

MARCH 2010

# LEDs MAGAZINE®

TECHNOLOGY AND APPLICATIONS OF LIGHT EMITTING DIODES



[LEDsmagazine.com](http://LEDsmagazine.com)

## Products

Nine categories of LEDs, components & fixtures P.3

## Companies

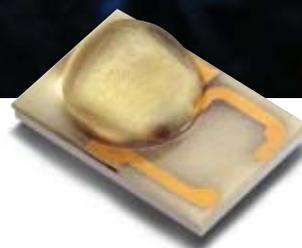
A-Z listing of key suppliers in LED market P.111

# LED Suppliers Directory 2010



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**OSRAM**  
Opto Semiconductors



## Transforming Light

LUXEON LEDs are changing the way we light the spaces we live, shop and play in. With unparalleled efficiency, quality, and reliability, LUXEON LEDs are a simple way to transform lighting and improve the well being of our environment.

Whether you're lighting a restaurant, roadway or architectural masterpiece, you can count on LUXEON to deliver long life, high-quality white light while reducing energy consumption.

To learn how LUXEON can help you transform lighting, call our partner, Future Lighting Solutions, at +1-888-589-3662, or visit [www.philipslumileds.com/transform](http://www.philipslumileds.com/transform)

L U X E  N<sup>®</sup>

**PHILIPS**  
**LUMILEDS**  
sense and simplicity

**TOSHIBA**

Leading Innovation &gt;&gt;&gt;

# TOSHIBA LED.

## Brightening people's lives for generations.

**TOSHIBA**Come visit us  
our exhibit at**light+building**

The world's leading trade fair for Architecture and Technology

**April 11-16, 2010**Messe Frankfurt Hall 4.2 J10  
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Japan's first incandescent bulb and fluorescent lamp are just two examples of Toshiba's achievements in lighting technology. Toshiba's passion to innovate takes lighting to a new level, with E-CORE, Toshiba's super-efficient LED lighting solution. Expertise from 120 years of innovation in lighting provides optimum lighting conditions to bring comfort and warmth to life for people all over the world.

Concept image shown. Product appearance may vary in your market.

- Ecology
- Energy Saving
- Efficiency
- Economy

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Green lighting technologies



Lynk Labs, INC. (847) 783-0123

0.5W LED Wedge GWF05CXK-12



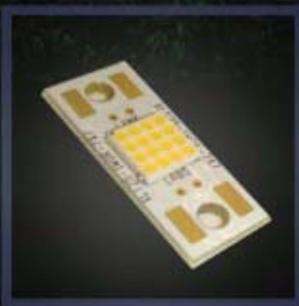
0.5W LED Festoon | GF05CXK-12



0.5W LED Wedge  
GWF05CXK-12



1W TESLA  
T6565



1W-12W SnapBrite  
S300 Series



0.5W LED Festoon  
GF05CXK-12

[www.LynkLabs.com](http://www.LynkLabs.com)

# LEDs MAGAZINE®

ISSUE 33

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*Image supplied by Osram Opto Semiconductors*

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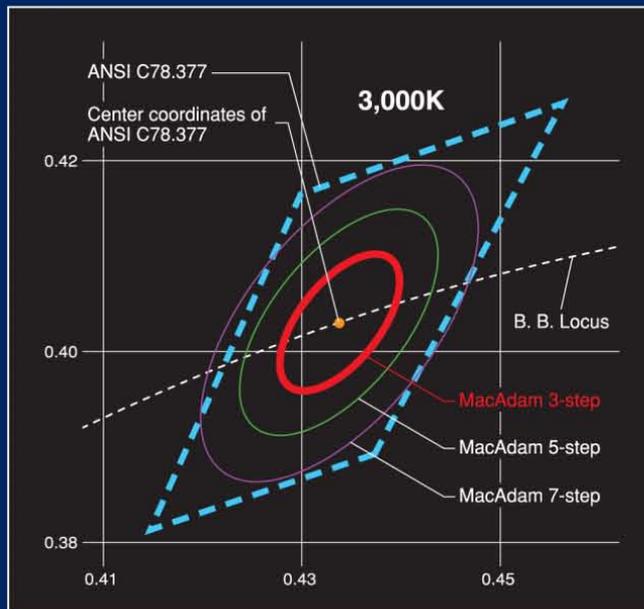
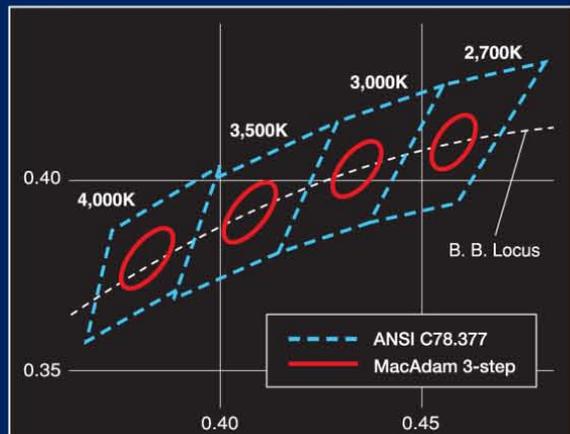
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**CITILED**  
The Light Engine

CITILED continues to provide innovative technology

**Compliance with ANSI C78.377 in 2009 ⇒ MacAdam 3-step in April, 2010**

**Narrower Chromaticity Range (2,700K~4,000K)**



● **Applicable packages**

**CL-L103 Series**



3W/ 6W class  
50.0 (L) × 7.0 (W) × 1.35 (H) mm

**CL-L251 Series**



4W/ 6W class  
13.5 (L) × 13.0 (W) × 1.35 (H) mm

**CL-L233 Series**



13W class  
23.0 (L) × 17.5 (W) × 1.4 (H) mm

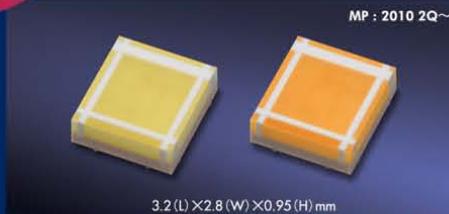
**Citizen Electronics efforts:**

Chromaticity control of CITILED has been shifted from Sorting after production to Elaboration in production. CITILED (2,700K~4,000K) provides MacAdam 3-step based on continuous technology improvement.

Visit us at  
**Light+Building 2010** in Frankfurt  
April 11-16 / Citizen booth : Hall 4.2, booth No. J81

Visit us at  
**LPI 2010** in Las Vegas  
May 12-14 / Citizen booth : 859

**NEW release High level of luminous efficiency**



**CL-L270 Series (0.2W class)**  
MP : 2010 2Q~  
3.2 (L) × 2.8 (W) × 0.95 (H) mm  
If: 60mA  
3,000K (Ra85) : 16.7 lm· 83.1 lm/W  
5,000K (Ra68) : 20.5 lm· 102.0 lm/W

▶ Please contact us for samples!

**CITIZEN ELECTRONICS CO., LTD.**

**CITIZEN**  
Micro HumanTech

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Priority Listings |

LED SUPPLIERS DIRECTORY

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American Bright Optoelectronics Corp.



Anglia Lighting



Beautiful Light Technology



The Bergquist Co



Carlco Technical Plastic



Color Stars



Cree Inc



DOMAG LED Technology., Ltd



Edison Opto Corp



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Frontand Technology



Hamamatsu Corp



Heatron



KLA-Tencor



Labsphere



LED Linear



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Light Engine (United Luminous)



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Matrix Lighting



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NXP Semiconductors



ON Semiconductor



Optical Research Assoc



Optiled Lighting International



OPTIS



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Philips Emergency Lighting



ROHM Semiconductor



SemiLED



Signcomplex Limited



Stanley Electric



StellarNet Inc



Team Instrument Co., Ltd.



Thomas Research Products



UPEC Electronics



Veeco Instruments



VS Optoelectronic Gmbh & Co KG



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- The black top surface and full black body of the LED deliver enhanced contrast for color sign applications.
- Water-resistant (IPX6) design for environmentally harsh applications.

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# AVAGO

TECHNOLOGIES

Your Imagination, Our Innovation



# section 1

## LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
	AC LEDs	Fiber-coupled LEDs	Power LEDs - cool white	Power LEDs - colored	Power LEDs - neutral white	Power LEDs - warm white	RGB packages	Side-view LEDs	Surface-mount LEDs (<0.5 W)	Through-hole LEDs	UV and IR LEDs	White LEDs (<0.5 W)	AlGaInP red, orange, yellow LED chips	Infrared LED chips	Nitride (InGaN) blue, green LED chips	UV LED chips
Abacus LED			●	●	●	●	●	●	●	●	●	●				
Advanced Media Inc. (RitekUSA)												●				
Alcom Electronics	●		●	●	●	●	●	●	●	●	●	●				
All Brite International C., Ltd	●		●	●	●	●	●	●	●	●	●	●				
Allied Electronics, Inc.			●	●	●	●	●	●	●	●	●	●	●	●	●	●
 <b>Alpha-One Electronics Ltd.</b>				●				●	●	●		●	●	●	●	
 <b>American Bright Optoelectronics Corp</b>	●		●	●	●	●	●	●	●	●	●		●			
 <b>Anglia Lighting</b>			●	●	●	●	●	●	●	●	●					
APC-Hero	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
AP Technologies Ltd.		●	●	●			●	●	●	●	●		●			●
Arco Inc.			●	●	●	●		●	●	●	●	●	●	●	●	●
Arrow Electronics, Inc.			●				●	●	●	●	●	●	●	●	●	●
Arrow Electronics (UK) Ltd			●	●	●	●	●	●	●	●	●	●	●	●	●	●
Atimpex Ltd.			●		●	●										
AUK Semiconductor (S) Pte Ltd			●	●				●	●	●	●					
 <b>Avago Technologies</b> See ad on page 6			●	●	●	●	●	●	●	●	●	●		●		

section 1 | LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
	AC LEDs	Fiber-coupled LEDs	Power LEDs - cool white	Power LEDs - colored	Power LEDs - neutral white	Power LEDs - warm white	RGB packages	Side-view LEDs	Surface-mount LEDs (<0.5 W)	Through-hole LEDs	UV and IR LEDs	White LEDs (<0.5 W)	AlGaN/P red, orange, yellow LED chips	Infrared LED chips	Nitride (InGaN) blue, green LED chips	UV LED chips
Bandwidth Semiconductor												●				
Baytek International			●	●	●	●	●	●	●			●				
Binay Opto Electronics Pvt. Ltd.	●		●	●	●	●	●	●	●	●		●				
BridgeLux			●		●	●									●	
Brite-LED Optoelectronics Inc.							●		●	●	●					
CAO Group, Inc.			●	●	●	●		●	●		●					
China Semiconductor Corp.												●	●	●	●	
 <b>CITIZEN ELECTRONICS CO., LTD.</b>			●		●	●	●	●			●					
■ Citizen Electronics Co. Ltd. See ad on page 4																
Clairex Technologies, Inc.		●					●	●	●	●	●					
Clandell Limited			●	●	●	●	●	●	●	●	●					
Clearstone Technologies Inc										●						
CML Innovative Technologies (Europe)			●	●	●	●	●	●	●	●	●					
CML Innovative Technologies Ltd			●	●	●	●	●	●	●		●					
 <b>Color Stars Inc</b>			●				●				●					
Components Bureau Ltd			●	●	●	●	●	●	●	●	●					
CoolLED Ltd			●	●	●	●				●						
 <b>Cree Inc</b> See ad on page 9			●	●	●	●		●	●		●				●	
Crescent Lighting Ltd		●														
DG Lighting Technology Co.,Ltd						●										
DiCon Fiberoptics, Inc.		●					●									
Dicrom Electronica S.L.			●	●		●	●	●	●	●	●					
Digi-Key Corporation	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Dominant Semiconductors Sdn. Bhd.			●	●	●	●	●	●	●	●	●					
Dowa Electronics Materials Co., Ltd.										●		●	●			●
EBV Elektronik			●				●	●	●	●	●	●	●	●		
Edge Electronics, Inc.		●	●	●	●	●	●	●	●	●	●					
 <b>Edison Opto Corporation</b> See ad on page 25	●		●	●	●	●	●	●	●	●	●					

CREE RGB AND BRIGHT-WHITE, HIGH-BRIGHTNESS LEDs FOR VIDEO, DISPLAY AND SIGNAGE



# GAME CHANGING PERFORMANCE.

## CREE HIGH-BRIGHTNESS LEDs.

Cree LEDs are revolutionizing lighting. Our full line of RGB and white high-brightness LEDs deliver high-performance at an economical price. Cree can help you bring energy-efficient LED light to video screens, display and informational signage, channel lighting, light strips and architectural lighting worldwide.



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RoHS-COMPLIANT

### 4-mm Oval LED

Screen Master Series for matched Radiation pattern  
Luminous Intensity (mcd)  
- C4SMF  
Red (1100 - 4180)  
Green (2130 - 8200)  
Blue (550 - 2130)

### PLCC4 3 in 1 SMD LED

Luminous Intensity (mcd)  
- Red (355 - 900)  
- Green (560 - 1400)  
- Blue (180 - 450)  
Viewing Angle: 120 degree

### PLCC6 3 in 1 SMD LED

Water-Resistant (IPX5\*)  
Moisture Sensitivity Level: 3  
Luminous Intensity (mcd)  
- Red (560 - 1120)  
- Green (1120 - 2240)  
- Blue (280 - 560)

### PLCC4 1 in 1 SMD LED

Color Temperatures (K)  
- Cool White: Min. (4600) / Typical (5500)  
- Warm White: Min. (2500) / Typical (3200)  
Typical CRI: Cool White 72, Warm White 80  
Luminous Intensity (mcd)  
- Cool White (1800 - 4500)  
- Warm White (1400 - 3550)

Contact an authorized distributor at [www.cree.com/hb](http://www.cree.com/hb)  
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\* This part is tested under the condition of assembling it on a PCB with isolating the electrical path by silicone. Cree and the Cree logo are registered trademarks of Cree, Inc.

section 1 | LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
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 <b>Enertrail Technology Co. Ltd.</b>			●	●	●	●	●									
Enfis Ltd			●				●	●			●					
Epigap Optoelektronik GmbH				●			●	●		●		●	●			
epiLED		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Epistar Corporation												●	●	●	●	●
Epivalley Co., Ltd.														●		
 <b>Everlight Electronics Co. Ltd.</b> See ad on page 34	●	●	●	●	●	●	●	●	●	●	●					
EVERREDtronics Ltd.			●	●	●	●	●	●	●	●	●					
Evident Technologies, Inc.								●	●		●					
Exalos			●													
Excellence Opto. Inc.			●	●	●	●	●	●	●	●	●					
Firstar Electronic Technology Co., Ltd.			●	●	●	●	●	●			●					
 <b>Forge Europa</b>			●	●	●	●	●	●	●		●					
Forward Electronics	●															
The Fox Group Inc								●	●	●						●
Frontier Custom Assemblies									●							
Future Lighting Solutions			●	●	●	●	●	●	●	●	●					
 <b>GE LUMINATION</b>			●		●	●	●				●					
Gerber Sales			●	●	●	●	●	●	●	●	●					
Glo AB												●		●	●	
Goldeneye, Inc			●	●	●	●	●									
Guangzhou AURORA LED Lighting Co.,Ltd								●								
 <b>Hamamatsu Corporation</b>													●			
Harvatek			●	●	●	●	●	●	●	●	●					
Helio Optoelectronics Corp.	●		●	●	●	●	●	●		●						
High Power Lighting Corp			●				●	●		●	●					
HTDS			●	●	●	●	●	●	●	●	●	●	●	●	●	●

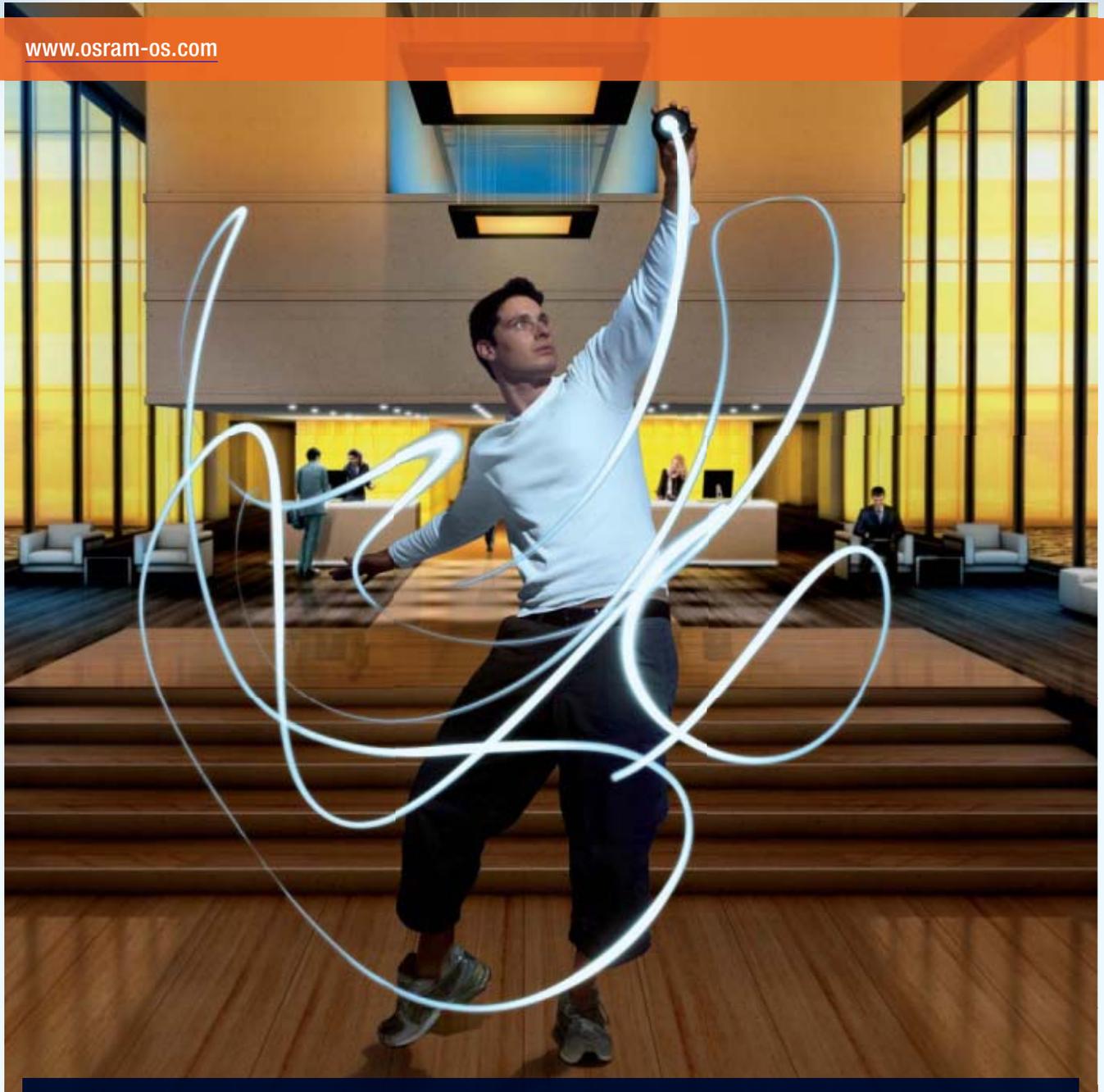
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Impact Lighting Inc.		●														
Ingebat S.L.			●	●	●	●		●				●				
Intelligent LED Solutions			●	●	●	●	●	●	●	●	●	●				
Intematix Technology Center			●	●	●	●	●									
International Light Technologies			●	●	●	●		●	●	●	●					
ISP Co, Ltd			●	●	●	●	●	●	●	●	●					
Itswell Co., Ltd.			●	●	●	●	●	●	●	●	●					
Jenoptik Polymer Systems GmbH										●						
JKL Components Corporation								●	●							
Josef Barthelme GmbH & Co. KG		●														
JS LED Power Inc.	●		●	●	●	●	●	●	●		●					
Kingbright Corporation			●	●	●	●	●	●	●	●	●					
 <b>Kingbright Electronic Europe GmbH</b> See ad on page 59			●				●	●	●	●						
Kyosemi Corp.								●	●	●						
LandiMark Co.,Ltd			●	●	●	●	●	●	●	●						
LED-Depot			●	●	●	●	●	●	●	●	●					
LedEngin, Inc.			●	●	●	●	●	●	●	●						
LEDIKO			●	●	●	●	●	●	●	●	●					
Ledium Ltd.			●				●	●	●		●					
<h1>LEDON</h1> <b>Ledon Lighting Jennersdorf GmbH</b>			●	●	●	●		●			●					
LedRise Ltd			●	●	●	●	●	●	●							
leds.com.mx			●				●									
LEDSupply			●	●	●	●	●	●	●	●	●					
LEDtronics, Inc.		●	●				●	●	●	●	●					
Lenoo Electronics Co.,Ltd.							●	●	●	●	●					
 <b>LG Innotek</b> See ad on page 27			●	●	●	●	●	●			●			●		
LichtwerkBerlin Ltd.			●		●	●	●			●	●		●		●	
Lightspeed Technologies		●														
Ligitek Electronics Co. Ltd.			●	●	●	●	●	●	●	●	●					
LiteOn, Inc			●	●	●	●	●	●	●	●	●	●	●	●	●	
Lumex / An ITW Company			●				●	●	●	●	●					
Luminus Devices		●	●	●	●	●	●	●	●			●		●		
Lustrous Technology Ltd			●	●	●	●				●						

section 1 | LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
	AC LEDs	Fiber-coupled LEDs	Power LEDs - cool white	Power LEDs - colored	Power LEDs - neutral white	Power LEDs - warm white	RGB packages	Side-view LEDs	Surface-mount LEDs (<0.5 W)	Through-hole LEDs	UV and IR LEDs	White LEDs (<0.5 W)	AlGaInP red, orange, yellow LED chips	Infrared LED chips	Nitride (InGaN) blue, green LED chips	UV LED chips
 <b>■ Lynk Labs</b> See ad on page 2	●															
Marktech Optoelectronics			●	●	●	●	●	●	●	●	●					
Marl International Limited							●		●	●	●					
Marubeni America Corporation								●	●	●	●	●	●	●	●	●
Micron Technology			●		●	●		●	●		●					
Mimaki ECO Lighting Solutions			●	●	●	●	●	●		●	●					
Monolithic SA			●	●	●	●	●	●								
 <b>Mouser Electronics</b>			●	●	●	●	●	●	●	●	●	●	●	●	●	
MSC Vertriebs GmbH			●	●	●	●	●	●	●	●	●					
Neon-EC Ltd			●	●	●	●	●	●	●	●	●				●	
 <b>Neo-Neon LED Lighting International Ltd</b>	●		●	●	●	●	●	●	●		●				●	
Nichia America Corp			●			●	●	●	●	●	●					
Nitride Crystals Inc																●
Noctron Soparfi SA										●	●					
Nu Horizons Electronics			●	●	●	●	●	●	●	●	●	●	●	●	●	
NuLEDs by Numinus LLC		●														
OPTEK Technology		●	●	●	●	●	●	●	●	●	●			●		
Opto Diode Corporation									●	●						
Optosupply Ltd			●	●	●	●	●	●	●	●	●					
Opto Tech												●	●			
Opto Technology, Inc.		●	●				●	●		●	●					
Optotek Limited		●														
OSA Opto Light GmbH			●	●	●	●		●	●	●	●	●	●	●	●	●
 <b>■ OSRAM Opto Semiconductors GmbH</b> See ad on front cover and page 13			●	●	●	●	●	●	●	●	●	●	●	●	●	
Pacer International Ltd			●	●		●	●	●	●	●	●					
Para Light Corp			●	●	●	●	●	●	●	●	●					
PerkinElmer Inc		●	●	●	●	●	●	●	●	●	●					
Phenoptix Ltd								●	●		●					
Philips Lighting UK			●	●	●	●	●	●	●		●	●	●	●	●	

[www.osram-os.com](http://www.osram-os.com)



## LEDs for General Lighting Solutions

OSRAM Opto Semiconductors empowers lighting solutions for today and tomorrow

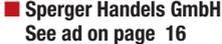
**OSRAM**  
Opto Semiconductors

section 1 | LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
	AC LEDs	Fiber-coupled LEDs	Power LEDs - cool white	Power LEDs - colored	Power LEDs - neutral white	Power LEDs - warm white	RGB packages	Side-view LEDs	Surface-mount LEDs (<0.5 W)	Through-hole LEDs	UV and IR LEDs	White LEDs (<0.5 W)	AlGaInP red, orange, yellow LED chips	Infrared LED chips	Nitride (InGaN) blue, green LED chips	UV LED chips
 never before possible <b>Philips Lumileds Lighting Co</b> See ad on inside front cover			•	•	•	•		•		•		•		•		
Plus Opto Ltd			•	•	•	•	•	•	•	•	•	•	•	•	•	•
Power Light Systems GmbH			•	•	•	•	•	•	•	•	•	•				
Professional Lamps Scandinavia ApS			•	•	•	•	•			•		•				•
ProLight Opto Technology Corp			•	•	•	•	•	•		•	•					
ReliaTech Limited - ReliaLED	•	•	•	•	•	•	•	•	•	•	•					
 <b>ROHM Semiconductor USA, LLC</b>			•				•		•	•	•	•	•	•		
RS Components			•				•		•	•	•					
Samsung LED			•	•	•	•	•	•			•				•	
SASCO - A division of Arrow			•	•	•	•	•	•	•	•	•					
SchahlLED Lighting	•		•	•	•	•	•			•						
Schott North America		•														
Secol			•	•	•	•	•		•		•					
Selectronic			•	•	•	•		•			•					
 <b>SemiLEDs</b>															•	•
Senslite Corporation			•	•	•	•	•	•	•	•	•	•	•	•	•	•
 <b>SEOUL SEMICONDUCTOR</b> <b>Seoul Semiconductor</b> See ad on page 109	•		•	•	•	•	•		•	•	•					
setron GmbH			•	•	•	•	•	•	•	•	•					
 <b>Sharp Microelectronics Europe</b> See ad on page 101			•		•	•	•	•	•		•					
Sharp Microelectronics of the America			•	•	•	•	•	•		•	•	•				
Shenzhen Chippower Technology Co Ltd															•	•
Shenzhen Hongya Opto Electronic				•	•	•										
Shenzhen Jiuzhou Optoelectronics			•	•	•	•	•	•	•		•					

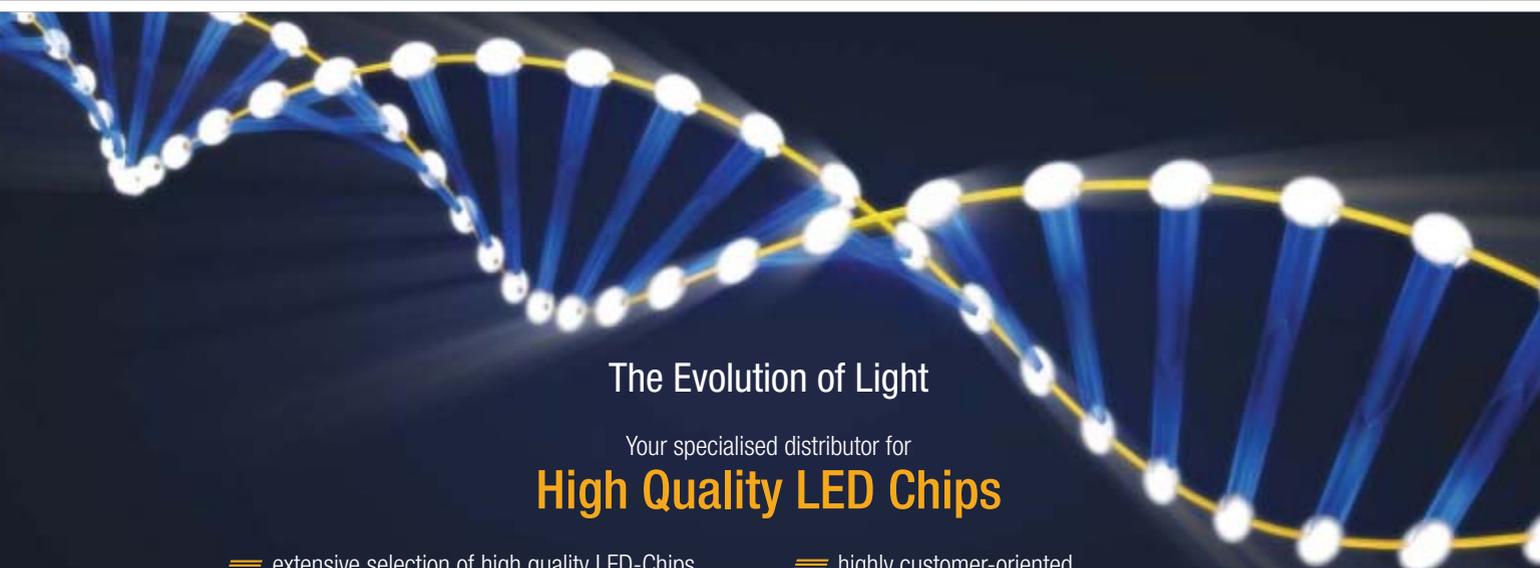


section 1 | LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
	AC LEDs	Fiber-coupled LEDs	Power LEDs - cool white	Power LEDs - colored	Power LEDs - neutral white	Power LEDs - warm white	RGB packages	Side-view LEDs	Surface-mount LEDs (<0.5 W)	Through-hole LEDs	UV and IR LEDs	White LEDs (<0.5 W)	AlGaN/P red, orange, yellow LED chips	Infrared LED chips	Nitride (InGaN) blue, green LED chips	UV LED chips
 <b>Shenzhen Refond Optoelectronics</b> See ad on page 79			●	●	●	●	●	●	●	●	●					
Silica (An Avnet Company)			●	●	●	●	●	●	●	●	●					
SM Electronics			●	●	●	●	●	●	●	●	●					
 <b>Sperger Handels GmbH</b> See ad on page 16												●	●	●		
Spoerle		●	●	●	●	●	●	●	●	●	●					
Stanley Electric Co. Ltd.			●	●	●	●	●	●	●	●	●					
 スタンレー電気株式会社 STANLEY ELECTRIC CO., LTD. <b>Stanley Electric Co. Ltd. (UK)</b>			●	●	●	●	●	●	●	●	●					
Sun Export Private Limited			●	●	●	●	●	●	●	●	●					
Super Bright LEDs			●	●	●	●	●	●	●	●	●					
Supreme Components Intl Pte. Ltd.			●	●	●	●	●	●	●	●	●					
Texim Europe BV	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Thor Lighting Solutions Inc.			●	●	●	●	●	●	●	●	●	●	●	●	●	●
3DZ Ltd			●	●	●	●	●	●	●	●	●	●	●	●	●	●
 <b>Leading Innovation &gt;&gt;&gt;</b> <b>Toshiba Electronics Europe</b>			●	●	●	●	●	●	●	●	●	●	●	●	●	●
TradeKey (Pvt.) Limited	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TridonicAtco UK Limited			●	●	●	●	●	●	●	●	●					
Trola*Tek	●	●	●	●	●	●	●	●	●	●	●					
UBLeds Co Ltd			●	●	●	●	●	●	●	●	●					
Universal Optoelectronics Co., Ltd.			●	●	●	●	●	●	●	●	●					
 <b>UPEC Electronics Corp.</b>	●	●	●	●	●	●	●	●	●	●	●					
US A'SYCK Corporation							●	●			●					
USHIO America			●	●	●	●	●	●	●	●	●					
Virginia Optoelectronics Inc			●	●	●	●	●	●	●	●	●					
Vishay Semiconductor GmbH			●	●	●	●	●	●	●	●	●		●			
VLM GmbH - Tomorrow's light			●	●	●	●	●	●	●	●	●					
 A New Lighting Experience <b>Vossloh-Schwabe Optoelectronic</b>			●	●	●	●	●	●	●	●	●					

section 1 | LED PACKAGES & CHIPS

Company	LED PACKAGES											LED CHIPS				
	AC LEDs	Fiber-coupled LEDs	Power LEDs - cool white	Power LEDs - colored	Power LEDs - neutral white	Power LEDs - warm white	RGB packages	Side-view LEDs	Surface-mount LEDs (<0.5 W)	Through-hole LEDs	UV and IR LEDs	White LEDs (<0.5 W)	AlGaInP red, orange, yellow LED chips	Infrared LED chips	Nitride (InGaN) blue, green LED chips	UV LED chips
Wah Wang Holdings Co. Ltd.			●	●	●	●	●	●	●	●	●	●			●	●
E Wave Corporation			●	●		●		●	●	●	●	●	●	●	●	●
Wilbrecht Ledco Inc	●						●			●						
WT&T Inc		●														
 <b>YEG Opto</b>	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Yo-Hua Corp.			●	●	●	●	●	●	●	●	●					
Zhuhai Mingyuan Lighting Co. Ltd			●	●	●	●	●									



### The Evolution of Light

Your specialised distributor for  
**High Quality LED Chips**

- ≡ extensive selection of high quality LED-Chips
- ≡ available in every colour with differing brightness
- ≡ wide selection of sizes, even the smallest
- ≡ personalised chips for your requirements

- ≡ highly customer-oriented
- ≡ broad expert advice for your development
- ≡ fast, reliable and assured delivery, worldwide
- ≡ quick supply of various samples or large quantities

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# section 2

## LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
A5 Lighting							●	
Abacus LED						●	●	●
Action Media Technologies, Inc		●			●			
Act One Communications Inc.		●	●		●	●	●	
Adam Electronics		●	●					
Advanced LED Systems		●	●	●	●	●	●	
Advanced Media Inc. (RitekUSA)							●	
Advanced Thermal Devices, Inc.							●	
Advanced Thermal Solutions, Inc.				●				
 <b>ALT</b> Aeon Lighting Technology Inc.	●	●	●				●	
<b>Aeon Lighting Technology</b>								
AGC Mirodan Glassiled			●	●		●	●	
AgiLight Inc.					●	●	●	
Alcom Electronics	●	●	●	●				●
All Brite International C., Ltd		●	●		●	●	●	●
Alliance Optotek Corp.				●			●	
Allied Electronics, Inc.	●	●	●		●	●	●	●
 <b>Alpha-One Electronics Ltd.</b>	●		●					●
Aluwave AB			●	●	●	●	●	
AMA Precision INC.					●			
 <b>AMERICAN BRIGHT</b> OPTOELECTRONICS CORP.	●	●	●	●	●	●	●	●
<b>American Bright Optoelectronics Corp</b>								

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
 American Illumination Inc	•	•	•	•	•	•	•	•
 Anglia Lighting				•	•	•	•	•
APC-Hero	•	•	•	•	•	•	•	•
Apcus Technologies		•						
AppLED BV	•							
AP Technologies Ltd.	•	•	•		•			•
Apticol Ltd			•	•	•			
Arco Inc.			•			•	•	
ARC Solid-State Lighting Corp.						•	•	
Aristo Engineering Pte Ltd			•			•		
Arrow Electronics, Inc.	•	•	•		•			•
Arrow Electronics (UK) Ltd	•	•	•	•	•	•	•	•
ATG Electronics Corp.						•	•	
Atimpex Ltd.							•	
AT&S AG				•		•	•	
AUK Semiconductor (S) Pte Ltd			•			•	•	•
Bachur & Associates			•					
BAG electronics GmbH		•	•	•			•	
Bare Development, Inc			•				•	
Baytek International		•	•		•		•	•
B/E Aerospace				•	•	•	•	•
Beta Opto Technology Co., Ltd.			•			•	•	
BH Design Plus		•	•	•	•	•	•	
Binay Opto Electronics Pvt. Ltd.	•	•	•	•	•	•	•	•
Boca Flasher			•					
Brazen Tek				•			•	•
BridgeLux	•		•				•	•
BrightBurst Technologies, LLC			•	•			•	
Brillia, a Division of Permlight			•	•	•		•	
Brilliant Electronic Systems Ltd		•	•		•		•	•
Brite-LED Optoelectronics Inc.		•	•					•
Bulartist Ltd.					•			
CAO Group, Inc.	•	•	•	•	•	•	•	•
Carmanah Technologies					•			
Celestica Incorporated		•						
Cepoint Networks, LLC		•						
Cerno			•		•			
Challenge Electronics Ltd		•	•	•		•	•	•
Chaos Design Consultants Ltd	•		•	•				•

# 麗光科技股份有限公司

Beautiful Light Technology Corporation

Green Technology of Lightings



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Zip code: 60665 / Sales / 營業窗口: sales@bitc.com.tw / Technical / 技術サポート: service@bitc.com.tw

**Factory / 工場:**

TEL: +86-769-8312-2838 / FAX: +86-769-8312-2128

Address / 住所: Golden Rooster Hills (JinJiLing), Shabu Village, Dalang Town, Dongguan City, Guangdong Province, China

Zip code: 523755



section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
ChiHua Lighting Technology Company Ltd				●				
China Semiconductor Corp.		●	●				●	●
Circom, Inc.		●	●					
Clairex Technologies, Inc.	●	●	●					●
Clandell Limited	●		●		●		●	●
Clean Lighting Solutions, LLC	●	●	●	●	●		●	
Clover Electronics		●	●					
CML Innovative Technologies (Europe)			●	●	●	●	●	
Cofan-PCB		●	●	●			●	
 <b>Color Stars Inc</b>			●		●			●
Continental Inc.		●	●	●	●	●	●	
CooLED Ltd		●	●	●			●	
Cooler Master		●	●		●			
Cooler Master USA		●	●		●	●		
Coolux Electro-optics Co. Ltd	●	●	●	●		●	●	
Cool-View					●		●	●
Cooper Lighting					●	●	●	
Crestron Electronics, Inc.				●				
CRS Electronics		●	●	●	●		●	
CS Electronic GmbH		●	●	●		●	●	
CYRON Lighting		●	●	●	●	●	●	●
Dana Enterprises Int'l, Inc.		●	●		●	●	●	●
Darona Inc.		●						
DDP Engineered LED Solutions		●						
Defond North America		●						
Delta Electronics, Inc			●					
Delta Light			●	●	●	●	●	
Denggang Lighting Technology Co., Ltd						●		
Dialight-Lumidrives Ltd		●	●					●
Diana Electronic-Systeme GmbH			●					
DiCon Fiberoptics, Inc.					●			●
Dicrom Electronica S.L.						●	●	
Digi-Key Corporation	●					●	●	●
DigitalLight AG			●		●	●	●	
DK Thermal Solutions		●		●				
D-LED Illumination Technologies	●	●	●		●		●	
DMS Lighting, LLC						●	●	
 <b>DOMAG LED Technology Co., Ltd.</b>		●	●	●	●		●	

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
Dominant Group Technology Ltd		●	●	●				
Dominio LED		●	●	●	●	●	●	●
Dongguan Jingliang Lighting Factory		●						
Dowa Electronics Materials Co., Ltd.						●	●	
Dynazign Illumination Group, LLC		●	●	●	●	●	●	
EBV Elektronik								●
EBW Electronics, Inc.		●	●	●	●	●	●	
Ecoleds.eu						●	●	
Eco Light Pte Ltd			●			●	●	
Eco Marketing				●				
Edgelit Acrylics, LLC					●	●		
 <b>Edison Opto Corporation</b> See ad on page 25		●	●		●			●
eldoLED America, Inc.			●			●	●	
 your product   our drive <b>eldoLED by</b> See ad on page 63			●			●	●	
Electrobrain Enterprises		●	●	●				
Element Labs Ltd			●					
Elma Electronic Inc			●	●				
Eneltec Group		●			●			
 Create the trail for saving energy <b>Enertrail Technology Co. Ltd.</b>		●	●	●			●	
Enfis Lighting N.A.	●	●	●	●	●	●	●	●
Enfis Ltd	●		●		●			●
enjoy Lichtgestaltung			●	●		●		
enLux Lighting	●							
Epigap Optoelektronik GmbH	●		●	●			●	●
epiLED	●	●	●		●	●	●	●
ETAP						●	●	
Etlin Daniels			●					
Everbright Lights Inc.			●	●		●	●	
 LIGHTING FOREVER <b>Everlight Electronics Co. Ltd.</b> See ad on page 34	●	●	●	●	●	●	●	●

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
EVERREDtronics Ltd.							●	
Excellence Opto. Inc.	●	●	●	●	●	●	●	●
Fa. GK Technik		●	●	●		●	●	
Firstar Electronic Technology Co., Ltd.						●		
FNG Corporation			●			●	●	
Fobsun Electronics Ltd						●	●	
Foreal Spectrum					●	●		
Foresight Systems Development, Inc.				●				
 <b>Forge Europa</b>		●	●	●	●	●	●	
4D Optical LLC			●	●				
Foxsemicon Integrated Technology Inc		●			●		●	
Frontier Custom Assemblies		●	●	●	●	●	●	
 <b>Fusion Optix</b> ■ <b>Fusion Optix</b> See ad on page 119		●	●	●	●	●	●	
Future Lighting Solutions		●	●	●	●	●	●	
 <b>GE Lumination</b>	●				●		●	
Gerber Sales	●	●	●					
■ <b>GlacialLight</b> See ad on page 23				●		●	●	
g-Lite Technologies						●	●	
Goldeneye, Inc	●							●
GO Lighting Technologies Inc.					●			
Green Lighting LLC					●	●	●	
Greenlite Solutions			●	●		●	●	
Guang Li-Light Power Technology		●	●			●	●	
Guangzhou AURORA LED Lighting Co.,ltd						●	●	
 <b>GVA Lighting Inc</b>			●	●	●	●	●	
Hai Chang Industrial Co., Ltd.						●	●	
Hanscraft Inc		●	●	●				
Harvatek						●	●	
HBA Tech Ltd.		●						



section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
 <b>Heatron Inc</b> Hella Lighting Finland Oy	•	•	•	•	•	•	•	•
 <b>Hilux</b> Hokuriku Malaysia Sdn Bnd		•		•	•	•	•	

## GlacialTech®

Enlighten Your Humanity



MR-16



BR-20



BR-30



BR-30



BR-40



T8-Tube



T8-Tube 1/2/4/5/6 feet  
Low power T8-Tube 1/2/4/5/6 feet



SP-07W



SP-07W



SP-15W



SP-30W



SP-60W



Light Bar



High Bay Lights





**GlacialTech Inc.**

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 Fax : +886 2 2244-1228 E mail : sales@glacialtech.com Website : www.GlacialTech.com








section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
Hologenix Inc			●	●			●	●
Hongkong Coolight Opt-Ele Co Ltd		●				●	●	
HTDS	●		●	●		●	●	●
Hudnut Company LED Lighting Solutions							●	
Hybrid Integrated Circuits Ltd (HIC)		●	●	●		●		
Hynetic Electronics Pvt Ltd		●	●	●	●	●	●	●
i2Systems		●	●	●	●	●	●	●
IAQ Consulting Pty Ltd		●				●	●	●
Ideas with Energy Ltd			●	●	●	●	●	
IDEC Corp						●	●	●
i-led Solutions Ltd						●		
iLight Technologies Inc					●			
Illumination Management Solutions Inc	●				●			●
Illumination Optics Inc			●		●			
Imagineering Inc		●	●					
Impact Lighting Inc.			●		●	●		
The Indak Group		●		●				
IndoLED			●	●		●	●	●
Industrial Electronics Services, Inc.		●	●	●	●	●	●	
Ingebat S.L.			●		●	●	●	
Inlux Lighting Co., Ltd.						●	●	
Innolux Pte Ltd		●	●	●		●	●	●
Innovations in Optics, Inc.	●	●	●		●			●
Innovative Scientific Solutions, Inc		●						
Insight Sign Systems						●	●	
Intelligent LED Solutions	●	●	●	●	●	●	●	●
Intermatix Technology Center	●	●	●		●		●	●
International Light Technologies							●	●
Interplex Engineered Products		●						●
Interstate Solar Utilities, LLC					●		●	
IP LED						●	●	
IST Lighting Ltd		●	●	●	●		●	●
i-vision (uk) ltd	●	●	●	●	●		●	
IVUS Energy Innovations				●	●			
JD Greentech-Global, Inc		●	●	●				
Jenoptik Polymer Systems GmbH	●	●	●	●	●	●	●	●
JGA Associates/Bulbwizards	●					●	●	
Johnsson Lighting Technologies AB (JLT)			●	●	●			
Josef Barthelme GmbH & Co. KG	●		●		●	●	●	●
JS LED Power Inc.	●	●	●	●	●	●	●	●
JuiceWorks LLC		●	●	●	●	●	●	
Kingbright Corporation	●		●					●
 <p><b>Kingbright Electronic Europe GmbH</b> See ad on page 59</p>								●

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
Kingsun Optoelectronic Co.,Ltd.				●		●		
Kyosemi Corp.		●						
Kypai Ltd	●	●	●	●	●			
Lathrop Engineering Inc			●	●				
LDDE Vertriebs GmbH	●		●	●	●	●	●	●
LED Concepts				●		●	●	
LeddarTech			●	●				
LED-Depot						●		
LEDdynamics Inc	●	●	●	●	●	●	●	●
LedEngin, Inc.			●		●	●	●	●
LED Grow Master Global, LLC				●				
LEDIKO			●	●	●	●	●	

**EDISON**  
A Solid-State Lighting Premium Expert

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**B E Y O N D • I L L U M I N A T I O N**

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
LEDirect							•	
Ledium Ltd.			•		•			
LED Lighting, Inc.		•	•	•		•	•	•
LED Lighting South Africa				•				
LED Light Opto Co.,Ltd.	•	•				•	•	•
 <b>LED Linear</b> linear lighting solutions ■ LED Linear GmbH See ad on page 74		•			•	•	•	•
LED One (Hangzhou) Co Ltd				•		•	•	
 <b>LEDON</b> Ledon Lighting Jennersdorf GmbH	•		•		•		•	
LED Optical Solutions			•	•	•		•	
LedRise Ltd						•	•	•
LEDs N Solar			•			•	•	
LED Specialists, Inc.		•	•		•		•	
LEDsupply	•		•		•	•	•	
LED Transformations, LLC			•	•				
LEDtronics, Inc.	•				•			•
Leotek Electronics USA Corp.						•	•	
Leviton Manufacturing Company			•	•	•	•	•	
 <b>LG Innotek</b> ■ LG Innotek See ad on page 27	•	•	•	•	•	•	•	•
LichtwerkBerlin Ltd.	•			•				•
Lighttech SRL			•		•		•	
 <b>Light Engine</b> ■ Light Engine Ltd See ad on page 51	•	•		•	•	•	•	
Light Engines	•		•		•	•	•	•
Lighter Europe AB					•		•	
Light Ocean Technology Corp.	•		•	•	•		•	
Lightspeed Technologies		•						•
Ligitek Electronics Co. Ltd.	•		•				•	•
Line Lite International BV	•	•	•		•		•	

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
LiteLED Ltd			●		●			
LiteOn, Inc	●		●		●	●	●	●
Logah Technology Corp.			●				●	
LPA Excil Electronics Ltd		●		●	●		●	
Lucid-Lighting				●	●			
Lumagine	●	●	●	●	●	●	●	
Lumec					●			
Lumex / An ITW Company	●	●	●	●		●	●	●
Lumilens Optoelectronics Inc.						●	●	
Lumi Lime Limited	●		●	●	●	●	●	●
Luminit					●			
Luminus Devices	●				●	●	●	●

## LG Innotek Leading the next generation of lighting

The First Partner

LG Innotek opens a new chapter in LED lighting with technical competence at every level of integration from LED chips to light engines. LG Innotek's complete vertical integration of LED value chain helps to create unique values for customers with new experience in lighting. As a globally-recognized leader in electronic components, LG Innotek exercises a strict quality control over the whole development and manufacturing processes to deliver the highest level of customer satisfaction. With its commitment to technology and quality, LG Innotek strives to be The First Partner to your lighting projects.

### Street Lighting

### From chip to Light Engine and everything in between

170w  
120w  
80w

GOOD PUBLIC DESIGN

EPI Chip PKG Light module Power / Driver / Control Light engine

V-LED PKG Light module

Vertical LED with a wafer-bonded metal support Wide variety of packages 10w module for outdoor lighting

### Lamp

2010 iF design award

product design award 2010

CCT-adjustable light engine for slim flat panel lighting

Seoul Squire-20F, Namdaemunno-5-ga, Jung-gu, Seoul, 100-714, Korea | [www.lginnotek.com](http://www.lginnotek.com) | [ledlighting@lginnotek.com](mailto:ledlighting@lginnotek.com) LG Innotek

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
Lustrous Technology Ltd	●		●					●
LuxInTec SL	●	●	●	●	●	●	●	●
 <b>■ Lynk Labs</b> See ad on page 2	●		●	●	●	●	●	●
MAC SRL		●	●	●				●
Magic Lite Ltd.					●			
MAL Effekt Technik		●	●	●		●	●	
Mango Electronics			●	●	●			
Marc Signage			●	●		●	●	
Marktech Optoelectronics	●	●	●	●		●	●	
Marl International Limited	●				●			●
Marubeni America Corporation	●							●
MAZeT GmbH			●	●				
McDonald Technologies Int		●	●		●			●
Membrane Switch and Panel, Inc.			●					
Midwest Circuits		●	●		●			
Mimaki ECO Lighting Solutions	●	●	●	●	●	●	●	●
Minispottlight.com						●		
Modo Lights FZCO		●	●	●	●	●	●	●
Monolithic SA	●		●	●		●	●	●
 <b>Mouser Electronics</b> a TI company					●			●
MSC Vertriebs GmbH	●		●		●			●
The Nassau Group, Ltd.		●	●	●			●	
National LED Direct						●	●	
NCW (Holdings) Ltd		●	●	●	●	●	●	●
Neon-EC Ltd		●	●		●	●	●	●
 <b>Neo-Neon LED Lighting International Ltd</b>	●	●	●	●	●	●	●	●
Neon-LED International (HK) Ltd					●			
Noctron Soparfi SA					●			●
Nooteboom Elektronica			●	●		●	●	
Nu Horizons Electronics	●	●	●	●	●	●	●	●
NuLEDs by Numinus LLC	●	●	●	●	●	●	●	●
OAS-ISUSA		●	●	●	●		●	
OEC AG				●	●			

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
Onstate Technologies							•	
opsira GmbH			•					
OPTEK Technology	•	•	•	•	•	•	•	•
Optics Lite srl				•				
 <b>OPTILED Lighting International Ltd</b> See ad on page 47				•		•	•	•
 <b>Optocore Ltd</b>		•	•	•	•	•	•	
Opto Diode Corporation	•		•					•
 <b>OptoElectronix Inc.</b>	•				•		•	•
Opto Tech						•	•	
Opto Technology, Inc.	•	•	•		•			•
Optotek Limited	•	•	•	•				•
 <b>Orb Optronix, Inc.</b>				•				
Oree Inc	•			•				•
Orient Lighting Co. Ltd.			•			•		
Oried		•	•	•			•	
OSA Opto Light GmbH		•	•			•	•	•
OSCI Inc.			•	•				
OSRAM GmbH		•	•	•	•	•	•	•
 <b>OSRAM SYLVANIA</b> See ad on page 95		•	•	•	•	•	•	•
Oxley Group Ltd			•					•
Ozmium.com			•			•		
Pacer International Ltd	•	•	•	•	•	•	•	•
Paleco BV			•	•				
Palomar Technologies Inc		•						

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
PandA Europe		●	●	●	●			●
Paragon-Firstronic		●	●	●				
Para Light Corp	●							
PerkinElmer Inc	●	●	●		●			●
Permlight for Signs	●		●		●	●		
Pharos Life Corp	●	●	●	●	●			●
Philips Color Kinetics			●		●			●
Philips Lighting UK					●	●	●	●
 <p>never before possible</p> <p>■ Philips Lumileds Lighting Co See ad on inside front cover</p>			●		●	●	●	
Phoster Industries			●	●	●	●	●	
Pixalto		●	●	●	●	●		●
PJB Systems Technology Ltd			●	●	●			
Planar Systems		●	●					
Plus Opto Ltd					●	●	●	●
The Power LEDs				●				
Power Light Systems GmbH		●	●	●				
Power Vector				●				
Professional Lamps Scandinavia ApS	●		●		●		●	●
ProLight Opto Technology Corp		●	●					●
PRP Optoelectronics Ltd	●	●	●					●
Quasar Light Co. Ltd.		●	●		●	●	●	●
Raled LLC		●	●	●	●	●	●	●
Ray Dynamics					●			
Reach Technology Inc			●					
Real World Designs Ltd							●	
ReliaTech Limited - ReliaLED	●	●		●		●	●	●
RLS Innovations GmbH		●	●	●	●	●	●	●
 <p>living energy</p> <p>■ ROAL Electronics S.p.A. See ad on page 52</p>	●		●	●	●			●
 <p>ROHM SEMICONDUCTOR</p> <p>ROHM Semiconductor USA, LLC</p>			●					●
RS Components	●				●			●
Sagitario Lighting S.L.U.			●	●		●	●	●
SAKMA Electronica Industrial SA			●				●	



section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
Samsung LED			●	●	●		●	●
Samudra Electronic Systems Pvt Ltd		●	●	●			●	
SASCO - A division of Arrow			●		●	●	●	●
SchahLED Lighting	●		●		●			●
Schott North America					●			
Schreder Lighting LLC						●	●	
Selectronic	●	●	●		●		●	●
Select Software Limited	●	●	●	●	●	●	●	●
Semicon-Optronics Channel Corp.		●	●	●	●	●	●	
Senslite Corporation	●	●	●	●	●	●	●	●
Sensovation AG		●	●	●				
 <b>SEOUL SEMICONDUCTOR</b> ■ Seoul Semiconductor See ad on page 109	●		●					●
setron GmbH	●					●	●	●
Shanghai Euchips Industrial Co. Ltd.		●	●			●	●	
Shanghai Inwood Electronic Co., Ltd.	●	●	●	●		●	●	●
 ■ Sharp Microelectronics Europe See ad on page	●				●	●	●	●
Sharp Microelectronics of the America							●	●
Shenzhen Jeeja Century Optoelectronics	●	●	●	●	●	●	●	●
Shenzhen Jiuzhou Optoelectronics		●	●					
Shenzhen Retop LED Display Co Ltd		●		●		●	●	
SH Lighting Ltd			●	●	●	●	●	
 ■ Signcomplex Limited See ad on page 97		●	●	●		●	●	●
Silica (An Avnet Company)				●		●	●	●
Silverled		●	●	●		●	●	
Sino Union Technology Ltd					●		●	
Sirio Panel	●							●
SMA Optical Technologies Inc			●	●	●		●	
Solid State LED Lighting		●	●	●			●	
SoundOff Signal		●	●		●			
Spark LED Lighting (HK) Co Ltd	●	●	●			●	●	
Special-T Lighting		●	●	●	●	●	●	
SRM-Technik GmbH	●	●	●	●	●	●	●	●

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
 <b>スタンレー電気株式会社</b> STANLEY ELECTRIC CO., LTD. <b>Stanley Electric Co. Ltd. (UK)</b>			●		●	●	●	●
Starled Inc			●		●		●	●
 <b>StockerYale (IRL) Ltd.</b>	●							
StrongBase USA		●	●	●				
Summit UV			●					
Sun Export Private Limited						●		
Sunovia Energy Technologies	●	●	●	●	●	●	●	●
Super Bright LEDs						●	●	
Swift Canada						●	●	
Tally Display Corp			●	●				
 <b>TEAM INSTRUMENT CO. LTD</b> 榮嘉科技股份有限公司 <b>TEAM Instruments Co Ltd</b>							●	
Tecartex Digital Solutions, SL						●	●	
Teledyne Lighting & Display Products	●	●	●	●	●			●
100 West Electronics LLC		●	●	●				
Tepcomp Oy		●	●	●				
TerraLUX Inc.	●	●	●	●	●	●	●	●
Texim Europe BV	●		●	●	●	●	●	●
Tharsus Vision Ltd		●	●	●			●	
Thermastrate Ltd.	●	●	●	●	●	●	●	●
Thor Lighting Solutions Inc.		●		●		●	●	
3DZ Ltd	●		●	●	●			●
TPL Vision			●	●				
TradeKey (Pvt.) Limited	●	●	●	●	●	●	●	●
Traxon Technologies Ltd.					●	●	●	●
TridonicAtco UK Limited	●		●					●
Tri-O-Light BV	●							
Trola*Tek							●	●
 <b>Tyco Electronics</b> Our commitment. Your advantage ■ Tyco Electronics See ad on inside back cover			●	●	●	●	●	

section 2 | LED ARRAYS, LIGHT ENGINES & MODULES

Company	Chip-on-board (COB) arrays	Contract manufacturing for LED assemblies	Custom modules & prototyping	Design & integration services	Light engines	Modules for decorative lighting	Modules for general lighting	Packaged multichip LED arrays
UBLeds Co Ltd	●		●			●	●	●
UNI-EE Electric Appliance Co. Ltd.		●				●	●	
Universal Optoelectronics Co., Ltd.	●		●	●				●
Universal Science			●	●	●			
 <b>UPEC Electronics Corp.</b>	●	●	●	●	●	●	●	●
Upstream Engineering Inc.			●	●	●	●		
US A'SYCK Corporation	●	●	●			●	●	●
Versabright						●	●	
Vexica Limited			●	●	●			
Viatech Industries		●	●	●		●	●	
VioLED International Pte Ltd			●	●	●	●	●	
Virginia Optoelectronics Inc	●	●	●	●		●	●	●
Vishay Semiconductor GmbH		●					●	
Visive			●			●		
Visual Interactive Ltd			●	●			●	
VLM GmbH - Tomorrow's light						●	●	●
 <b>Vossloh-Schwabe Optoelectronic</b> A New Lighting Experience	●		●					●
Wamco, Inc.							●	
E Wave Corporation	●		●		●			●
W. C. Heraeus GmbH							●	●
West Bank Engineering Consultancy Ltd		●	●	●				
Wilbrecht Ledco Inc			●	●			●	●
Wilson Process Systems		●						
World of Lights LED Solutions Inc						●	●	
WT&T Inc			●					
 <b>YEG Opto</b> electronics	●	●	●	●	●	●	●	●
Yo-Hua Corp.		●	●					●
YYZ Systems Inc		●	●	●	●	●	●	●
Zhuhai Mingyuan Lighting Co. Ltd			●				●	●
Zydoled		●	●	●			●	



there is not only  
off & on  
there is Everlight



MR16



Office Lighting



Streetlight



High Power



SMD LED



Power LED



LED LAMPs



IR Devices



Digital Display



Photo Coupler

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EVERLIGHT ELECTRONICS CO., LTD. | [www.everlight.com](http://www.everlight.com)

# section 3

## OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
Aavid Thermalloy															•	•	
Abacus LED	•			•												•	
AbelConn, LLC									•						•		
ACC Silicones Europe	•	•						•									
Accuratus Corporation							•	•								•	•
Adept Optical				•	•	•	•										
Advanced LED Systems						•									•		
Advanced Thermal Solutions, Inc.														•	•	•	•
AG Materials Inc.								•									
AIM Specialty Materials	•							•									
AI Technology, Inc.	•	•	•					•									
Alanod							•	•									
Albright Technologies, Inc				•	•												
Alcom Electronics				•	•						•						
Allied Electronics, Inc.			•	•	•											•	•
 <b>Alpha-One Electronics Ltd.</b>								•	•	•	•						
Aluwave AB			•			•									•		•
American Beryllia Inc.								•									•
 <b>AMERICAN BRIGHT OPTOELECTRONICS CORP.</b>		•							•						•	•	
American Bright Optoelectronics Corp																	
 <b>AMERICAN ILLUMINATION INC.</b>				•											•	•	
American Illumination Inc																	

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
Anderson & Associates								●									
 <b>Anglia Lighting</b>				●		●									●	●	●
APC-Hero				●	●	●	●								●	●	●
Apollo Optical Systems, Inc.				●													
Apticol Ltd				●	●	●											
Arco Inc.				●												●	
Arrow Electronics, Inc.			●		●		●				●		●	●			●
Arrow Electronics (UK) Ltd				●							●					●	
ASM Assembly Automation Ltd.									●								
ASM Pacific Assembly Products									●								
Asymtek	●	●					●		●								●
ATC Semitec Limited															●		
AT&S AG								●			●				●	●	
Bayer MaterialScience LLC						●	●										
BBTronics											●					●	
 <b>Bergquist Company, The</b>	●		●								●						●
BH Design Plus				●		●									●		
BizriOptics						●							●				
Brandenburg GmbH						●							●				
Breault Research Organisation													●				
Brewer Science	●																
BrightBurst Technologies, LLC				●	●	●	●										
Bright View Technologies							●										
California Micro Devices Corp.																	●
Cambridge America LLC											●						
Capovani Brothers Inc.									●								
 <b>Carclo Technical Plastics Ltd</b>				●	●	●	●										
Challenge Electronics Ltd								●			●				●	●	
Chooyu Chemical Co., Ltd.	●	●	●												●	●	●
Cl Lumen Industries							●										
Circom, Inc.															●		
Clandell Limited				●		●											
Clover Electronics						●		●									
CML Innovative Technologies (Europe)					●										●		
Cofan-PCB	●	●	●						●	●	●			●	●	●	●

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
Cognex Corporation									●								
Continental Inc.						●			●				●	●	●		
Cooler Master													●	●			●
Cooler Master USA											●		●	●	●	●	●
Cool Innovations Inc.															●	●	●
CPS Technologies																●	
Creative Electron, Inc	●																
CS Electronic GmbH											●				●		
C/S France - Wattohm Profiles							●										
Dana Enterprises Int'l, Inc.	●	●					●										
DBM Reflex				●	●	●											
Defond North America								●			●						
Denka Chemicals GmbH	●		●								●					●	●
Denki Kagaku Kogyo K.K.	●		●					●								●	●
Dialight-Lumidrives Ltd				●													
Diemat, Inc	●																
Digi-Key Corporation	●															●	●
Dipet-M Co., Ltd.											●						
DK Thermal Solutions			●								●				●		●
Dolan-Jenner Industries					●												
Dominio LED						●	●				●				●	●	●
Dow Corning Corporation	●	●		●			●	●									
DuPont Electronic Technologies			●														●
Dymax Corporation	●	●			●												
Dynacast Corp.																●	
Dynazign Illumination Group, LLC															●	●	
EBV Elektronik				●	●												
EBW Electronics, Inc.											●						
Edge Electronics, Inc.							●									●	
Edgelit Acrylics, LLC					●												
 <b>Edison Opto Corporation</b> See ad on page 25				●		●					●				●	●	
Edmund Optics				●													
Eldim S.A.				●													
Electrolube	●							●									
Electronic Interconnect						●					●						
<b>Ellsworth Adhesives</b> See ad on page 117	●	●					●										●
Elma Electronic Inc					●												
Enfis Lighting N.A.				●		●									●	●	●
Engineered Materials Systems	●	●															
epiLED				●													
Epoxy Technology, Inc	●	●						●									●
Eschenbach-Optik GmbH				●	●	●											

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
 <b>Everlight Electronics Co. Ltd.</b> See ad on page 34						●			●						●		
Evident Technologies, Inc.									●			●					
Excellence Opto. Inc.									●						●		
Fa. GK Technik									●		●				●		●
Fairfield Crystal Technology				●													
Ferro Electronic Material Systems	●	●						●									
Fiberdyne Energy/Edison LED						●											
FiberGraf Materials								●									
Fiberguide Industries, Inc.					●												
FiberVision GmbH					●												
Fischer Elektronik GmbH															●	●	●
Fivestar Corp				●	●	●	●										
Foreal Spectrum				●	●		●										
Foresight Systems Development, Inc.						●											
 <b>Forge Europa</b>															●	●	
Forward Electronics					●												
4D Optical LLC					●	●											
Fraen Corporation				●	●												
Frontier Custom Assemblies											●						
Fujipoly America Corporation		●	●	●	●		●	●	●								
Fuji Polymer Industries Co., Ltd.		●	●	●	●		●	●	●								
Furukawa America				●			●										
 <b>Fusion Optix</b>				●	●	●	●										
<b>Fusion Optix</b> See ad on page 119				●	●	●	●										
Future Lighting Solutions	●	●	●	●		●	●							●	●	●	●
Gaggione SAS				●	●								●				
Gautam Polymers				●	●		●									●	
GE Global Electronics Services										●							
Genius Electronic Optical Co., Ltd				●													
Gerber Sales											●						
<b>GlacialLight</b> See ad on page 23															●		
<b>Global Lighting Technologies</b> See ad on page 113				●	●	●											
GrafTech International			●								●				●	●	●



# CHANGE your LIGHT, SAVE more ENERGY

## All NEW LumiDas-CL 5W

FAWOO provides sustainable lighting solutions.  
Suitable for both general and decorative uses.  
Excellent alternative to the incandescent bulb.



GOOD DESIGN



AIDA



**LumiDas-CL 5W** creates a warm atmosphere.



Size(mm): Ø52XH135, E26/E27



Replaces 40W incandescent lamp



Dimmable/Non dimmable  
AC100-120V/AC200-240V



GOOD DESIGN Award  
and AIDA(Australian Idea Design Award) in 2009



A wide variety of applications  
for office, household, hotel, shop as direct or indirect lighting



Very safe from electric shock as LENS of LumiDas-CL  
is made of insulated plastic



### LumiDas-B 6W

Replaces 60W incandescent lamp

Size(mm): Ø63XH109.5, E26/E27/GU10

Dimmable/Non dimmable  
AC100-120V/AC200-240V

Radiates the light in all directions  
like conventional incandescent bulbs.



### LumiDas-D 6W

Replaces halogen PAR20

Size(mm): Ø63XH84.6, E26/E27/GU10

Dimmable/Non dimmable  
AC100-120V/AC200-240V



**light+building**

Hall 4.2 Booth G90



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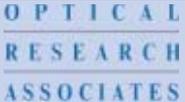
section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
<b>HAMAMATSU</b>					●												
<b>Hamamatsu Corporation</b>																	
						●			●		●				●	●	●
<b>Heatron Inc</b>																	
Helio Optoelectronics Corp.		●		●		●									●	●	
Hella Lighting Finland Oy						●											
Henkel Corp. Electronics Group	●	●															
Hokuriku Malaysia Sdn Bnd															●	●	●
Hologram Research				●	●	●							●				
Huntsman Advanced Materials (Switzerland) GmbH	●	●						●			●						
Hymite A/S								●									
i2Systems				●							●		●	●		●	
ICOS									●								
Ideas with Energy Ltd															●		
Illumination Optics Inc				●	●	●									●		
Imagineering Inc									●		●						
Independent Testing Laboratories, Inc.						●											
Indium Corporation	●	●															
Innovations in Optics, Inc.				●													
INOV Optical Development				●	●	●											
Inphora Inc.						●	●								●		
Insight Electronic Group											●					●	
Insight Products USA											●					●	
Intek Adhesives Ltd	●	●															●
Intelligent LED Solutions				●							●					●	●
												●					
<b>Intematix Corporation</b>																	
Interplex Engineered Products			●					●								●	
Intertronics	●	●															
inVisua LED Lighting Solutions						●											
IRC																	●
Ironwood Electronics								●			●					●	
Ismecca Europe Semiconductor SA									●								
ISP Co, Ltd				●	●	●											
IST Lighting Ltd				●	●	●		●			●				●	●	
Jenoptik Polymer Systems GmbH				●	●	●		●	●								
Johnsson Lighting Technologies AB (JLT)															●		
Josef Barthelme GmbH & Co. KG				●			●				●						

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
 <b>Khatod Optoelectronic</b> Kisco Conformal Coating, LLC Kodiak Lighting Products Krayden, Inc. Kyocera Corporation Laird Technologies Lambda Research Corporation Lathrop Engineering Inc LDDE Vertriebs GmbH LEDAmerica Co. LED-Depot LEDIKO LEDIL Oy				●	●	●										●	
 <b>Ledlink Optics, Inc.</b> See ad on page 49				●		●					●						
 <b>Ledon Lighting Jennersdorf GmbH</b> LED Optical Solutions LedStore The LED Store/DirectLights LEDSupply LED Transformations, LLC LEDtronics, Inc. Leicester Circuits Ltd Lightech SRL Lighting Sciences Inc. Light Prescriptions Innovators, LLC Lightscape Materials Inc. Line Lite International BV Lumentra Inc Lumex / An ITW Company Lumi Lime Limited Luminit LuxInTec SL Mango Electronics Marktech Optoelectronics Marubeni America Corporation				●													
				●	●	●											
									●								
	●															●	
						●						●			●		
				●													
					●						●						
				●	●	●	●								●		
				●	●	●		●							●	●	
									●						●		
				●	●	●											

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
Master Bond	●	●															
Matsuo Sangyo Co., Ltd				●	●												
MAZeT GmbH						●											
Mentor Graphics Corporation													●		●		
Micropress S.A.											●				●	●	●
Microsharp Corporation Ltd				●	●	●	●										
Midwest Circuits			●								●						●
Molex Inc											●						
Monolithic SA											●						
MSC Vertriebs GmbH					●												
Nanosys												●					
The Nassau Group, Ltd.				●		●											
Neon-EC Ltd				●													
Neon-LED International (HK) Ltd					●		●				●						
Nextreme															●	●	●
Nichia America Corp												●					
Novagard Solutions	●	●															
NSH Electronics									●								
Nudec SA							●										
Nu Horizons Electronics					●	●			●						●	●	
NuSil Technology LLC		●	●														
Nuventix Inc															●	●	
Nye Lubricants Inc		●															
OAS-ISUSA					●	●					●				●	●	
Ocean Optics Inc							●						●				
OEC AG					●	●							●				
Omega Communications																●	
Omron Electronic Components LLC				●	●											●	
OnChip Devices								●								●	●
opsira GmbH						●											
OPTEK Technology						●											●
 <b>Optical Research Associates</b>						●							●				
Optics Balzers AG						●	●										
Optics Lite srl				●	●	●											
 <b>Optis</b>						●							●	●	●		

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

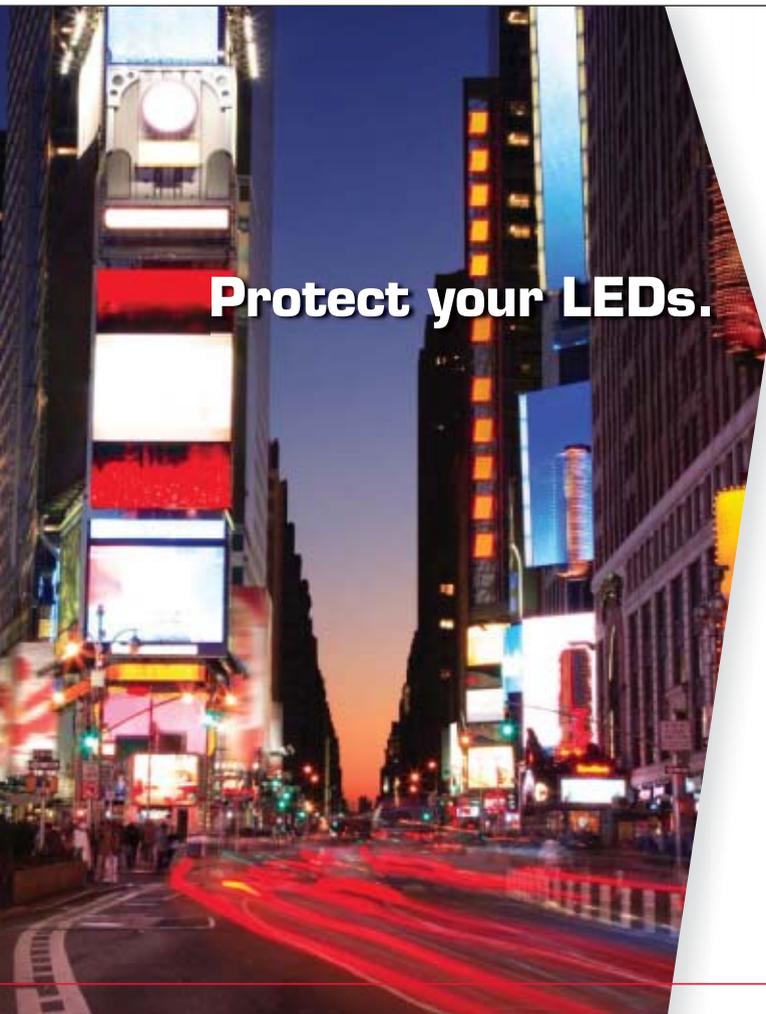
Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
 <b>Optocore Ltd</b>					•	•	•	•			•	•					
Opulent Techno Pte Ltd									•		•				•		•
 <b>Orb Optronix, Inc.</b>						•					•				•		
Oree Inc	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
OSCI Inc.						•											
Palomar Technologies Inc								•	•								
Panda Europe				•				•	•						•		•
Paragon-Firstronic											•				•		
Pharos Life Corp				•		•			•						•		
 <b>Philips Lumileds Lighting Co</b> See ad on inside front cover				•													
Piciesse Elettronica srl											•						•
PicusLED						•							•				
PJB Systems Technology Ltd											•			•			
Planar Systems	•					•											
Plus Opto Ltd				•	•												
Polymer Optics Ltd				•	•	•							•				
Professional Lamps Scandinavia ApS											•					•	
ProLight Opto Technology Corp				•													
Pro-Lite Technology LLP							•						•				
PRP Optoelectronics Ltd									•								
Quantum Silicones	•	•						•									•
Raled LLC											•				•		•
Reactive NanoTechnologies Inc (RNT)	•							•									
ReliaTech Limited - ReliaLED	•	•		•		•	•				•						
 <b>ROAL Electronics S.p.A.</b> See ad on page 52															•		•

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
 <b>ROHM Semiconductor USA, LLC</b>				●								●					
RPC Photonics, Inc.				●			●										
RS Components				●	●												●
RSoft Design Group													●				
Rudolph Bros. & Company	●	●															
Sagitario Lighting S.L.U.						●											
Samsung LED								●	●								
 <b>Sapa Extrusions Inc</b>																●	●
SASCO - A division of Arrow		●	●	●	●												●
Saturn Electronics Corporation											●					●	
SchahLED Lighting				●				●			●						
Schott North America					●												
Semicon-Optronics Channel Corp.				●													
Sensovation AG				●		●			●	●							
SG Designs											●				●		
Shenzhen Baikang Optical Co Ltd				●		●											
Shenzhen Retop LED Display Co Ltd	●	●	●														
Shin-Etsu Chemical Co Ltd	●	●		●													
 <b>Shin-Etsu Silicones Of America</b> See ad on page 50		●															
Silica (An Avnet Company)	●			●	●										●	●	
SMA Optical Technologies Inc				●	●	●	●								●		
Solvay Advanced Polymers, LLC								●									
sp3 Diamond Technologies																●	●
Special-T Lighting						●											
<b>Specialty Coating Systems</b> See ad on page 45		●						●	●	●							
Spectrum Plastics Group				●	●	●		●	●								
Spoerle	●			●	●											●	
 <b>スタンレー電気株式会社</b> STANLEY ELECTRIC CO., LTD. <b>Stanley Electric Co. Ltd. (UK)</b>				●	●												●
STR Group, Ltd.						●							●	●			

section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
Suncolor Corporation				●			●	●									
Sun Export Private Limited				●	●												
Supreme Components Intl Pte. Ltd.				●		●									●	●	
SUS MicroOptics SA				●		●											
Taconic Advanced Dielectric Division			●														●
Taiwan Solution Systems Corp.								●	●	●	●				●	●	●
Taiyo America, Inc.											●						
TDK Corporation										●							
Techsil Ltd	●	●		●													
Teledyne Lighting & Display Products				●		●			●								
100 West Electronics LLC											●				●		
Texim Europe BV	●	●		●	●											●	



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LEDs require superior protection to ensure reliable operation and long performance as lighting technologies in the aerospace, automotive, electronics, medical and military industries continue to advance.

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SCS Parylenes can be applied to virtually any surface material to create an ultra-thin, pinhole-free, conformal coating with superior moisture, chemical and dielectric barrier properties. Additionally, SCS Parylene coatings are optically clear, so the coating does not reduce the color or lumens output of LEDs. As electronic packages are exposed to extreme environments, SCS Parylene HT® offers long-term UV and thermal stability (up to 450°C), higher than most industry standard coatings.

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section 3 | OPTICS, PACKAGING & THERMAL MANAGEMENT

Company	Bonding materials (epoxies, TIMs, solders etc)	Encapsulants (silicones, epoxies), dispensers	Insulated metal substrates	Lenses & other optical components	Light guides	Optical design & consulting	Optical films, diffusers, materials	Packages & raw materials for packages	Packaging & assembly - contract manufacturing	Packaging & assembly equipment	PCBs	Phosphors & quantum dots	Software for optical design	Software for thermal design	Thermal design & consulting	Thermal heat sinks	Thermal substrate materials
Tharo Systems, Inc.										●							
Thermalking Technology Intl. Corp.															●	●	
Thermastrate Ltd.			●						●		●				●	●	●
3DZ Ltd						●									●		●
Ticona Engineering Polymers								●									
Optical Scientific Corp.				●	●	●											
 <p><b>TOSHIBA</b> Leading Innovation &gt;&gt;&gt;</p>																	
<p><b>Toshiba Electronics Europe</b></p>																	
Towa Corporation										●							
TPL Vision											●				●		
TradeKey (Pvt.) Limited	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Turboard Technologies Inc											●						
 <p><b>Tyco Electronics</b> Our commitment. Your advantage.</p>																	
<p>■ Tyco Electronics See ad on inside back cover</p>																	
Uniglobe Kisco Inc	●	●	●					●			●						●
Unity-Advance Electronics Co.,Ltd											●						
Universal Sales Co											●						
Universal Science											●			●	●	●	
 <p><b>UPEC Electronics Corp.</b></p>																	
Upstream Engineering Inc.				●		●											
US A'SYCK Corporation				●							●		●				
Vexica Limited											●					●	
VLM GmbH - Tomorrow's light				●													
Wavelength Electronics Inc.																●	
W. C. Heraeus GmbH	●	●															
West Bank Engineering Consultancy Ltd						●					●			●			
WhiteOptics LLC				●			●										
Wilson Process Systems											●						
WT&T Inc				●													
 <p><b>YEG Opto</b> electronics</p>																	
ZEMAX Development Corporation				●	●	●	●				●			●		●	●



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Reference photos of OPTILED's project  
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Galaxy LED Lamp



Round 150 LED Downlight



Super Star LED Lamp



Tube LED Tube



Array LED Fixture

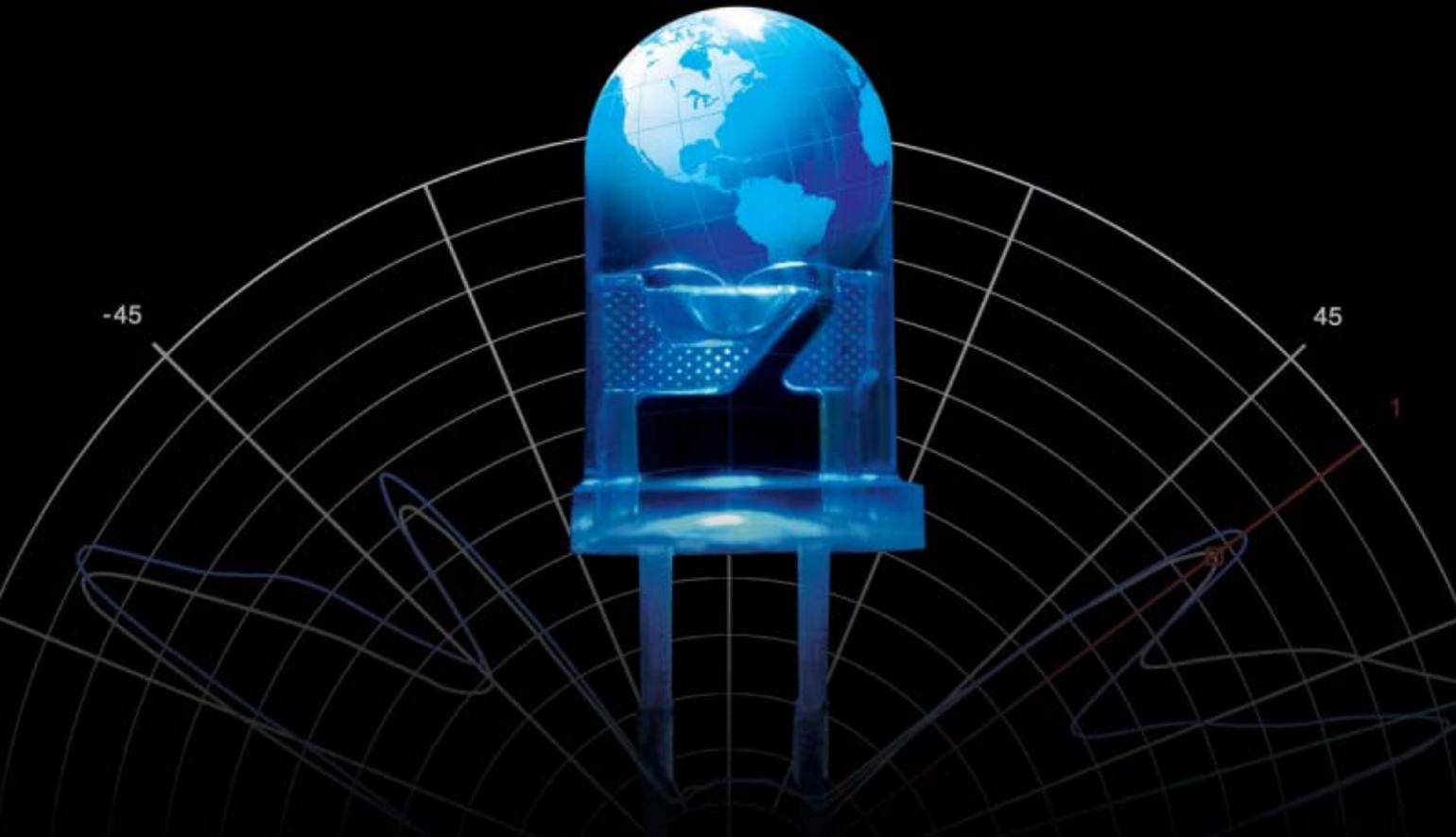
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- Color temperature and color rendering index
- Dominant wavelength and spectral data
- Spatial radiation pattern

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# section 4

# LEDs MAGAZINE

## TEST & MEASUREMENT

Section sponsor:



### TEST & MEASUREMENT

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Bentham Instruments Ltd  
Clover Electronics  
Electric Power Research Institute  
Elkays Electronics, Inc.  
4D Optical LLC  
Gigahertz-Optik Inc  
Independent Testing Laboratories, Inc.  
Inphora Inc.



Intertek  
■ SEE AD ON PAGE 77

KEMA



Labsphere, Inc.  
■ SEE AD ON PAGE 61

Lighting Association Laboratories, The  
Lighting Sciences Inc.  
LightTest Labs  
Lumentra Inc  
Majantys  
MuAnalysis Inc  
opsira GmbH



Optis

Optronic Laboratories



Orb Optronix, Inc.

Oree Inc  
OSA Opto Light GmbH  
Power Light Systems GmbH  
Product Safety Engineering Inc  
Pro-Lite Technology LLP  
Radiant Imaging Inc  
Serma Technologies  
Shanghai Yaming-Lighting Co.,Ltd.  
SphereOptics  
TerraLUX Inc.  
TradeKey (Pvt.) Limited  
UL International (UK) Ltd  
VLSI Standards Inc



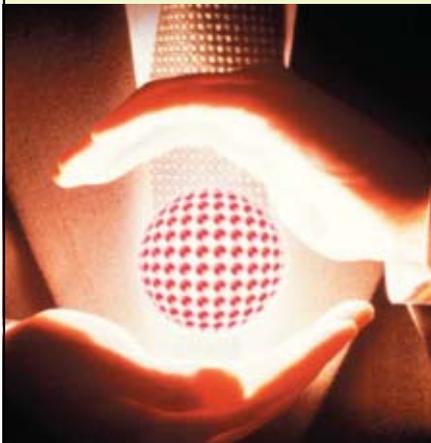
Optics solutions for: CREE EDISON PHILIPS LUMILEDS NICHIA OSRAM Opto Semiconductors SEOUL

- More than 30 types of new lenses for small size packaging LED.
- Recognised by Cree, Edison Opto, Osram Opto, and Seoul semi-conductor.
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SCR-1012 / SCR-1016 / KER-2500 /  
KER-2600

**Durable Die Bond Adhesives:**  
KER-3000-M2 / KER-3100-U2 /  
KER-3200-T1

**Thermally Conductive,  
Double-Sided Tape:**  
TC-20SAS

Contact us to learn more about these  
and many other superior silicone  
materials for HB LEDs.

**The choice is clear.**

**Shin-Etsu**

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section 4 | TEST & MEASUREMENT

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**TEST & MEASUREMENT EQUIPMENT**

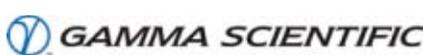
Advanced Thermal Solutions, Inc.  
Allied Electronics, Inc.  
Arroyo Instruments  
Artifex Engineering e.K.  
ASM Pacific Assembly Products  
Avantes  
Bentham Instruments Ltd  
B & W Tek, Inc.  
Capovani Brothers Inc.  
Cepoint Networks, LLC  
CRAIC Technologies  
Eldim S.A.  
Electroglas Inc

LayTec GmbH  
Lighting Association Laboratories, The  
Lighting Sciences Inc.  
Lumentra Inc  
Majantys  
Meiji Techno America  
Mentor Graphics Corporation  
Micro-Lite, Inc  
MKS Instruments Inc  
Ocean Optics EMEA  
Ocean Optics Inc  
Operations Technology Inc. (OPTEK)  
opsira GmbH  
Op-Test



**FEASA**

FiberVision GmbH  
4D Optical LLC



**Gamma Scientific**

GE Global Electronics Services  
Gigahertz-Optik GmbH  
Gigahertz-Optik Inc



**Hamamatsu Corporation**

Hi-Rel Products  
Hologenix Inc  
Independent Testing Laboratories, Inc.  
Inphora Inc.



**Instrument Systems GmbH**  
■ SEE AD ON PAGE 48

International Light Technologies  
Ismeca Europe Semiconductor SA  
Keithley Instruments GmbH  
Konica Minolta Sensing Singapore Pte Ltd



**Labsphere, Inc.**  
■ SEE AD ON PAGE 61



**Optis**

Opto System Co Ltd  
Optronic Laboratories



**Orb Optronix, Inc.**

Pentamaster Instrumentation Sdn Bhd  
Photonic Lattice Inc  
Precision Photometrics Ltd  
Pro-Lite Technology LLP  
Radiant Imaging Inc  
SemiProbe  
SphereOptics



**StellarNet Inc**

SUSS MicroTec  
Thor Lighting Solutions Inc.  
Optical Scientific Corp.  
TradeKey (Pvt.) Limited



**Vektrex**

VLSI Standards Inc

**Light Engine**

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- ☺ Cold Storage Lighting Module
- ☺ Landscape Lighting Module
- ☺ Signage / Advertisement Panel & Billboard Lighting
- ☺ Automotive Lighting Module

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# section 5

## DRIVERS, CONTROL & CONNECTORS

Section sponsor:



Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
Abacus LED		●	●	●	●	●		●	●
AbelConn, LLC								●	
ACDC Lighting		●	●						
AC Electronics		●			●	●			
Adam Electronics		●							
Adelto Ltd.			●						
Advanced Illumination, Inc					●				
Advanced Interconnections Corp.								●	
Advanced LED Systems		●	●			●	●		
Advenas Lighting Technologies, LLC		●			●	●			
AEG Power Solutions			●		●	●	●		
AgiLight Inc.					●				
Aimtec Inc.					●				
Alcom Electronics				●	●				
All Brite International C., Ltd			●		●		●		
Allegro MicroSystems, Inc.		●		●					
Allied Electronics, Inc.	●	●		●	●		●	●	
Aluwave AB		●							
American Control Systems Inc.	●	●	●			●			
Amphenol Industrial Operations								●	
AnalogicTech				●	●				
 solid state solutions <b>Anglia Lighting</b>	●		●	●	●	●		●	
APC-Hero	●	●	●	●	●	●		●	●
AppLED BV			●		●				
AP Technologies Ltd.		●			●				
Arco Inc.	●			●	●			●	
ARC Solid-State Lighting Corp.	●	●	●		●				
Aries Electronics								●	
Arrow Electronics, Inc.			●	●	●		●		
Arrow Electronics (UK) Ltd	●	●	●	●	●	●		●	
Arroyo Instruments					●				●
Astrodyne					●				

section 5 | DRIVERS, CONTROL & CONNECTORS

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
ATC Semitec Limited				●					
ATG Electronics Corp.	●		●		●	●	●		
Atmos Lighting Ltd					●				
AT&S AG						●			
austriamicrosystems AG		●		●	●				
Autec Power Systems, Inc.		●			●				
 <b>Avago Technologies</b> See ad on page 6				●					
AVX Corporation								●	
BAG electronics GmbH		●	●		●				
BBTronics						●			
B/E Aerospace	●	●	●		●	●		●	
Beta Opto Technology Co., Ltd.	●		●		●				
BG-LED.COM					●				
Binay Opto Electronics Pvt. Ltd.					●				
BJB GmbH & Co. KG								●	●
Blue Sky Lighting					●				
Brazen Tek	●		●	●	●	●	●		
Brilliantz Electronic Systems Ltd					●				
Bulartist Ltd.					●			●	●
California Micro Devices Corp.				●					
CAO Group, Inc.					●				
Capovani Brothers Inc.							●		
CAP-XX (Australia) Pty Ltd						●			
 <b>Carclo Technical Plastics Ltd</b>								●	●
Central Semiconductor Corp.		●				●			
Cepoint Networks, LLC								●	●
Cerno		●				●			
Challenge Electronics Ltd	●		●	●		●			
Check Up SpA		●			●				
Circom, Inc.						●		●	
Citel Incorporated	●				●				
Clare, Inc.				●					
Clean Lighting Solutions, LLC					●			●	
ClearView Development Co Ltd		●	●		●	●			
Clover Electronics					●				
CML Innovative Technologies (Europe)					●				
Coilcraft				●	●				
Colombia LEDs	●	●	●	●	●				



Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
<b>ColorStars</b>			•		•		•		
<b>Color Stars Inc</b>									
Continental Inc.			•			•			
Cooper Lighting & Security			•		•				
Crestron Electronics, Inc.			•						
CS Electronic GmbH								•	
CUI Inc					•			•	
Cypress Semiconductor Corp.	•		•	•					
Defond North America			•			•			
Delta Electronics, Inc					•				
Delta Light		•				•			
Dialight-Lumidrives Ltd					•				
Diana Electronic-Systeme GmbH		•	•		•	•			
Dicrom Electronica S.L.			•	•	•				
Digi-Key Corporation	•		•	•	•			•	•
DigiLighting, Inc	•	•	•		•	•			
DigitLight AG		•	•		•	•			
Diodes Incorporated				•					
D-LED Illumination Technologies	•	•	•		•				
DMS Lighting, LLC			•		•				
<b>DOMAG</b> LED TECHNOLOGY CO., LTD.		•			•	•			
<b>DOMAG LED Technology Co., Ltd.</b>									
Dominant Group Technology Ltd	•								
Dominio LED		•			•	•			
Double Microelectronics		•	•	•	•	•	•		
DST		•			•				
Dynacast Corp.								•	
Dynamic LED Ltd					•	•		•	
Dynazign Illumination Group, LLC		•	•		•	•	•		
EBV Elektronik			•	•			•		
EBW Electronics, Inc.		•			•	•			
Eco Light Pte Ltd	•				•				
Eco Marketing	•	•	•	•	•	•		•	
EcoTek Lighting		•							
Eden Park Illumination					•				
Edge Electronics, Inc.						•		•	
eldoLED America, Inc.	•	•	•	•	•	•			
<b>eldoLED</b> your product   our drive eldoLED by See ad on page 63	•	•	•	•	•	•			

section 5 | DRIVERS, CONTROL & CONNECTORS

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
Electric Power Research Institute						●			
Electrobrain Enterprises	●		●			●			
Emerson Network Power - Embedded Power					●				
Eminus Inc.					●				
Endicott Research Group (ERG), Inc.	●	●			●				
Enfis Lighting N.A.						●			
Enhance Electronics					●				
enjoy Lichtgestaltung								●	●
EnvironmentalLights.com	●	●	●			●			
EO Lighting					●				
ePace Products								●	
EPCOS, Inc.	●	●	●		●	●	●		
EPtronics, Inc		●			●	●			
Equipson S.A.	●		●					●	
Etin Daniels	●	●	●						
 <b>Everlight Electronics Co. Ltd.</b> See ad on page 34	●								
Excelsys Technologies Limited					●				
 <b>Excelsys Technologies</b> See ad on page 57					●				
Exclara		●	●	●	●				
Fa. GK Technik		●	●		●	●			
Fobsun Electronics Ltd			●		●				
Focus Company					●				
 <b>Forge Europa</b>		●	●		●	●			
Freescale Semiconductor	●	●		●	●				
Frontier Custom Assemblies								●	
Future Lighting Solutions	●	●	●	●	●	●	●	●	●
Gerber Sales		●			●			●	
Greengage Lighting Ltd			●		●			●	●
GreenMark Inc.		●	●		●				
 <b>GVA Lighting Inc</b> Hai Chang Industrial Co., Ltd.			●		●				
Hai Chang Industrial Co., Ltd.					●			●	

- 95% Efficient
- High Reliability
- 30-300W
- IP67 Waterproof LED Drivers
- Constant Current & Constant Voltage
- International Safety Approvals



# LED Power Supplies

*Leading edge LED Driver solutions  
for lighting applications*



**5 YEAR**  
Warranty

See data sheet

- Street Lighting
- Bay Lighting
- Signs and Displays
- Refrigerator Lighting
- Architectural Lighting

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USA

Tel: +1 972 771 4544  
e-mail: salesusa@excelsys.com

#### Europe/Asia

**Excelsys Technologies Ltd**  
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Little Island, Cork,  
Ireland

Tel: +353 21 4354716  
e-mail: sales@excelsys.com

[www.excelsys.com](http://www.excelsys.com)

section 5 | DRIVERS, CONTROL & CONNECTORS

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
<b>HAMAMATSU</b> Hamamatsu Corporation	•								
Hanskraft Inc								•	•
<b>HEATRON</b> Heatron Inc		•			•	•			
<b>hilux</b> LED Solutions		•		•	•				
Hirose Electric USA								•	
Hongkong Forous Group Co Ltd		•			•				
Hotbeam		•			•				
HTDS					•				
Hynetic Electronics Pvt Ltd		•	•		•	•			
i2Systems			•		•				
Ideas with Energy Ltd		•	•		•	•			
iGuzzini illuminazione UK Ltd	•	•	•		•				
i-led Solutions Ltd			•						
IndoLED					•				
Industrial Electronics Services, Inc.						•			
Infineon Technologies AG		•		•	•				
Ingebat S.L.	•				•				
Ing. Elmar Schrotek		•			•				
Inlux Lighting Co., Ltd.	•				•			•	
Innolux Pte Ltd			•						
Innovative Scientific Solutions, Inc		•				•			
Insight Sign Systems					•				
Insta Elektro GmbH	•	•	•		•			•	•
Intelligent LED Solutions		•	•	•	•	•			
Interactive Technologies INc			•						
International Light Technologies					•				
International Rectifier				•					
Interplex Engineered Products								•	•
Intersil Corporation		•	•	•	•				
<b>INVENTRONICS</b> Inventronics		•			•				
IP LED					•				
Ironwood Electronics				•					
ISEP Lighting Inc.					•				
IST Lighting Ltd	•		•		•	•			

Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
ITT Interconnect Solutions								●	
i-Tunnel (Indal Group)			●						
i-vision (uk) ltd	●	●	●						
IVUS Energy Innovations		●			●	●			
JKL Components Corporation					●				
Johnson Lighting Technologies AB (JLT)		●	●		●	●			
Josef Barthelme GmbH & Co. KG	●				●				
JS LED Power Inc.	●	●						●	●
Juice Technology Ltd		●	●		●	●	●		
JuiceWorks LLC		●			●	●			
Justin Inc.					●				
Karbon Lite Ltd						●			
Kodiak Lighting Products						●			
Kypai Ltd					●				

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Kingbright's most popular Through-hole and SMD-LEDs in super-bright pure-orange



Dominant wavelength: 605 nm • Peak wavelength: 611 nm • Forward voltage: typ. 2,2V – max. 2,8V  
Luminous intensity up to typ. 18.000 mcd @ IF 20mA

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
LandiMark Co.,Ltd	●		●		●				
Lathrop Engineering Inc						●			
LDDE Vertriebs GmbH		●			●	●	●		
LeddarTech	●	●			●				
LED-Depot				●	●				
LEDynamics Inc			●		●	●	●		
LEDIKO					●	●			
LED Import BV	●				●				
LED Lighting, Inc.	●	●	●		●	●		●	
 <b>LED Linear</b> linear lighting solutions ■ LED Linear GmbH See ad on page 74			●		●			●	
Ledlite Power		●			●		●		
LED Neon Flex			●		●	●			
LED Optical Solutions						●			
LED Retro8					●				
leds.com.mx			●						
Ledsgo		●	●						
LED Specialists, Inc.					●	●	●		
LedStore			●		●				
LEDSupply				●	●				
LED Transformations, LLC		●				●			
LED*Waves					●		●		
Leviton Manufacturing Company								●	●
 <b>LG Innotek</b> ■ LG Innotek See ad on page 27		●	●		●				
LichtwerkBerlin Ltd.	●	●							
Lightech SRL								●	●
Lighthouse WorldWide, LLC		●			●	●			
Lightspeed Technologies		●	●		●	●			
Line Lite International BV					●				
LiteLED Ltd			●		●		●		
Logah Technology Corp.					●				
Logolight						●			
LPA Excil Electronics Ltd		●			●	●			
Lucid-Lighting		●	●		●	●			
Lumentra Inc						●			
Lumilens Optoelectronics Inc.		●			●				
Lumi Lime Limited		●	●		●				
Luminous Flux					●				
Lumstar Technology Inc	●	●			●				
Lutron Electronics					●				
LuxInTec SL	●	●	●		●	●	●		

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section 5 | DRIVERS, CONTROL & CONNECTORS

Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
 ■ Lynk Labs See ad on page 2					•				
 ■ Macroblock Inc. See ad on page 102				•	•	•			
MAC SRL	•	•	•		•	•	•		
Madrix	•	•	•		•	•			
Magic Lite Ltd.					•				

# We have your LED Measurement Solution



## Instruments and Systems for measurement and analysis of:

- complete thermal, optical and electrical testing per IESNA LM-79-08 & LM-80
- optical, spectral, color and purity characteristics
- intensity, spectrum and derived color values
- spatial distribution

*Our Sales Engineers can help you choose the right system. Contact us today.*

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
 <b>Magtech Industries Corporation</b> High Power LED Driver/Power Supplies					•				
Majantys	•								
MAL Effekt Technik		•			•				
Mango Electronics						•			
Marc Signage		•			•				
Marktech Optoelectronics				•	•	•			
Marl International Limited			•						
Maxim Integrated Products				•					
MAZeT GmbH	•	•	•			•			
 <b>Mean Well USA, Inc.</b> See ad on page 72					•				
Melexis				•	•				
Microsemi Corporation	•	•	•	•	•				
Midwest Circuits					•		•		
Mighty Power Solutions Corp.					•				
Mimaki ECO Lighting Solutions					•				
Modo Lights					•	•			
Modo Lights FZCO					•				
Molex Inc								•	
Monolithic SA		•		•					
 <b>Mouser Electronics</b> a tti company				•	•			•	•
MP Lighting								•	•
MSC Vertriebs GmbH	•				•		•		
MTEC GmbH			•		•				
Nanker LED lighting Ltd		•							
National LED Direct			•		•				
 <b>National Semiconductor</b> See ad on page 91				•			•		
NCW (Holdings) Ltd		•	•		•	•		•	
NEC Electronics America Inc	•		•	•	•				
Neon-EC Ltd				•	•				



## eldoLED

your product | our drive

# POWERdrive, world's most powerful LED driver

Colour  
is our nature

## POWERdrive: power meets intelligence

The POWERdrive Series: 4-channel constant current LED driver/controllers with a wide input voltage range of 12V-32V DC. For networked (DMX, DALI and 0-10V) and standalone high-brightness LED luminaires that require a power output of up to 180 watts! POWERdrive has an intuitive, 3-button user interface with display for unprecedented ease-of-configuration. For more information, please visit [www.eldoled.com/powerdrive](http://www.eldoled.com/powerdrive).



### Advantages

- Available in 45, 90 and 180 watt versions
- DALI, DMX and 0-10V compatible
- LED current configurable to any value between 200mA and 1.4A in 50mA steps
- Suited for most LED types currently on the market
- Unprecedented ease-of-configuration
- LEDcode-compatible
- Extremely smooth dimming and fine colour mixing: 15-bit control resolution
- ShowMaster: user-definable show sequences
- Very low EMI
- Compact form factor: 193x50x23mm / 7.6x1.97x0.91inch

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For other countries please contact : eldoLED Europe bv | [sales@eldoled.com](mailto:sales@eldoled.com) or +31 40 2054050 (Eindhoven, The Netherlands)

section 5 | DRIVERS, CONTROL & CONNECTORS

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
 <b>Neo-Neon LED Lighting International Ltd</b>	•	•	•		•	•	•		
Neo-LED International (HK) Ltd			•						
Nooteboom Elektronica						•			
Nu Horizons Electronics				•	•	•			
NuLEDs by Numinus LLC	•	•	•	•	•	•	•		
 <b>NXP Semiconductors</b>			•	•	•				
OAS-ISUSA		•				•			
Omega Communications						•			
Omron Electronic Components LLC								•	
 <b>ON Semiconductor</b>		•		•	•				
Operations Technology Inc. (OPTEK)			•						
OPTEK Technology	•							•	•
 <b>Optocore Ltd</b>	•	•			•	•		•	•
 <b>OptoElectronix Inc.</b>								•	
Opto Tech	•	•	•						
Optotek Limited					•	•			
Opulent Technologies Inc			•						
 <b>Orb Optronix, Inc.</b>						•			
Orient Lighting Co. Ltd.	•	•	•						
Orled						•			
Oshino Architectural LED Lighting			•		•		•		
OSRAM GmbH			•		•		•		

Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
 <b>OSRAM SYLVANIA</b> See ad on page 95	•	•	•	•	•	•	•		
Ozium.com			•						
Palomar Technologies Inc						•			
Pegasus Associates Lighting					•				
Permlight for Signs					•				
Pharos Life Corp		•	•		•	•			
Phihong Technology					•				
 <b>Phihong USA</b>					•				
Philips Color Kinetics			•		•		•		
 <b>Philips Emergency Lighting</b>					•				
Philips Lighting UK					•				
Phoster Industries		•			•	•			
Photon Power Technology Ltd					•	•			
Pixalto	•	•	•			•			
PJB Systems Technology Ltd		•	•		•	•			
Plus Opto Ltd				•	•				
Positronic Industries								•	
Powerbox SSL					•				
Power Integrations				•	•				
Power Light Systems GmbH	•				•				
Powermicro Technology Sdn Bhd	•	•	•						
 <b>Power Partners Inc</b>		•			•				
Power Sources Unlimited Inc	•				•				
Power Supply Sourcing Ltd							•		
Powertech			•		•		•		
Power Vector	•	•	•	•	•	•	•		
Prema Semiconductor GmbH		•		•					
Premier Lamp Distributors Ltd			•		•				
Professional Lamps Scandinavia ApS		•			•				
PRP Optoelectronics Ltd		•			•	•			
PSSL (Power Supply Sourcing Ltd)					•				
Quasar Light Co. Ltd.	•		•						
Radix Controls Inc					•				

section 5 | DRIVERS, CONTROL & CONNECTORS

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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
Raled LLC		●	●		●	●			
Real World Designs Ltd		●	●		●				
 <b>RECOM Power Inc</b>		●			●	●			
ReLED Systems					●				
ReliaTech Limited - ReliaLED					●	●		●	●
Rite Lites			●		●			●	●
RLS Innovations GmbH	●	●	●			●			
 ■ <b>ROAL Electronics S.p.A.</b> See ad on page 52	●	●	●		●	●	●		
 <b>ROHM Semiconductor USA, LLC</b>				●	●				
RoweBots	●	●	●		●	●			
RS Components			●	●	●		●		
S3J Electronics LLC					●	●			
Sagitario Lighting S.L.U.	●	●				●			
SAKMA Electronica Industrial SA		●			●				
Samudra Electronic Systems Pvt Ltd		●			●				
SASCO - A division of Arrow	●		●	●	●	●	●		
SchahLED Lighting					●		●		
Schurter Inc.								●	
Select Software Limited	●	●	●		●	●	●		
Semicon-Optronics Channel Corp.	●	●	●		●		●		
Senslite Corporation		●		●					
Sensovation AG						●			
setron GmbH	●		●	●	●			●	
SG Designs		●				●			
Shanghai Euchips Industrial Co. Ltd.		●	●		●				
 ■ <b>Sharp Microelectronics Europe</b> See ad on page 101				●	●				
Sharp Microelectronics of the America				●	●				
Shenzhen Chipower Technology Co Ltd		●							
Shenzhen Jeeja Century Optoelectronics				●	●				
Shenzhen Retop LED Display Co Ltd			●			●		●	●
SH Lighting Ltd					●				

**ELUX**™  
GOING GREEN SUSTAINABILITY

**35W**



**LED Mr16**

**40W**



**LED R50**

**50W**



**LED Gu10**

**75W**



**LED PAR20**

**100W**



**LED PAR30**

**150W**



**LED PAR38**

**DIMMABLE**

**60W**



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Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
 <b>Signcomplex Limited</b> See ad on page 97	•		•						
Silica (An Avnet Company)		•	•	•	•	•		•	•
Silverled	•	•							
SMA Optical Technologies Inc		•							
SM Electronics				•					
Solid State LED Lighting			•		•	•			
SoundOff Signal			•		•		•		
Special-T Lighting	•	•	•		•	•	•		
Spoerle	•		•	•	•				
SpriteDrive		•	•		•	•			
SRM-Technik GmbH						•			
Stadium Power		•		•	•	•			
STMicroelectronics		•		•	•				
Sun Export Private Limited					•				
Sunfire LED, LLC					•				
Sunovia Energy Technologies		•	•		•				
Sunpower (UK) Ltd		•			•	•			
Sunrise Systems, Inc.						•			
Super Bright LEDs					•				
Supertex				•	•				
SuperViewVision					•				
Supreme Components Intl Pte. Ltd.	•	•	•	•	•	•		•	•
Synapse Wireless Inc.			•			•			
Tally Display Corp	•	•			•	•			
TAOS, Inc.	•								
TDK Corporation					•				
Technical Witts, Inc.		•			•	•			
100 West Electronics LLC		•			•	•	•		
Tepcomp Oy		•			•	•			
Terachips, Inc.				•					
TerraLUX Inc.					•	•			
Texas Instruments				•	•				
Texim Europe BV	•	•	•	•	•	•	•	•	•
Thermastrate Ltd.								•	
 <b>Thomas Research Products</b> Innovative & Energy Saving Lighting Controls					•				
<b>Thomas Research Products</b>									
3DZ Ltd		•				•			
 <b>TOSHIBA</b> Leading Innovation >>> Toshiba Electronics Europe				•					

Company	DRIVERS & CONTROLS							CONNECTORS & CABLING	
	Color sensors & controllers	Custom-designed drivers	Digital lighting controllers	Driver ICs	Drivers & power supplies	Electronic design & consulting	Electronic loads	Connectors & cables	Mounting systems
TPL Vision		●			●	●			
TradeKey (Pvt.) Limited	●	●	●	●	●	●	●	●	●
Traxon Technologies Ltd.			●					●	
Triad Semiconductor		●	●	●		●			
TridonicAtco UK Limited			●		●				
Trigon Technology Limited		●	●		●	●			
Tri-O-Light BV			●		●		●		
Trola*Tek	●					●			
Tunewell Juice Group					●				
 <b>Tyco Electronics</b> Our commitment. Your advantage ■ Tyco Electronics See ad on inside back cover								●	●
usLEDsupply					●			●	
Vexica Limited		●							
Viatech Industries					●	●		●	●
Vishay Semiconductor GmbH				●					
Visive						●			
Visual Interactive Ltd		●				●			
VLM GmbH - Tomorrow's light			●		●		●		
 <b>Vossloh-Schwabe Optoelectronic</b> A New Lighting Experience					●		●		
Wavelength Electronics Inc.		●			●				
W. C. Heraeus GmbH								●	
Wessel LED Lighting Systems								●	
West Bank Engineering Consultancy Ltd					●	●			
Wilbrecht Ledco Inc								●	
World of Lights LED Solutions Inc	●		●		●			●	●
Würth Electronics Midcom Inc								●	
XP Power					●				
 <b>YEG Opto</b> electronics		●	●	●	●	●		●	●
YYZ Systems Inc		●	●	●	●	●			
 <b>Zierick</b> ENGINEERED INTERCONNECTION SOLUTIONS								●	
Zydoled		●	●		●	●	●		

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The new K465i MOCVD System accelerates your high-volume LED manufacturing by delivering the industry's lowest cost of ownership, highest productivity and enabling you to achieve your best yield yet. Learn more at [www.veeco.com/mocvd](http://www.veeco.com/mocvd)



# section 6

# LEDs MAGAZINE

## CHIP DESIGN & MANUFACTURING



### CHIP DESIGN & MANUFACTURING

#### CHIP PROCESSING EQUIPMENT

ABM, Inc.  
Allwin21 Corp.  
Asahi Diamond America  
ASM Pacific Assembly Products  
Asymtek  
Axic Inc.  
Beta Squared Lithography, Inc.  
Capovani Brothers Inc.  
Electroglas Inc  
Epigap Optoelektronik GmbH

**Evatec Ltd**

GE Global Electronics Services

**JP Sercel Associates, Inc**

**KLA-Tencor Corporation**

Microdiamant AG  
MKS Instruments Inc  
Obducat AB  
Opto System Co Ltd  
Oxford Instruments Plasma Technology  
Pall Corporation  
Palomar Technologies Inc  
Plasma-Therm  
RKI Instruments  
Surface Technology Systems plc  
Tokyo Electron Limited (TEL)  
TradeKey (Pvt.) Limited

**Veeco Instruments Inc**  
■ SEE AD ON PAGE 70

#### CHIP SEPARATION EQUIPMENT

Asahi Diamond America

LEDsmagazine.com

Epigap Optoelektronik GmbH  
GE Global Electronics Services  
Haiku Tech, Inc.

**JP Sercel Associates, Inc**

Opto System Co Ltd  
TradeKey (Pvt.) Limited

#### EPITAXIAL GROWTH CHEMICALS AND GASES

AIM Specialty Materials  
Air Liquide  
Dow Electronic Materials  
Innovative Organics (Saint-Gobain)  
Matheson Tri-Gas, Inc.  
TradeKey (Pvt.) Limited

#### EPITAXIAL GROWTH SYSTEMS AND SOFTWARE

AIXTRON AG  
BluGlass  
Capovani Brothers Inc.  
GE Global Electronics Services  
Oxford Instruments Plasma Technology  
TradeKey (Pvt.) Limited

**Veeco Instruments Inc**  
■ SEE AD ON PAGE 70

#### EPITAXIAL WAFERS

AP Technologies Ltd.  
Bandwidth Semiconductor  
Epistar Corporation  
Epivalley Co., Ltd.  
The Fox Group Inc  
Nitride Crystals Inc  
TradeKey (Pvt.) Limited  
E Wave Corporation

#### PHOTONIC CRYSTAL MANUFACTURING EQUIPMENT

Advanced Media Inc. (RitekUSA)  
GE Global Electronics Services  
Obducat AB  
TradeKey (Pvt.) Limited

#### WAFER CHARACTERIZATION EQUIPMENT

Axic Inc.

Capovani Brothers Inc.  
Corning Tropol Corporation  
CRAIC Technologies  
Electroglas Inc  
GE Global Electronics Services  
Hologenix Inc  
ICOS  
Keithley Instruments GmbH

**KLA-Tencor Corporation**

LayTec GmbH  
LDB Corp  
Opto System Co Ltd  
Rudolph Technologies, Inc.  
SemiProbe  
Telops Inc.  
Tokyo Electron Limited (TEL)  
TradeKey (Pvt.) Limited

**Veeco Instruments Inc**  
■ SEE AD ON PAGE 70

VLSI Standards Inc

#### WAFERS & SUBSTRATES (SAPPHIRE, SIC, GAAS, ALN, ZNO)

Accuratus Corporation

**Cree Inc**  
■ SEE AD ON PAGE 9

Crystal-on Co. Ltd.  
CrystalQ  
Dowa Electronics Materials Co., Ltd.  
Fairfield Crystal Technology  
The Fox Group Inc  
Innovative Organics (Saint-Gobain)  
Jiaozuo City Crystal Photoelectric Material  
Microdiamant AG  
Nitride Crystals Inc  
OnChip Devices  
Optical Semiconductors Inc  
Rubicon Technology  
Silian Sapphire Corporation  
TradeKey (Pvt.) Limited  
Umicore

60~150W

### CLG Series

- PFC function
- IP65~67
- Potted with thermal-conducted glue for a better heat reduction
- Metal case
- Suitable for outdoor and street lighting



60~96W

### CEN Series

- IP66
- UL8750
- Metal case
- Suitable for outdoor and street lighting



20~96W

### PLN Series

- PFC function
- IP64
- UL1310 Class 2, UL879
- Plastic case
- Suitable for all kinds of LED lighting



30~60W

### ELN Series

- IP64
- UL1310 Class 2
- Plastic case
- Dimming function
- Suitable for LED indoor lighting



# Going Green? Go LED Power!

Dry, Damp,  
Wet locations

Class 2 / UL 879 SAM / UL 8750 (LED Power Source)

Mean Well's 2600 Power Supply models have been serving worldwide customers since 1982. If you are thinking green, Mean Well's LED power supplies have 9 series with dozens of models that will provide the best power solutions for your needs.

96~240W

### HLG Series

- IP65~67
- UL8750
- Metal case
- Suitable for LED lighting and street lighting applications



18~60W

### LP Series

- IP67
- UL1310 Class 2
- Plastic case
- Suitable for LED-based decorative, architectural lighting, and LED electronic displays



30~96W

### PLC Series

- PFC function
- UL1310 Class 2
- Plastic case
- Terminal block type
- Suitable for indoor LED lighting and moving sign applications



20~60W

### PLP Series

- PFC function
- PCB type
- Suitable for LED-based decorative, architectural lighting, and LED electronic displays



150W

### ULP Series

- PFC function
- U bracket type
- Suitable for LED street lighting (built-in lighting fixture)



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# section 7

## NETWORKS & DISTRIBUTORS

Company	LED packages & chips	Drivers & controllers	Optics & packaging	Arrays & modules	Design & integration services
 Anglia Lighting solid state solutions	Avago, Cree, Sharp	Microchip, Power Integrations, Sharp, ST Microelectronics, Diodes Inc	Aavid, Berquist, Calinar, Carclo, Laird, Ledil, NMB, Polymer Optics	Avago, Sharp	Anglia Designs
 Mouser Electronics a tti company	•	•	•	•	•
 YEG Opto	Seoul Semiconductor, Excellence Opto Inc, Samsung, SunLED	Harvard, Soaring, New Japan Radio, FSP, Mornsun, Prema, KEC	Fraen, Carclo, Gaggionne, Sekonix	YEG Opto, T Bestek	YEG Opto

**MORE COMPONENT DISTRIBUTORS**

Abacus LED  
 Alcom Electronics  
 All Brite International C., Ltd  
 Allied Electronics, Inc.  
 APC-Hero  
 AppLED BV  
 AP Technologies Ltd.  
 Arco Inc.  
 Arrow Electronics, Inc.  
 Arrow Electronics (UK) Ltd  
 Clandell Limited  
 Components Bureau Ltd  
 Dana Enterprises Int'l, Inc.  
 Diamond LED Lighting  
 Dicrom Electronica S.L.  
 Digi-Key Corporation  
 Dominio LED

EBV Elektronik  
 Edge Electronics, Inc.  
 EPCOS, Inc.  
 Equipson S.A.  
 Future Lighting Solutions  
 HTDS  
 Ingebat S.L.  
 Intelligent LED Solutions  
 LEDIKO  
 Lightspeed Technologies  
 Marktech Optoelectronics  
 Monolithic, S.A.  
 MSC Vertriebs GmbH  
 Neon-EC Ltd  
 Nu Horizons Electronics  
 Pacer International Ltd  
 Plus Opto Ltd  
 Power Light Systems GmbH  
 ReliaTech Limited - ReliaLED

RS Components  
 SASCO - A division of Arrow  
 SchahLED Lighting  
 setron GmbH  
 Silica (An Avnet Company)  
 SM Electronics  
 Spoerle  
 Supreme Components Intl Pte. Ltd.  
 Texim Europe BV  
 Trola\*Tek

**SUPPLIER NETWORKS**

Cree Solutions Providers Network  
 Future Lighting Solutions Network  
 LED Light For You

dazzling shapely  
high class

our Venus  
LED Lighting shaped to fit  
your architecture (IP67)



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linear lighting solutions

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# section 8

# LEDs MAGAZINE

## LED LIGHTING

Section sponsor:  **LED Linear**  
linear lighting solutions

Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
A5 Lighting		●																							
Ability Optoelectronics Corporation		●																							
ACDC Lighting	●	●	●	●	●	●	●	●		●	●						●		●	●			●		●
A.C. Entertainment Technologies Ltd.																	●		●		●		●		
Acoya Illumination																		●	●						
AC Techart Electronics Pty Ltd	●	●		●	●	●	●	●	●	●	●	●			●	●			●						
Action Media Technologies, Inc	●		●	●	●		●	●	●		●	●		●	●				●				●	●	
Act One Communications Inc.	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	
Adelto Ltd.																			●					●	
Adept Optical	●									●															
 <b>advanced leds</b>	●										●	●				●	●		●	●	●				
<b>Advanced LEDs Ltd</b>																									
Advanced LED Systems	●	●	●	●	●	●	●	●	●	●	●	●					●		●	●					●
Advanced Media Inc. (RitekUSA)					●	●		●	●			●					●								
Advanced Technology Products				●	●	●	●	●	●					●	●										
Advanced Thermal Devices, Inc.						●					●	●				●									
Adenas Lighting Technologies, LLC	●	●						●	●		●	●				●			●						
<b>Aeon Lighting Technology</b>		●		●	●	●		●	●	●	●	●	●	●	●				●						
AGC Mirodan Glasslited	●																						●		
AgilLight Inc.							●							●			●								
AIBC International LED Division	●					●		●	●		●	●			●	●		●	●						
Aladdin Lighting Technologies, Inc.		●		●				●					●	●											
All Brite International C., Ltd	●	●	●		●		●	●	●		●	●		●	●	●	●	●	●		●		●	●	●
Alliance Optotek Corp.	●		●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●						

section 8 | LED LIGHTING

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Allied Electronics, Inc.	●		●	●	●	●	●	●			●	●	●			●	●	●		●		●	●		
 Alpha-One Electronics Ltd.							●		●																
AMA Precision INC.											●														
 American Bright Optoelectronics Corp	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●			
 American Illumination Inc	●	●	●	●	●	●		●	●	●		●	●	●		●		●	●	●					●
Andy Optoelectronic Co.,Ltd		●			●		●	●	●		●	●						●							
APC-Hero							●	●	●						●										
AppLED BV	●			●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
AP Technologies Ltd.																							●		
Opticol Ltd				●		●			●									●							●
Aquadelight										●															●
Architectural FX Ltd	●		●	●	●	●			●	●	●		●	●		●		●	●						●
Arco Inc.							●	●	●			●											●		
ARC Solid-State Lighting Corp.			●						●	●	●				●		●	●	●						
Arctik Lighting			●		●	●	●	●		●	●	●			●		●	●	●	●			●		●
Aristo Engineering Pte Ltd		●		●	●		●								●										
ARRI GB																								●	
Arrow Electronics (UK) Ltd							●	●																	
Articulite Ltd	●			●	●	●	●	●					●	●				●							
ATG Electronics Corp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
Atimpex Ltd.			●	●	●	●	●	●									●	●	●	●					
Atmos Lighting Ltd			●		●		●				●								●	●					
AUK Semiconductor (S) Pte Ltd	●											●						●					●	●	
Axton Inc	●	●																							
Bandis Vision	●		●			●	●		●	●								●	●				●		
Barbizon Light of the Rockies, Inc.																		●	●	●		●	●	●	●
Barco																		●				●	●	●	●
Bare Development, Inc	●										●	●			●			●				●		●	
Baytek International	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		●	●						
BBTronics	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	
BCN Lighting & Sign Specialists											●	●					●	●							
Beacon Products	●									●	●							●	●						
B/E Aerospace	●						●	●																	

## And the market said, "Let there be LED."

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Company	GENERAL LIGHTING													ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING											
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 <b>Beautiful Light Technonology Corp</b> See ad on page 19			●		●	●	●	●	●																
Beijing Huasun Optoelectronic									●					●			●						●	●	
BetaLED		●									●	●						●							
Beta Opto Technology Co., Ltd.	●		●				●				●	●					●	●	●						
BG-LED.COM					●	●		●	●		●	●				●	●	●							●
BH Design Plus	●								●		●	●				●		●	●	●		●			
Biclite USA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Binay Opto Electronics Pvt. Ltd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Bingk LED Technology India	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Blue Sky Lighting							●	●	●				●	●											
 <b>Bluestone Lighting</b>				●	●		●	●	●			●				●		●	●	●		●		●	
BMD Lighting Co., Ltd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●					
Boca Flasher	●		●	●			●	●	●		●			●			●						●	●	
Brazen Tek									●																
Brightcast Co., Ltd.																						●	●		
Brilliant Electronic Systems Ltd	●				●		●							●	●							●			
Broit Light					●		●	●																	
Bruck Lighting Systems, Inc.				●	●	●					●					●				●	●				
Bulartist Ltd.		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Bulbrite Industries		●	●		●		●	●	●		●														
Bulbtronics	●	●	●	●	●	●	●	●	●		●		●	●		●	●	●	●	●	●	●	●	●	●
BWT Lighting Inc.																●									
Canada LEDs		●						●	●		●	●			●	●		●			●		●		
CAO Group, Inc.	●						●	●	●		●	●			●	●	●	●	●				●		
Careca Italia SpA	●		●	●	●	●	●				●														
Carmanah Technologies		●									●	●			●										
C. Crane Company, Inc.				●		●	●	●				●			●										
Cepoint Networks, LLC																							●		
Cerno	●		●	●		●			●			●													●
Challenge Electronics Ltd	●																								
Chaos Design Consultants Ltd			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ChiHua Lighting Technology Company Ltd						●					●	●													
Chloride Systems		●									●														
Christmas USA																		●							
Chromatica Ltd	●	●	●						●	●	●				●	●		●	●	●					●



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section 8 | LED LIGHTING

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Cinimod Studio Ltd						●				●	●														
Circorn, Inc.									●																
Cireon, LLC	●										●												●		
Citiled	●	●	●	●	●	●			●	●	●			●		●	●	●	●	●	●	●	●	●	●
Citiled Middle East	●	●	●	●	●	●			●	●	●			●		●	●	●	●	●	●	●	●	●	●
Clandell Limited		●					●	●																	
Clean Light Green Light	●				●	●		●	●	●															
Clean Lighting Solutions, LLC	●	●	●		●		●	●	●		●	●		●	●				●						
ClearView Development Co Ltd	●				●		●	●	●		●			●	●										
CML Innovative Technologies (Europe)					●	●		●	●				●	●		●		●		●					

## R&D that brings you SMD LEDs with Zero degradation



5050 TOP LED



3528 TOP LED



High Power LED

Our team of over 60 engineers is constantly researching and developing new technologies to offer you LEDs that exceed your expectations. This endeavor has resulted in SMD LEDs with better heat dissipation – our products have zero degradation after 3,000 hours of use. So they're more stable, longer-lasting and better to withstand reflow-soldering methods than competing models on the market.

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Fax: (86-755) 2967 5111  
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section 8 | LED LIGHTING

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CML Innovative Technologies Ltd	●							●							●										
Colombia LEDs		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
 <b>Color Stars Inc</b>	●					●		●	●		●	●	●	●	●			●	●						●
Color Vision Int'l Co., Ltd	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●
Continental Inc.	●								●	●	●	●			●	●		●	●	●				●	
Control Specialties, Inc.										●												●	●		
CooLED Ltd	●			●	●	●	●				●								●	●					●
Cooler Master						●		●	●																
Cooler Master USA						●		●	●		●														
Cool-View	●			●							●														
Cooper Lighting		●		●	●	●	●				●	●	●	●	●	●	●	●	●	●				●	
Cooper Lighting & Security		●			●	●					●				●	●	●	●	●	●			●	●	
CraLux Lighting				●	●	●		●							●										
 <b>Cree Inc</b> See ad on page 9						●																			
Crescent Lighting Ltd	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●				●
Crestron Electronics, Inc.										●															
CRS Electronics						●		●			●				●										
C/S France - Wattohm Profiles	●																								
CT Creative Technology						●					●											●	●	●	
CYRON Lighting	●										●	●	●	●	●	●	●	●	●	●				●	
Dai Shin Technologies, Inc.				●				●	●		●				●			●							
Darona Inc.											●							●					●		
DataEnergy Srl								●	●		●				●										
DBM Reflex											●														
DDP Engineered LED Solutions																							●		
DeepSea Power & Light																									●
Del International	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●
Dellux International Inc	●										●														
Delta Electronics, Inc	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Delta Light	●	●		●		●	●	●	●		●				●	●	●	●	●	●					
Denggang Lighting Technology Co., Ltd						●	●	●	●		●	●						●	●	●			●	●	●
Design LED Products	●	●	●																						
Detas SpA DLEDS Division								●			●	●			●			●					●	●	
DG Lighting Technology Co.,Ltd																		●	●	●			●	●	●
Dialight-Lumidrives Ltd												●					●		●		●		●	●	

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linear lighting solutions

section 8 | LED LIGHTING

Company	GENERAL LIGHTING													ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING											
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
Diamond LED Lighting			●	●	●	●	●	●		●	●	●	●	●		●		●	●	●		●	●		
Diana Electronic-Systeme GmbH	●								●																
DiCon Fiberoptics, Inc.			●										●	●		●	●	●							
Dicrom Electronica S.L.								●			●					●	●	●	●						
DigiLighting, Inc	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	
DigitaLicht AG			●			●	●	●	●	●	●	●				●	●	●	●	●			●	●	●
DigoLight Company Limited	●						●	●						●									●	●	●
 <b>Diogen Lighting</b>	●			●	●	●	●	●			●			●											
D-LED Illumination Technologies	●	●	●	●	●	●	●				●	●				●		●						●	
DMS Lighting, LLC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●					
DMX LED Lights			●	●		●	●	●	●	●	●	●	●	●	●		●	●	●	●					●
 <b>DOMAG LED Technology Co., Ltd.</b>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●						●
Dominant Group Technology Ltd	●			●		●	●	●			●														
Dominio LED	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●
DongFang LED Co.,Ltd	●					●		●	●	●	●	●	●	●	●										
Dongguan Jingliang Lighting Factory							●	●	●	●	●	●					●			●			●		
Dowa Electronics Materials Co., Ltd.		●									●														
DST				●	●		●								●										
Dynamic LED Ltd					●	●		●	●	●							●	●	●	●					
Dynazign Illumination Group, LLC	●						●	●					●		●										
EBV Elektronik									●																
Ecoleds.eu	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	
Ecolighting, Inc.					●	●		●	●																
Eco Light Pte Ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	
Eco Marketing	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
EcoTek Lighting														●			●	●							
Eden Park Illumination				●	●	●	●				●						●	●	●	●	●				
Edge Lighting			●		●	●				●															
Edgelit Acrylics, LLC																							●		
 <b>Edison Opto Corporation</b> See ad on page 25								●			●	●		●											

section 8 | LED LIGHTING

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Company	GENERAL LIGHTING													ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING											
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
 <b>Edlux Luminaire</b> See ad on page 67	●					●	●	●	●	●	●			●											
EE Green Lighting Company			●	●	●	●	●	●	●		●			●				●							
EG Lightings Co., Ltd.	●								●		●														
eldoLED America, Inc.																							●		
 your product   our drive <b>eldoLED by</b> See ad on page 63																							●		●
 <b>Elecosn (HK) Co., Ltd</b>						●		●	●		●														
Electrobrain Enterprises	●	●						●	●	●	●	●		●			●						●		
Electro-Matic						●						●													
Element Labs Ltd										●	●												●	●	
E-Lite OptoTech Co., Ltd.					●	●					●			●	●	●	●	●	●					●	●
Elkays Electronics, Inc.	●	●	●	●	●	●	●	●	●		●			●			●	●			●		●	●	●
ELS - Entertainment Lighting Services																	●	●							
Emergent Lighting Systems LLC		●															●			●					
Emergi-Lite Safety Systems		●																							
Eminus Inc.									●																
Eneltec Group	●	●	●				●	●	●								●		●					●	
Energyled Corporation						●	●	●	●				●										●		
Energy Tech Solutions, LLC						●	●	●	●																
 Create the trail for saving energy <b>Enertrail Technology Co. Ltd.</b>	●		●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							
Enfis Lighting N.A.									●																
enjoy Lichtgestaltung			●	●			●	●	●	●				●	●			●					●		
enLux Lighting	●			●	●	●	●	●			●		●					●							
Envirobrite	●												●												
Envirolight, Inc (Seesmart LED)			●	●	●	●	●	●		●	●		●	●		●		●		●					
Environmental LED			●	●	●	●	●	●		●	●														
EnvironmentalLights.com						●	●	●	●					●	●	●	●	●	●	●			●		
EO Lighting	●	●	●	●	●	●	●	●	●	●	●		●	●				●	●	●		●		●	●

# A world of new lighting products



## Hong Kong International Lighting Fair (Spring Edition)

13-16 April 2010

Hong Kong Convention and Exhibition Centre

- Prime downtown location
- Over 200 quality exhibitors
- Exhibit categories include crystal lighting, green lighting, holiday lighting, outdoor lighting, lighting accessories & components and table lamps
- Held concurrently with HKDTC Hong Kong Electronics Fair (Spring Edition) and HKDTC International ICT Expo

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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
ePace Products	●	●	●	●	●	●	●	●	●			●	●	●		●		●							●
epiLED	●		●	●	●	●	●	●				●	●			●		●	●				●		
Equipson S.A.			●	●													●	●				●	●		
ETAP	●	●	●	●	●	●	●	●	●			●	●	●		●	●	●	●	●			●		●
N E Technology Ltd								●	●																
Eternaleds Inc.				●	●	●	●	●	●						●		●								
Etin Daniels					●	●					●				●	●	●	●		●					
Everbright Lights Inc.	●	●		●	●	●	●	●	●	●	●	●		●		●	●	●							
Everbrite Lighting					●																		●		
 <b>EVERLIGHT</b> LIGHTING FOREVER ■ Everlight Electronics Co. Ltd. See ad on page 34	●		●	●	●	●		●	●			●	●	●		●	●	●	●	●			●	●	
EVERREDtrionics Ltd.	●					●	●	●				●						●					●	●	
Evident Technologies, Inc.																●	●								
Evluma				●								●													
Excellence Opto. Inc.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Eyeleds International						●					●	●				●		●	●	●	●		●	●	●
Fa. GK Technik	●																								
 <b>FAWOO TECHNOLOGY</b> ■ Fawoo Technology Co. Ltd. See ad on page 39						●	●	●	●	●	●	●													
Fiberdyne Energy/Edison LED	●			●	●			●		●	●			●	●										
Firststar Electronic Technology Co., Ltd.			●		●	●	●	●	●		●	●			●			●					●		
FNG Corporation						●	●				●	●			●										
Fobsun Electronics Ltd		●	●	●	●	●	●	●	●	●	●	●				●	●	●	●	●		●	●	●	
Focus Company	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●			●		
Foreal Spectrum							●										●	●							
Foresight Systems Development, Inc.											●														
4D Optical LLC											●														
Fourlight																	●	●	●				●	●	
Foxsemicon Integrated Technology Inc	●	●		●	●	●		●	●		●	●	●		●	●		●	●				●		
 <b>FRONTAND</b> Technology FrontAnD Technology			●	●	●	●	●	●			●	●			●	●		●							
Frontier Custom Assemblies	●																								



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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
 <b>Fusion Optix</b> See ad on page 119	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Galaxia, Inc.																		●							
Gautam Polymers																●									
GE Consumer & Industrial									●		●		●			●	●	●							
 <b>GE Lumination</b>								●	●		●		●	●		●		●							
Gemma Lighting And Displays	●	●		●	●	●	●			●	●	●	●	●	●		●	●	●	●		●	●	●	●
General LED			●		●	●	●	●	●		●	●		●		●		●	●						
Genex Vision Inc.			●					●	●		●	●			●										
Gerber Energy Solutions								●			●														
<b>GlacialLight</b> See ad on page 23			●	●		●	●			●	●	●							●	●		●			
G-LEC Europe																									●
g-Lite Technologies	●		●	●	●	●	●	●	●		●	●		●	●	●		●	●	●	●		●		
GlobalGreen Energy										●	●				●			●							
<b>Global Lighting Technologies</b> See ad on page 113		●			●																				
GO Lighting Technologies Inc.	●			●			●	●	●		●		●	●									●		
GP Lighting Technology																		●							●
Greengage Lighting Ltd	●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●
Green Lighting LLC			●				●			●							●	●	●					●	
Greenlite Solutions	●		●	●	●	●		●	●								●		●						
Green Ray LED Lighting				●	●	●	●	●			●	●			●			●	●	●			●	●	●
Groupe LCX sas	●																●	●	●	●	●			●	●
Guang Li-Light Power Technology								●			●						●						●		
Guangzhou AURORA LED Lighting Co.,ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
 <b>GVA Lighting Inc</b>			●	●	●	●	●							●			●	●	●		●		●		
Hai Chang Industrial Co., Ltd.					●	●	●	●	●									●							
Hankscraft Inc	●																●	●	●		●		●		
Harvatek								●	●																
HBA Tech Ltd.			●	●	●	●		●	●		●	●			●			●	●						

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Company	GENERAL LIGHTING													ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING												
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires	
 <b>Heatron Inc</b>	•	•		•	•	•	•	•	•	•	•	•	•	•	•											
Hella Lighting Finland Oy	•	•		•		•	•			•	•		•				•	•								
HessAmerica										•	•					•	•	•			•		•			
High Power Lighting Corp		•							•		•	•				•	•	•			•		•			
 <b>Hilux</b>	•			•			•				•	•		•	•											
Hokuriku Malaysia Sdn Bnd						•		•	•									•								
Hologenix Inc	•		•	•	•	•	•	•		•	•		•	•		•										
Hologram Research									•														•			
Hongkong Coolight Opt-Ele Co Ltd						•	•	•	•							•	•									
Hotbeam	•			•	•	•	•	•		•		•	•	•	•	•	•	•		•		•	•		•	•
HTDS								•	•																	
Hudnut Company LED Lighting Solutions	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•			•		•			
Hybrid Integrated Circuits Ltd (HIC)			•		•	•																				
Hynetic Electronics Pvt Ltd	•		•		•	•	•	•	•	•	•	•				•	•	•	•	•						•
Hyundai Telecom				•	•	•	•	•			•	•			•											
i2Systems	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•		•						
IAQ Consulting Pty Ltd	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ideas with Energy Ltd	•																									
IDEC Corp				•	•	•										•									•	
iGuzzini illuminazione UK Ltd	•	•	•	•	•	•	•			•	•				•	•	•	•	•	•	•					
i-led Solutions Ltd			•	•				•		•					•	•	•	•					•	•		
iLight Technologies Inc	•		•								•				•	•	•									
Illumination Management Solutions Inc		•			•						•	•			•	•	•				•					
Illumination Optics Inc	•	•			•	•	•				•	•			•	•	•				•		•			
Illumination Unlimited USA Inc									•						•											
Illumine Technology	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•		•		•	•
ilumisys					•	•		•						•												
IM Electronics					•	•		•	•		•															
Impact Lighting Inc.	•		•							•							•		•			•			•	•
IndoLED			•	•	•	•	•	•	•	•	•					•	•	•	•	•	•		•		•	•
Industrial Electronics Services, Inc.	•																									
Ingebat S.L.	•	•	•			•	•	•	•							•	•	•	•	•	•				•	•
Ing. Elmar Schrutek	•		•														•							•	•	
Inlux Lighting Co., Ltd.	•		•	•	•	•	•	•		•	•				•	•	•	•	•	•			•		•	•
Innolux Pte Ltd	•		•	•	•	•	•	•		•	•				•	•	•	•	•	•					•	•
Innovations in Optics, Inc.		•													•		•						•			
Insight Sign Systems	•						•								•		•						•			
Insta Elektro GmbH	•		•	•	•	•	•			•	•			•	•	•	•	•	•	•			•			





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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
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Intelligent LED Solutions							●								●		●								
International Light Technologies							●																		
International Patterns Inc.															●								●		
Interstate Solar Utilities, LLC			●		●	●	●	●	●		●		●	●	●				●						
io Lighting				●							●				●				●						
IP LED								●									●						●		
ISEP Lighting Inc.			●		●	●	●				●								●						
IST Lighting Ltd	●		●		●	●					●				●				●	●				●	
i-Tunnel (Indal Group)												●							●						
i-vision (uk) ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●		●		●	●	
IVUS Energy Innovations												●													
Jampu lighting ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Jason Fidelity Consulting Ltd	●																								
JD Greentech-Global, Inc			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
JetRays Corporation USA	●	●									●	●	●	●	●										
JGA Associates/Bulb wizards					●	●				●	●			●			●	●	●					●	
Jin-Rei Industrial Electronic Co., Ltd.						●	●	●			●														
J&J Electronics / ColorGlo																	●		●						
JKL Components Corporation						●	●	●	●					●			●	●					●	●	
Josef Barthelme GmbH & Co. KG	●		●			●	●	●	●					●	●			●	●	●	●				
JS LED Power Inc.	●		●			●	●		●				●	●			●	●					●		
JuiceWorks LLC	●			●	●	●	●		●	●							●	●		●	●				●
Kara Jalmarit International Ltd		●			●	●	●	●	●	●	●			●			●	●			●				
Karbon Lite Ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Kichler Lighting				●	●	●	●				●														
Killawatt Lighting Solutions Ltd			●	●	●	●	●	●				●	●				●	●	●	●	●		●	●	●
Kingsun Optoelectronic Co.,Ltd.			●	●	●	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●	●	●
Klead Electrical Ltd.			●	●	●		●		●	●	●			●											
Kodiak Lighting Products								●																●	
Kyman Ledtex Limited							●	●																	
Kypai Ltd	●		●		●			●	●	●			●	●			●	●	●	●	●	●	●	●	●
LamaVita International Corp. Ltd.	●		●					●	●	●								●	●	●	●	●	●	●	●
Lamps Plus Professionals		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LandiMark Co.,Ltd			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LDDE Vertriebs GmbH	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ledcats Ltd		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LED Concepts	●		●		●	●				●	●	●					●	●					●	●	
LED Distributors						●	●	●									●	●			●				
LEDdynamics Inc	●	●		●		●	●	●				●	●						●	●		●			
LedEcoLights							●	●										●	●	●					
LED Emerald		●	●	●	●	●	●	●	●	●	●	●													
LEDgen Lighting, Inc.				●	●	●	●	●	●	●	●						●	●			●		●		
LED-Green Lighting/GSSI, Inc.	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LED Grow Master Global, LLC				●		●	●	●	●	●	●				●										
LEDIKO	●			●		●	●	●	●	●	●			●											
LED Import BV	●		●	●	●	●	●	●	●	●	●														

section 8 | LED LIGHTING

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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
Ledion Lighting, Inc.	●		●	●	●	●		●	●																
LEDirect						●		●	●		●	●		●					●		●				
Ledium Ltd.	●		●		●	●		●	●		●		●				●	●	●	●	●		●		●
LEDKE Technology Co., Ltd						●		●	●		●						●	●							●
LED Lighting Concepts Ltd			●		●	●		●	●	●	●	●					●	●		●			●		●
LED Lighting, Inc.			●	●			●	●	●	●	●	●					●				●		●		●
LED Lighting South Africa	●	●	●		●	●		●	●	●	●	●				●			●		●		●		●
LED Light Opto Co.,Ltd.	●	●	●		●	●		●	●	●	●	●						●	●	●			●		●
LED Light Technology	●	●	●	●	●	●		●	●	●	●	●	●	●	●				●	●					●
 linear lighting solutions ■ LED Linear GmbH See ad on page 74		●	●	●												●	●	●			●		●		●
 Looking LEDs in The Real World ■ Ledlink Optics, Inc. See ad on page 49																						●			
Ledlite Power	●	●						●	●			●			●			●							
LED Neon Flex			●				●	●	●	●	●			●		●	●			●		●	●	●	
LED One (Hangzhou) Co Ltd	●		●	●	●	●	●	●	●																
LED Optical Solutions	●	●									●							●		●					
LEDpartners	●																						●		
LED Retro8			●	●			●	●					●												
LedRise Ltd			●	●	●	●	●	●	●	●															
LED Roadway Lighting Ltd.											●														
<a href="http://jeds.com.mx">jeds.com.mx</a>																		●	●						
Ledsgo	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LEDs N Solar	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LED Specialists, Inc.	●				●	●		●	●	●	●			●					●						
LedStore	●	●	●	●	●	●	●	●	●			●		●			●	●	●	●	●	●	●	●	●
The LED Store/DirectLights	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LEDsupply					●		●	●	●			●		●			●								
L.E.D. The Way Store			●	●	●		●	●	●			●						●	●						
LED Transformations, LLC									●						●										
LEDtronics, Inc.		●			●			●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●
LEDvista Limited		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LED*Waves		●			●			●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●
LEDworx GmbH	●				●	●		●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●
Leotek Electronics USA Corp.						●	●	●	●		●				●	●				●		●		●	●
Leviton Manufacturing Company								●																	
LichtwerkBerlin Ltd.			●	●	●	●			●									●							●
LightBulb International Plc							●																		

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section 8 | LED LIGHTING

Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
Lightech SRL			●		●	●										●		●	●			●		●	
Light Emission Technology, Ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
Light Emitting Designs, LLC		●		●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●			●	●
 <b>Light Engine Ltd</b> See ad on page 51	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Light Engines																●									
Lighter Europe AB	●		●		●	●	●				●	●	●	●	●	●	●		●		●		●		
LightGuard		●									●														
Lighthouse WorldWide, LLC	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
Lighting and Production Resources			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Lighting Orient Co Ltd						●		●	●		●	●							●					●	
Lighting Ways Foreign Trade Co.		●				●	●				●	●							●				●		
Light Ocean Technology Corp.			●	●	●	●			●		●								●		●		●		
Lightolier		●	●	●	●	●	●										●		●		●				
Light Vision Corp.				●	●			●	●			●						●			●		●		
LightWild																	●	●					●		
Ligitek Electronics Co. Ltd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●						
Line Lite International BV	●			●	●	●		●	●	●					●				●	●				●	
LiteLED Ltd									●	●		●			●	●	●	●	●	●		●	●	●	
LiteOn, Inc			●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●			●		
LittleFootprint Lighting, Inc.				●																					
Logolight			●														●	●					●		
Lotus LED Lights				●	●	●	●	●	●			●							●						
LPA Excil Electronics Ltd	●	●			●	●		●	●	●			●	●	●	●	●		●				●		
LSI Industries Inc					●	●	●				●	●	●	●	●	●	●		●	●			●	●	
LTSS ltd		●			●	●		●		●	●	●	●	●	●	●	●		●		●				
Lumec											●	●				●									
Lumex / An ITW Company									●	●			●				●						●		
Lumicrest Lighting Solutions Inc.						●		●	●	●		●		●	●	●	●						●		
Lumilens Optoelectronics Inc.	●		●		●	●	●	●	●		●			●	●	●	●	●	●	●					
Lumi Lime Limited	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Luminit	●																								
Luminous Flux				●	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●	●	●	●
Lumstar Technology Inc					●	●		●	●							●									
Lunera Lighting	●				●	●	●	●	●	●	●	●	●	●	●	●	●								
Lustrous Technology Ltd	●		●	●	●	●	●	●	●		●	●				●									
Lutron Electronics						●																			
Luums International BV		●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LuxInTec SL	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

section 8 | LED LIGHTING

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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
 <b>■ Lynk Labs</b> See ad on page 2		●		●	●	●	●	●		●	●			●	●	●		●	●	●		●	●		
MAC SRL	●		●									●													
Magic Lite Ltd.			●	●	●		●		●	●				●		●	●	●	●	●			●	●	
MAL Effekt Technik	●		●			●		●						●		●	●	●	●	●			●	●	
Mango Electronics	●		●		●		●		●	●				●		●	●	●	●	●				●	●
Marc Signage	●		●		●	●	●			●	●			●	●		●	●	●	●		●	●		●
Marktech Optoelectronics				●		●	●	●					●	●	●	●	●	●	●	●		●	●		
Marl International Limited		●			●			●						●		●	●	●	●	●		●	●		
Martin Professional				●										●				●				●	●		
 <b>■ Matrix Lighting</b> See ad on back cover							●	●																	
Megaman Nederland				●	●	●	●	●		●															
ME Lighting			●	●						●					●				●	●					●
Membrane Switch and Panel, Inc.								●																	
Micron Technology	●		●	●					●		●														
Mimaki ECO Lighting Solutions		●						●				●				●	●				●		●		
Minispotlight.com						●								●				●							
Minleon International Limited		●		●	●	●	●	●		●	●		●	●	●	●	●	●	●				●		
Minleon International (USA) Ltd		●		●	●	●	●	●		●	●		●	●	●	●	●	●	●				●		
Modo Lights	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modo Lights FZCO	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modular International Inc	●	●	●		●	●				●	●			●	●	●	●	●	●	●	●	●	●	●	●
MonkeyLectric LLC									●					●				●				●	●		
Monolithic SA	●		●	●	●	●	●			●	●				●					●					
 <b>Mouser Electronics</b> a fti company								●																	
MP Lighting			●		●	●								●					●	●					●
MSC Vertriebs GmbH					●	●	●	●			●	●													
MTEC GmbH	●		●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Nanker LED lighting Ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
The Nassau Group, Ltd.					●	●			●					●									●	●	●
National LED Direct	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NCW (Holdings) Ltd	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Neon-EC Ltd		●	●	●	●	●	●			●	●						●	●	●	●	●	●	●	●	●

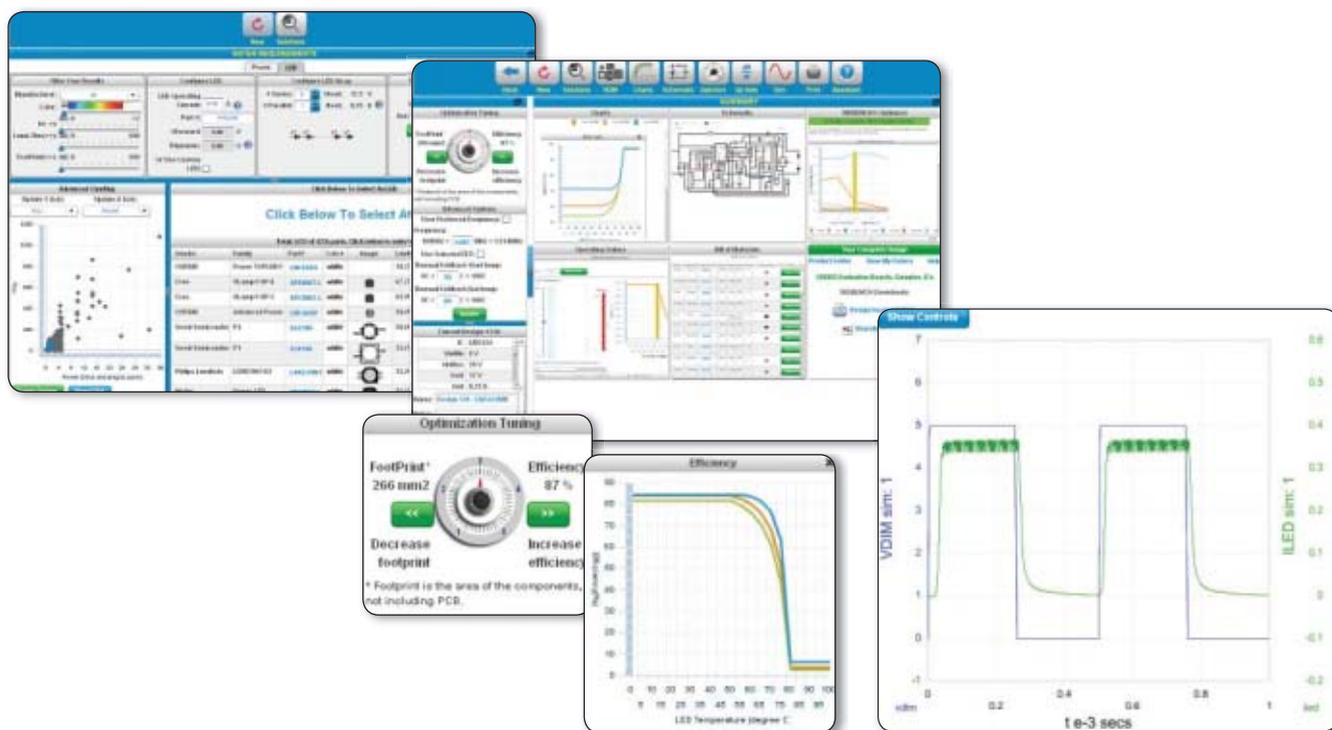


# High Performance. Easy Design.

## Create LED Designs In Minutes

National Semiconductor's intuitive and easy-to-use WEBENCH® LED Designer online tool allows you to choose the optimal LED for your specifications and complete an LED driver design in just minutes. Now you have the world's most powerful online design environment right at your fingertips. Design, optimize, generate your prototype, and download your test vectors – all online. And do it all for free, anywhere, anytime.

- ✓ 200+ LED options
- ✓ PowerWise® LED drivers
- ✓ Reference designs and application notes



### Design

Enter your application specifications and LED requirements such as color, luminous flux, drive current, and footprint for a list of more than 200 industry-leading LEDs. Then select the optimal energy-efficient PowerWise® LED driver for your application by analyzing tradeoffs such as efficiency or footprint.

### Optimize

Analyze electrical properties such as power dissipation, efficiency, or LED current over various parameters. The WEBENCH circuit calculator generates a bill of materials including all of the external components required for your design.

### Verify

The electrical simulator verifies circuit stability and operation, and allows you to visualize circuit behavior under dynamic conditions such as pulse-width modulation (PWM) dimming. Once your design is finished, print out a custom summary report or order a customized prototype kit.

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Semiconductor

section 8 | LED LIGHTING

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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
 <b>Neo-Neon LED Lighting International Ltd</b>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Neo-LED International (HK) Ltd	•				•	•	•	•								•	•	•			•				
NeoPac Optoelectronics Inc	•				•	•	•	•			•	•			•	•		•					•		
New Age Lightings				•		•	•	•			•	•					•		•						
Next Generation Lights Inc	•	•	•	•		•	•	•	•		•			•	•										
 <b>Nexxus Lighting Inc</b>			•	•	•		•	•						•		•		•							•
NIOS Lighting	•	•		•	•	•			•	•						•	•	•			•				
Noctron Soparfi SA								•					•										•		
Notis Design									•									•							
Novicomm	•	•	•	•	•	•	•	•	•				•	•				•			•		•		
Nozon Green Technologies nv/sa	•	•							•	•	•				•	•					•				
NuaLight Ltd													•	•							•				
NuArt Lighting																				•					
Nu Horizons Electronics	•								•																
NuLEDs by Numinus LLC	•		•	•	•	•	•		•					•		•	•	•	•				•		•
Nu Vue Lighting						•	•											•							
OAS-ISUSA	•	•	•	•	•	•			•	•	•	•		•	•			•							•
Ocean Optics Inc								•										•					•		
O C White Co	•			•																					
Omachron Lighting Corp				•	•	•	•				•	•				•		•	•						•
Omega Communications	•	•				•			•		•	•	•		•			•						•	•
Onstate Technologies												•													
opsira GmbH				•					•															•	
Optical Illumination Corp.	•			•		•			•					•	•	•	•	•			•		•		•
 <b>OPTILED Lighting International Ltd</b> See ad on page 47						•		•	•					•		•	•	•	•	•	•	•	•	•	•
 <b>Optocore Ltd</b>	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

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linear lighting solutions

section 8 | LED LIGHTING

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	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
 <b>OptoElectronix Inc.</b>		●		●	●	●	●	●		●		●	●	●		●		●	●	●					
Opto Tech	●		●								●	●					●							●	
Opto Technology, Inc.								●								●									
Opulent Technologies Inc	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Orca Green Marine (OGM)	●	●							●		●	●													
Oree Inc																							●	●	
Orient Lighting Co. Ltd.		●	●	●	●	●	●		●	●							●	●		●					
OSCI Inc.									●																
Oshino Architectural LED Lighting						●			●		●				●	●	●	●			●		●		
OSRAM GmbH			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
 <b>OSRAM SYLVANIA</b> See ad on page 95		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Oxley Group Ltd		●						●	●			●													
Oxley Inc	●	●						●	●		●	●													
Ozium.com		●	●	●	●	●	●		●	●			●	●		●	●	●		●				●	
Pacific Global Energy LED		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●		●		
Para Light Corp						●	●			●						●	●			●	●		●		
Pegasus Associates Lighting		●	●	●	●	●	●			●		●	●	●	●	●	●								
PerkinElmer Inc								●																	
Permlight for Signs													●	●											
Philips Color Kinetics	●		●	●	●		●				●				●		●	●	●				●	●	●
Philips Lighting UK	●		●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Phoenix Green Solutions			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
Phoenix Products Co Inc	●	●								●	●								●	●	●				
Phoster Industries	●	●	●			●	●	●							●				●	●	●				
PicusLED	●																								
Pixalto	●		●															●					●		
PixelRange																			●					●	
PJB Systems Technology Ltd																	●		●		●				
Planar Systems																							●		
Plus Opto Ltd	●		●		●	●	●			●					●				●	●	●		●		
Polar Ray LLC		●	●	●	●	●	●	●				●							●	●					
The Power LEDs						●		●	●	●		●					●	●	●						
Power Light Systems GmbH							●	●																	
Powermicro Technology Sdn Bhd	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Powertech				●	●			●	●					●			●	●	●	●			●		●
Precision-Lighting						●					●	●							●				●		●
Premier Lamp Distributors Ltd	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

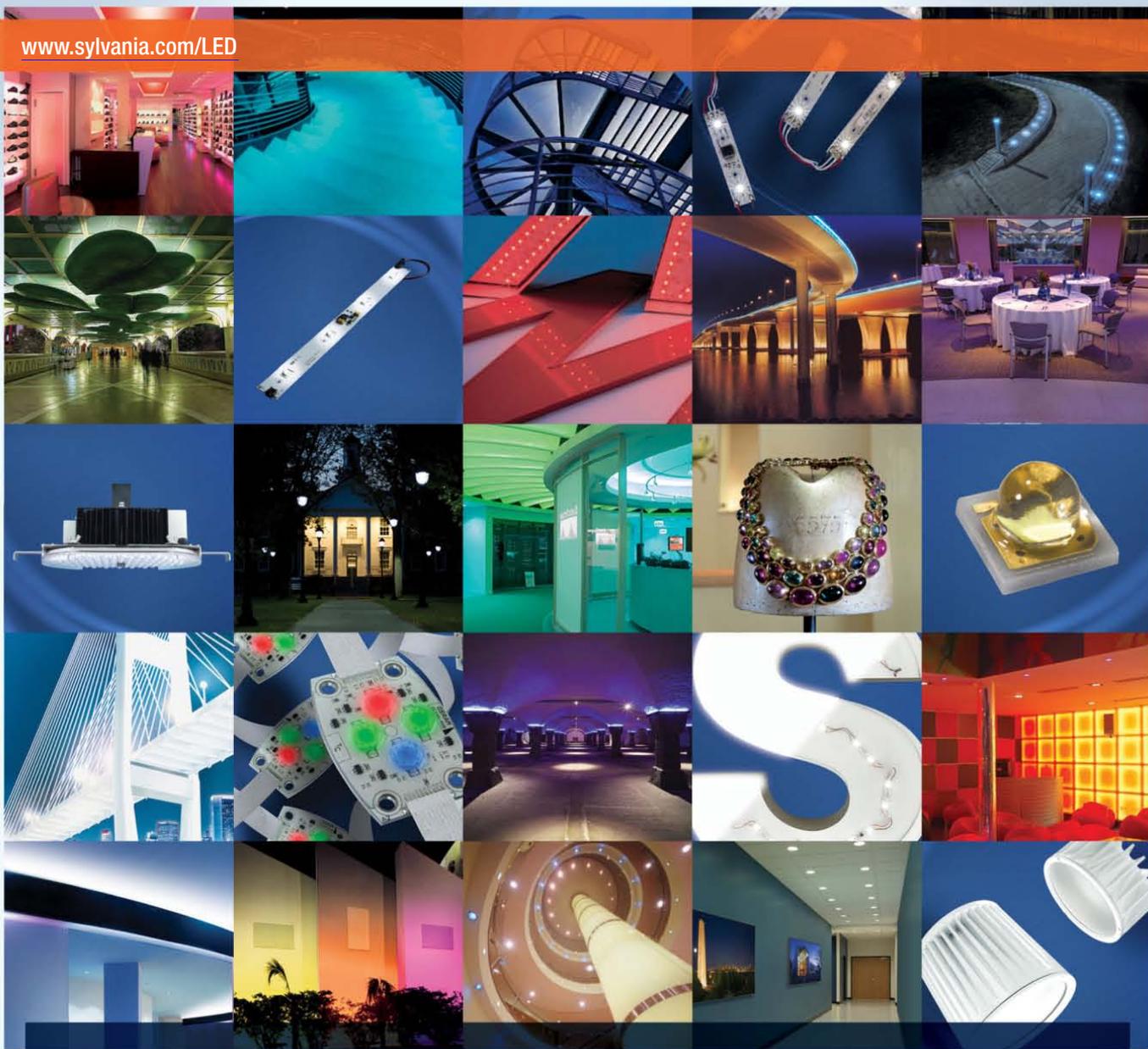
section 8 | LED LIGHTING

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linear lighting solutions

Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
Prescolite						●																			
Prime Light Pte Ltd																			●	●			●	●	●
Priority Energy	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Pro Brand International Inc	●					●	●	●			●	●													
Professional Lamps Scandinavia ApS			●		●	●	●	●			●								●		●			●	
Pure Lighting					●														●						
Qbas Tech Co. Ltd.			●								●														
Quasar Light Co. Ltd.		●	●	●	●		●	●	●	●	●		●				●	●	●				●		
Ray Dynamics	●				●		●				●					●	●		●		●				
Real World Designs Ltd	●	●			●						●				●										
RedBird LED	●	●	●		●	●	●	●	●	●	●		●												
Reflexions																									
Reflexions France																	●	●							
Reicore Technologies Inc	●		●		●				●												●				
ReLED Systems	●			●		●	●	●					●	●											
ReliaTech Limited - ReliaLED		●		●	●	●	●	●	●	●	●	●	●	●	●			●	●				●		●
Relume Technologies	●					●						●													
Renaissance Lighting			●		●																				
RenovaSolar Lda	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●
Rethink Lighting Inc.											●	●					●	●	●	●	●			●	●
RFTech Co.,Ltd.							●	●																	
Rincker Productions	●																								
Rincover Studio	●			●		●				●		●			●	●									
 <b>Ringdale Inc.</b>		●				●				●	●	●			●			●							
Rite Lites	●		●	●	●	●		●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
RLS Innovations GmbH	●	●	●	●	●	●	●						●	●			●	●	●	●	●	●	●	●	●
 <b>ROAL Electronics S.p.A.</b> See ad on page 52	●																								
Runion Energy Solutions LLC								●				●													
S2 Innovative Products Group Ltd	●		●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●			●	●
S3J Electronics LLC	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Sagitario Lighting S.L.U.	●	●	●	●	●	●	●	●	●	●	●	●			●		●	●	●	●	●	●	●	●	●
SAKMA Electronica Industrial SA	●		●		●	●				●							●						●		
Samsung LED	●	●			●	●		●	●		●	●	●				●						●		
Samudra Electronic Systems Pvt Ltd	●	●			●	●					●	●	●			●									
SASCO - A division of Arrow											●														
Saul Signs, Inc.																●	●								
Save Green Lighting Solutions	●		●	●	●	●	●	●	●		●	●	●	●						●		●			●



[www.sylvania.com/LED](http://www.sylvania.com/LED)



## Our LED Systems perform on a global scale.

SYLVANIA is a leader in LED lighting solutions in North America, and together with OSRAM, we delivered nearly a billion dollars in solid state lighting sales worldwide last year. Constantly investing in innovative technologies and products that span the complete range of LED lighting systems, SYLVANIA shines bright in the new world of lighting. And with SYLVANIA Lighting Services, we're the only lighting manufacturer with its own full-service installation and maintenance business. To learn more about our cutting-edge LED solutions, call 1-800-LIGHTBULB or visit us online at [www.sylvania.com/LED](http://www.sylvania.com/LED).

SEE THE WORLD IN A NEW LIGHT

**SYLVANIA**



section 8 | LED LIGHTING

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Company	GENERAL LIGHTING													ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING											
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
SchahlLED Lighting						●	●	●	●		●	●				●	●	●		●		●	●	●	●
Schott North America	●												●	●		●	●								
Schreder Group GIE		●									●	●							●	●	●				●
Schreder Lighting LLC	●										●	●				●			●	●	●				
Selectronic	●				●				●		●	●	●	●	●	●	●	●	●	●	●		●		
Select Software Limited	●							●	●		●	●	●	●	●	●	●	●	●	●	●		●		●
Semicon-Optronics Channel Corp.	●		●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●		●		●
Senslite Corporation								●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Senso Lighting Inc.			●	●	●	●	●		●	●	●	●		●				●	●						
Servodan A/S	●		●						●		●	●													
setron GmbH																							●		
SG Designs									●																
Shanghai Euchips Industrial Co. Ltd.	●		●		●	●	●				●	●			●		●	●	●	●	●	●	●	●	●
Shanghai Inwood Electronic Co., Ltd.																	●	●	●	●	●	●	●	●	●
Shanghai Neolux LED lightings Co. Ltd								●				●													
Shanghai Yaming-Lighting Co.,Ltd.	●		●	●	●	●					●	●		●		●		●	●						●
Sharp Electronics								●							●										
Sharp Microelectronics of the America 101					●																				
 <b>■ Shenzhen Bang-Bell Electronics</b> See ad on page 133								●	●		●					●									
Shenzhen Bright Lighting Technology						●	●	●					●					●	●						
Shenzhen Chenze SSL Co LTD			●		●	●	●	●	●										●						
Shenzhen Dicolor Optoelectronics Co Ltd						●		●				●							●					●	●
Shenzhen Greenstar Lighting Technology				●	●	●	●	●	●		●	●						●							
Shenzhen Hongya Opto Electronic					●			●	●		●	●						●	●						
Shenzhen Jeeja Century Optoelectronics	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Shenzhen Jiuzhou Optoelectronics						●		●	●		●	●		●	●	●	●	●	●	●	●				
Shenzhen Lamp Technology Co., Ltd								●			●	●						●	●				●		
Shenzhen MR Photoelectricity Co Ltd			●	●		●		●	●	●	●	●						●	●			●	●		
Shenzhen Retop LED Display Co Ltd	●	●	●	●	●		●		●		●	●		●		●		●	●	●	●	●	●	●	●
Shenzhen Spark Optoelectronics								●			●	●				●									
Shenzhen Unilumin Technology Co Ltd								●	●		●	●						●	●						
SH Lighting Ltd	●	●	●	●	●	●	●	●	●		●	●		●		●		●	●	●	●	●	●	●	●
 <b>■ Signcomplex Limited</b> See ad on page 97	●		●	●	●	●	●	●	●		●	●		●		●		●	●	●	●	●	●	●	●
Silverled	●		●	●	●	●	●		●									●	●		●	●			
Silvermere International Group			●	●	●			●	●		●	●						●	●						●
Sinostar Lighting Group Ltd								●	●	●	●	●			●										



## ArchiFlex™

ArchiFlex™ is a combination of SMD LEDs and extrusion technology. This IP68 rated flexible LED strip runs 30 meters a reel which can be powered merely by a transformer. The excellent performance with UV-resistance and V-1 fire rating guaranties outdoor applications.



info@signcomplex.com [www.signcomplex.com](http://www.signcomplex.com)  
Tell: +86-755-27608650 Fax: +86-755-27608651

section 8 | LED LIGHTING

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Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
Sino Union Technology Ltd																									
Sirio Panel								●																	
Sival, Inc.																		●							
SKC & C								●	●			●													
SMA Optical Technologies Inc	●								●			●													
Smartgreen Technology Co Ltd					●				●			●							●						
Smart Technologies Electronics Ltd	●	●				●		●				●							●						
So Bright Electronics Co., Ltd						●		●	●			●													
SOHO Energy	●	●		●	●	●	●	●	●	●	●	●	●	●	●										
SolarOne Solutions LLC												●				●									
Solas Lights for Life Ltd	●	●	●		●	●	●		●	●	●				●		●	●	●	●	●	●	●	●	●
Solid State LED Lighting																							●		
Solid State Luminaires	●		●	●	●	●	●				●				●			●	●	●	●			●	●
Sol Inc. (Solar Outdoor Lighting)												●				●			●					●	●
Solus Corporation Pty Ltd	●		●		●	●	●		●		●	●			●	●	●			●	●				●
Sommer Electric Corporation		●			●	●	●		●	●	●	●		●	●	●	●		●	●	●				
Space Tech, Inc		●	●	●	●	●	●	●	●	●		●		●	●	●	●	●	●	●	●		●		
SpaceWriter Pakistan												●			●										
Spark LED Lighting (HK) Co Ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	
Spark Optoelectronics Pty Ltd																									
Special-T Lighting	●		●	●	●	●	●		●	●	●	●	●	●	●	●									
SPI Lighting	●		●	●		●			●	●					●				●						
SSLI Limited			●	●	●	●		●	●			●			●										
Stanley Electric Co. Ltd.		●		●	●	●	●	●		●	●	●	●												
 スタンレー電気株式会社 STANLEY ELECTRIC CO., LTD. <b>Stanley Electric Co. Ltd. (UK)</b>	●							●	●			●		●	●		●	●	●		●		●		
Starled Inc		●			●			●	●	●		●		●	●		●		●		●		●		
Sternberg Lighting	●									●	●	●													
Stouch Lighting												●													
Stylmark, Inc.					●	●	●								●										
Sun Export Private Limited	●	●						●	●	●	●	●	●			●			●	●	●			●	
Sunfire LED, LLC					●	●		●																	
Sunovia Energy Technologies	●											●													
Sunsify International					●			●	●	●	●	●	●	●	●				●						
Super Bright LEDs				●		●	●		●		●	●			●										
SuperViewVision	●	●		●		●	●		●						●										
Swift Canada	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Synapse Wireless Inc.										●															
Synergy Micro Technologies	●	●						●	●		●	●			●										
Taiwan Mirai Industry Co. Ltd.				●		●			●						●										
Tally Display Corp																	●						●		



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section 8 | LED LIGHTING

Company	GENERAL LIGHTING														ARCHITECTURAL, ENTERTAINMENT & DECORATIVE LIGHTING										
	Custom luminaire manufacturing	Emergency & security lighting	Indoor: color-controlled luminaires	Indoor: desk/task lighting	Indoor: recessed downlights	Indoor: spotlights & pendant luminaires	Indoor: under-cabinet lighting	LED replacement lamps (fluorescent)	LED replacement lamps (incandescent)	Lighting project design & consulting	Outdoor: landscape luminaires	Outdoor: streetlights, general area lighting	Portable lighting (flashlights, lanterns etc)	Refrigerated cabinet lighting	Retail display lighting	Solar-powered & off-grid lighting	Border/contour lighting	Decorative & holiday lighting	Floodlights, wall-washers, battens	In-ground luminaires	Marker lights, uplights	Moving head projectors	Panels/tiles with LED backlighting	TV, film & stage lighting	Underwater luminaires
TEAM INSTRUMENT CO. LTD 榮磊科技股份有限公司 <b>TEAM Instruments Co Ltd</b>				●	●			●	●																
Tecartex Digital Solutions, SL	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●
Techsign Lightpanel Co., Ltd.																			●				●		
TecnoVISION SPA																								●	
Teledyne Lighting & Display Products		●																							
Tempo Industries						●		●																	
Tepcomp Oy	●			●	●	●	●								●				●		●				
TerraLUX Inc.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		
Tersen	●											●													
Texim Europe BV																	●		●	●					
Tharsus Vision Ltd								●						●	●								●		
Thermalking Technology Intl. Corp.					●	●	●	●		●		●		●											●
Thor Lighting Solutions Inc.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tons Lightology Inc.				●	●	●	●	●	●	●		●													
Topco Energy Saving System Corporation (TESS)					●	●		●			●														
<b>TOSHIBA</b> Leading Innovation >>> ■ Toshiba Corp Principal Office See ad on page 1		●	●	●	●	●	●	●	●	●	●	●	●	●	●										
TPL Vision	●						●		●								●	●	●	●					●
TradeKey (Pvt.) Limited	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Traxon Technologies Ltd.	●	●		●	●	●			●	●				●			●	●	●				●	●	●
TridonicAtco UK Limited		●															●			●					
Tri-O-Light BV		●		●					●	●		●					●	●	●		●		●		
Trola*Tek							●	●	●	●	●		●					●							
Tunewell Juice Group	●			●	●		●						●	●			●								
UBLeds Co Ltd				●	●	●	●	●	●			●							●						
UNI-EE Electric Appliance Co. Ltd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●		●		
Unilumin Technologies																									
Unisunrise Technology HK Ltd				●	●	●	●	●	●		●	●		●				●							
Universal Optoelectronics Co., Ltd.				●	●	●	●	●	●		●	●			●										
<b>UPEC</b> <b>UPEC Electronics Corp.</b>	●		●	●	●	●	●	●	●	●	●	●	●	●	●			●	●						
Urban Solar Corporation		●										●			●										
US A'SYCK Corporation	●						●	●	●			●					●	●	●	●	●		●		
USHIO America	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		
usLEDsupply			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●

section 8 | LED LIGHTING

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Value Green Inc				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Van Deursen LLC			●			●	●						●												
Versabright																	●	●	●			●	●	●	●
Vexica Limited						●		●	●						●										
Viotech Industries	●								●						●										
VioLED International Pte Ltd	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Virginia Optoelectronics Inc	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Vishay Semiconductor GmbH												●													
Visionaire Lighting	●										●	●				●									
Visive			●													●									
Visual Dimensions NA Inc				●	●	●	●								●	●									
Visual Interactive Ltd	●			●	●	●	●	●		●					●										
VLM GmbH - Tomorrow's light																●	●	●	●	●					●
Voss Lighting				●		●		●						●	●										
 <b>Vossloh-Schwabe Optoelectronic</b> A New Lighting Experience																	●						●		
Wah Wang Holdings Co. Ltd.																		●							
Waldmann Lighting	●	●		●		●	●				●	●			●				●					●	
Wamco, Inc.				●	●	●	●	●		●	●				●			●		●					
Watt Works Inc.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●			●	
WDM Lighting			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Wessel LED Lighting Systems			●				●		●					●		●			●	●			●		
West Bank Engineering Consultancy Ltd		●							●																
World of Lights LED Solutions Inc		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●				●		
WRTL Exterior Lighting Ltd											●	●							●	●					
Wuxi Kinlight Optoelec Technology							●					●													
XUS LED LIGHTING												●													
 <b>YEG Opto</b> electronics	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Yo-Hua Corp.							●																		
YYZ Systems Inc	●		●		●		●		●		●				●	●			●		●		●		
Zailed Co., Ltd.	●				●	●		●	●		●								●	●		●			
ZAP Light			●		●	●	●	●	●		●	●						●	●	●	●	●	●	●	●
Zers Group	●								●	●	●	●			●	●			●	●			●	●	●
Zhuhai Mingyuan Lighting Co. Ltd	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Zydoled	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Sharp LED solutions for bright sparks

# LED's work together!



[IC]

[OPTO]

[LED]

[LCD]

[RF]

Go for the broad range of Sharp LED solutions to present your applications in the best possible light: LED multi-chip modules, white light LEDs, RGB LEDs and flashlight LEDs. Whether single spotlight or wide-area ambient lighting, indoor or outdoor, stationary or mobile usage, Sharp LEDs combine maximum efficiency and lifetime with minimal heat generation. You can define white in the most beautiful tones – anything from warm to cold white and high CRI optimised for almost natural colour reproducibility. The Sharp portfolio offers a wide variety of different

packages: from PLCC2 to PLCC6, standard or extra thin, sideshoot and ultra-small – and features LEDs for work and reading lamps, indoor and outdoor lighting, signalling equipment and advertising panels, flashlights and displays as well as architectural and medical applications. Call or mail us to benefit from 37 years of experience in LED technology.

**Our Service Team will be glad to supply you with any engineering samples and advice you need.**

**E-Mail: [info.sme@sharp.eu](mailto:info.sme@sharp.eu); phone: +49 (0)180 507 35 07**

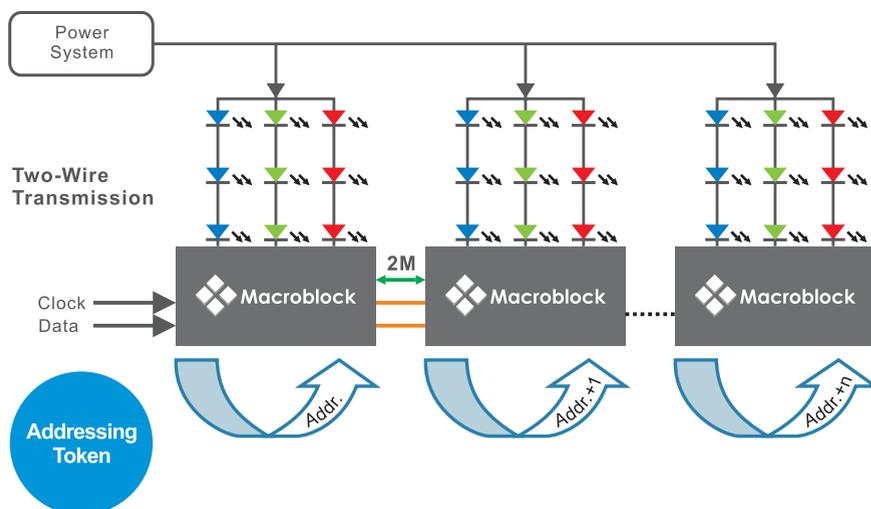
**light+building**

Visit us at the Light+Building 2010  
from 11-16 April in Frankfurt am Main: Hall 4.2, Booth J71.

**SHARP** | Microelectronics



### A-Token Topology



### Two-Wire, Long Distance Transmission (2 Meters between 2 Clusters)

- **Simple** Two-wire transmission protocol to support 1024 RGB clusters
- **Smart** A-Token(Addressing Token) topology with self-alignment addressing
- **Flexible** Achieve 65,536 gray scales at 10-bit data bandwidth
- **Reliable** Phase - inverted CLK to assure signal integrity after long distance transmission

Part No.	Channel	Output Current	Sustaining Voltage	Supply Voltage	S-PWM	Built-in LDO	Signal Integrity	Transmission Interface	RoHS Package
MBI6020	3	5~50mA	17V	3~5.5V	16 bits	---	Phase - Inverted Output CLK	2 wires	SSOP16 / QFN3*3
MBI6024	12								SSOP24 / QFN4*4
MBI6030	3	5~150mA	40V	5V, 7~30V	16 bits	V	CLK Regeneration	2 wires	SSOP16 / QFN4*4

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 Website:[www.mblock.com.tw](http://www.mblock.com.tw) • Email:[marketing@mblock.com.tw](mailto:marketing@mblock.com.tw)



# section 9

## LED DISPLAYS & SIGNS

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION				
	Alphanumeric displays, tickers, scoreboards	Billboards	Exit & emergency signs	High resolution indoor video screens	Large outdoor video displays	Modules for signage backlighting	Semi-transparent displays	Variable message signs	Backlight units (BLUs) and components for LCDs	Drivers for LCD backlighting	Light sources for projection systems	Optical materials & components
 <b>advanced leds</b> Advanced LEDs Ltd						•						
 Alpha-One Electronics Ltd.		•	•			•				•		•
 <b>AMERICAN BRIGHT</b> OPTOELECTRONICS CORP. American Bright Optoelectronics Corp	•		•			•			•	•		
 <b>anglia lighting</b> solid state solutions Anglia Lighting										•	•	•
 <b>AVAGO</b> TECHNOLOGIES ■ Avago Technologies See ad on page 6									•			
 <b>carclo</b> technical plastics Carclo Technical Plastics Ltd									•			•

section 9 | LED DISPLAYS & SIGNS

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION				
	Alphanumeric displays, tickers, scoreboards	Billboards	Exit & emergency signs	High resolution indoor video screens	Large outdoor video displays	Modules for signage backlighting	Semi-transparent displays	Variable message signs	Backlight units (BLUs) and components for LCDs	Drivers for LCD backlighting	Light sources for projection systems	Optical materials & components
 <b>CITIZEN ELECTRONICS CO., LTD.</b> ■ Citizen Electronics Co. Ltd. See ad on page 4									●		●	
 <b>DOMAG</b> LED TECHNOLOGY CO., LTD. DOMAG LED Technology Co., Ltd.			●								●	●
 <b>EDISON</b> ■ Edison Opto Corporation See ad on page 25									●			
 <b>ELECOSN</b> Ideas for lighting Elecosn (HK) Co., Ltd ■ Ellsworth Adhesives See ad on page 117		●		●	●							
 <b>EVERLIGHT</b> LIGHTING FOREVER ■ Everlight Electronics Co. Ltd. See ad on page 34	●								●		●	
 <b>FAWOO TECHNOLOGY</b> ■ Fawoo Technology Co. Ltd. See ad on page 39							●		●			
 <b>Forge Europa</b>	●		●		●	●		●				

section 9 | CHIP DESIGN & MANUFACTURING

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION				
	Alphanumeric displays, tickers, scoreboards	Billboards	Exit & emergency signs	High resolution indoor video screens	Large outdoor video displays	Modules for signage backlighting	Semi-transparent displays	Variable message signs	Backlight units (BLUs) and components for LCDs	Drivers for LCD backlighting	Light sources for projection systems	Optical materials & components
 ■ Fusion Optix See ad on page 119						●			●			●
 GE Lumination ■ Global Lighting Technologies See ad on page 113						●						
 GVA Lighting Inc						●						
 Hamamatsu Corporation									●			
 Heatron Inc						●				●		
 Khatod Optoelectronic									●			
 ■ Kingbright Electronic Europe GmbH See ad on page 59	●											
 ■ LED Linear GmbH See ad on page 74						●	●					

section 9 | LED DISPLAYS & SIGNS

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION				
	Alphanumeric displays, tickers, scoreboards	Billboards	Exit & emergency signs	High resolution indoor video screens	Large outdoor video displays	Modules for signage backlighting	Semi-transparent displays	Variable message signs	Backlight units (BLUs) and components for LCDs	Drivers for LCD backlighting	Light sources for projection systems	Optical materials & components
 Ledon Lighting Jennersdorf GmbH						•						
 ■ LG Innotek See ad on page 27						•		•				•
 ■ Light Engine Ltd See ad on page 51	•											
 ■ Lynk Labs See ad on page 2						•	•	•				
 ■ Macroblock Inc. See ad on page 102									•			
 Mouser Electronics												•
 Neo-Neon LED Lighting International Ltd	•	•	•	•	•	•	•	•				
 Nexxus Lighting Inc						•						

section 9 | CHIP DESIGN & MANUFACTURING

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION			
	Alphanumeric displays, tickers, scoreboards	Billboards	Exit & emergency signs	High resolution indoor video screens	Large outdoor video displays	Modules for signage backlighting	Semi-transparent displays	Variable message signs	Backlight units (BLUs) and components for LCDs	Drivers for LCD backlighting	Light sources for projection systems
 ON Semiconductor									•		
 Optocore Ltd	•	•	•	•	•						
 OptoElectronix Inc.						•					
 ■ OSRAM Opto Semiconductors GmbH See ad on front cover and page 13	•							•		•	
 ■ OSRAM SYLVANIA See ad on page 95	•	•	•		•	•				•	
 never before possible ■ Philips Lumileds Lighting Co See ad on inside front cover										•	
 RECOM Power Inc									•		
 Ringdale Inc.		•									

section 9 | LED DISPLAYS & SIGNS

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION				
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 ■ ROAL Electronics S.p.A. See ad on page 52										●		
 ROHM Semiconductor USA, LLC	●		●		●	●		●				
 SEOUL SEMICONDUCTOR ■ Seoul Semiconductor See ad on page 109									●		●	
 ■ Sharp Microelectronics Europe See ad on page 101				●	●				●	●		
 スタンレー電気株式会社 STANLEY ELECTRIC CO., LTD. Stanley Electric Co. Ltd. (UK)						●			●		●	
 Toshiba Electronics Europe										●		
 UPEC Electronics Corp.									●			
 Vossloh-Schwabe Optoelectronic	●					●			●			



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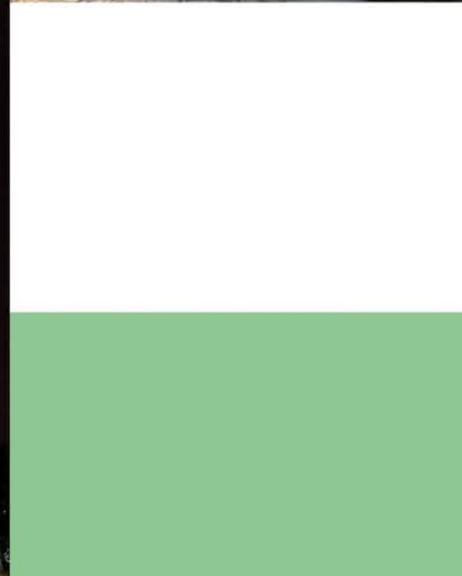
Russian Business Center



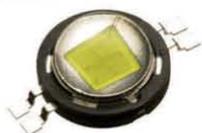
Hotel in Turkey



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section 9 | LED DISPLAYS & SIGNS

Company	DISPLAYS & SIGNS							BACKLIGHTING & PROJECTION			
	Alphanumeric displays, tickers, scoreboards	Billboards	Exit & emergency signs	High resolution indoor video screens	Large outdoor video displays	Modules for signage backlighting	Semi-transparent displays	Variable message signs	Backlight units (BLUs) and components for LCDs	Drivers for LCD backlighting	Light sources for projection systems
 YEG Opto	•	•	•			•		•		•	

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Bob Steele, Director of Optoelectronics at Strategies Unlimited – February 2010

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LEDs MAGAZINE

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Unit 1, 14 Bow Court, Fletchworth Gate, Burnsall Rd, Coventry, CV5 6SP UK, Tel: +44 (0)2476 716151, Fax: +44 (0)2476 712161, [sales@advanced-led.com](mailto:sales@advanced-led.com), [www.advanced-led.com](http://www.advanced-led.com)

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2-8-41 Chuoh, Ebina-city, Kanagawa, 243-0432 Japan, Tel: 81-46-292-7111, Fax: 81-46-292-7113, [info@alpha1-eg.com](mailto:info@alpha1-eg.com), [www.alpha1-eg.com](http://www.alpha1-eg.com)

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American Bright Optoelectronics' LED Assembly Services Division offers a wide variety of services with a global reach and local US support, including through-hole and surface mount LED board assembly and non-eutectic chip on board technology. The company's in-depth knowledge of special materials and methods allows it to provide thermal management solutions to customers in applications using high power LEDs. Expertise in MCPCB and flexible circuits is featured as well. Assembly facilities are ISO-14000 and TS-16949 certified.

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[info@american-illumination.com](mailto:info@american-illumination.com),  
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At American Illumination, Inc., we specialize in producing original and custom design LED light engines for modern and retrofit lighting solutions. From selecting components to delivering a finished product, we strive for excellence in quality, service, and producing dependable and environmentally friendly LED Light Engines, Optics, Heat Sinks, and more. We also offer OEM and ODM services for companies seeking unique lighting solutions, because lighting professionals should never settle for less.

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Avago Technologies may well be the world's oldest startup. When HP spun off Agilent Technologies in 1999, we became Agilent's semiconductor products group: expanding into new markets and applications with products that would help revolutionize global communications. In late 2005 KKR and Siler Lake Partners acquired our group and Avago Technologies became the largest privately-held independent semiconductor company in the world. Avago Technologies provides an extensive range of analog, mixed-signal and optoelectronic components and subsystems to tens of thousands of manufacturers around the world. The company's products serve four end markets: industrial and automotive, wired networking, wireless communications, and computer peripherals.

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[www.pr.com/company-profile/overview/2020](http://www.pr.com/company-profile/overview/2020)**Beacon Products**Bradenton, FL, USA, [www.beaconproducts.com](http://www.beaconproducts.com)**B/E Aerospace**

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www.bltc.com.tw

**Beautiful Light Technology Corp**  
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886-5-239-2881, [www.bltc.com.tw](http://www.bltc.com.tw)

■ SEE AD ON PAGE 19

Beautiful Light Technology Corporation (B.L.T.C.) was established in 2005 in Chia-yi County, Taiwan. Specializing in high power LED lamps, B.L.T.C. fulfills customer's requests, and places high emphasis on customer satisfaction with our professionalism in the field of safety certificates, thermal management, optics & electrics.

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Beijing, China-PRC, [www.huasun-tech.com](http://www.huasun-tech.com)

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Bergquist Thermal Clad© is a metal core printed circuit board (mcpcb) providing thermal management for surface mount and High Power LED applications. Available in standard and custom configurations, Bergquist Thermal Clad solutions provide excellent thermal management resulting in lower die temperatures, extended LED lifetimes, and increased light output. The Bergquist Company designs and manufactures high performance thermal management materials used to dissipate heat and keep electronic components cool. Bergquist is your total thermal management supplier.

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Barrington, NJ, USA, [www.edmundoptics.com](http://www.edmundoptics.com)

**EE Green Lighting Company**

Onalaska, WI, USA, [www.eegreenlighting.com](http://www.eegreenlighting.com)

**EG Lightings Co., Ltd.**

Suwon, South Korea, [www.egk.kr](http://www.egk.kr)

**Ekta Prom Ltd**

Kiev, Ukraine, [www.ekta-led.com](http://www.ekta-led.com)

**Eldim S.A.**

Herouville Saint-Clair, France, [www.eldim.fr](http://www.eldim.fr)

**eldoLED America, Inc.**

San Jose, CA, USA, [www.eldoled.com](http://www.eldoled.com)

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eldoLED develops, produces and markets high-performance Drive, Networking and Control solutions for both RGBW and tunable white solid-state lighting applications. Regardless of the type of LED application - general white lighting, dynamic full color lighting, direct pixelated, to name a few - eldoLED either has a fitting standard product or can develop a customized product in a short turnaround time. eldoLED designs focus on high control resolution, optimum power efficiency, small footprint and robust thermal management.

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Developes and manufactures high quality LED products with innovations including LED bulbs for home & commercial lighting and LED displays for advertising. And Elecosh announced the first 5W MR16 dimmable LED bulb that is equal to same brightness of 50W halogen bulb...

**Electric Power Research Institute**

Knoxville, TN, USA, [www.epri.com](http://www.epri.com)

**Electrobrain Enterprises**

Manila, Philippines, [www.ebrain.com.ph](http://www.ebrain.com.ph)

**Electroglas Inc**

San Jose, CA, USA, [www.electroglas.com](http://www.electroglas.com)

**Electrolube**

Swadlincote, Derbyshire, UK, [www.electrolube.com](http://www.electrolube.com)

**Electro-Matic**

Farmington Hills, MI, USA, [empvisualsolutions.com](http://empvisualsolutions.com)

**Electronic Interconnect**

Elk Grove Village, IL, USA, [www.eiconnect.com](http://www.eiconnect.com)

**Element Labs Ltd**

London, UK, [www.elementlabs.com](http://www.elementlabs.com)

**E-Lite OptoTech Co., Ltd.**

Shenzhen, China-PRC, [www.elite-opto.com](http://www.elite-opto.com)

**Elkays Electronics, Inc.**

San Diego, CA, USA, [www.elkays.com](http://www.elkays.com)

**Ellsworth Adhesives**

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**Elma Electronic Inc**

Fremont, CA, USA, [www.elma.com](http://www.elma.com)

**ELS - Entertainment Lighting Services**

Sun Valley, CA, USA, [www.elslights.com](http://www.elslights.com)

**Emergent Lighting Systems LLC**

Huntsville, AL, USA, [www.emergentlighting.com](http://www.emergentlighting.com)

**Emergi-Lite Safety Systems**

Leeds, W.yorks, UK, [www.emerigi-lite.co.uk](http://www.emerigi-lite.co.uk)

**Emerson Network Power - Embedded Power**

Carlsbad, CA, USA, [www.PowerConversion.com](http://www.PowerConversion.com)

**Eminus Inc.**

Mississauga, ON, Canada, [www.eminusled.com](http://www.eminusled.com)

**Endicott Research Group (ERG), Inc.**

Endicott, NY, USA, [www.ergpower.com](http://www.ergpower.com)

**Eneltec Group**

Shanghai, China-PRC, [www.eneltec-led.com](http://www.eneltec-led.com)

**Energyled Corporation**

Sindian City, Taipei County, Taiwan, [www.energyled.com](http://www.energyled.com)

**Energy Tech Solutions, LLC**

Monona, WI, USA, [www.ledenergysolutions.com](http://www.ledenergysolutions.com)

**Enertrail Technology Co. Ltd.**

9F, No.58, Sinchang Rd., Sijhih City, Taipei County, 221 Taiwan, Tel: 886-2-26490081, Fax: 886-2-26429428, [partner@enertrail.com.tw](mailto:partner@enertrail.com.tw), [www.enertrail.com.tw](http://www.enertrail.com.tw)

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**Enfis Lighting N.A.**

Bedminster, NJ, USA, [www.enfis.com/](http://www.enfis.com/)

**Enfis Ltd**

Swansea, UK, [www.enfis.com](http://www.enfis.com)

**Engineered Materials Systems**

Delaware, OH, USA, [www.netmktplc.com/Engmatsys/intro.html](http://www.netmktplc.com/Engmatsys/intro.html)

**Enhance Electronics**

Cerritos, CA, USA, [www.enhanceusa.com](http://www.enhanceusa.com)

**enjoy Lichtgestaltung**

Paderborn, Germany, [www.enjoy.de](http://www.enjoy.de)

**enLux Lighting**

Tempe, AZ, USA, [www.enluxed.com](http://www.enluxed.com)

**Envirobrite**

Sanford, FL, USA, [www.retrofitting.com](http://www.retrofitting.com)

**Envirolight, Inc (Seesmart LED)**

Simi Valley, CA, USA, [www.seesmartled.com](http://www.seesmartled.com)

**Environmental LED**

Saline, MI, USA, [www.environmentalled.com](http://www.environmentalled.com)

**EnvironmentalLights.com**

San Diego, CA, USA, [www.EnvironmentalLights.com](http://www.EnvironmentalLights.com)

**EO Lighting**

Dural, Nsw, Australia, [www.eolighting.com.au](http://www.eolighting.com.au)

**ePace Products**

Fremont, CA, USA, [www.epace-products.com](http://www.epace-products.com)

**EPCOS, Inc.**

Iselin, NJ, USA, [www.epcos.com](http://www.epcos.com)

**Epigap Optoelektronik GmbH**

Berlin, Germany, [www.epigap.de](http://www.epigap.de)

**epiLED**

Wroclaw, Poland, [www.epiled.com](http://www.epiled.com)

**Epistar Corporation**

Hsinchu, Taiwan, [www.epistar.com.tw](http://www.epistar.com.tw)

**Epivalley Co., Ltd.**

Kumi City, South Korea, [www.epivalley.com](http://www.epivalley.com)

**Epoxy Technology, Inc**

Billerica, MA, USA, [www.epotek.com](http://www.epotek.com)

**EPtronics, Inc**

Los Angeles, CA, USA, [www.EPtronics.com](http://www.EPtronics.com)

**Equipson S.A.**

Valencia, Spain, [www.equipson.es](http://www.equipson.es)

**Eschenbach-Optik GmbH**

Nurnberg, Germany, [www.eschenbach-optik.com](http://www.eschenbach-optik.com)

**eSign LED**

Huntsville, TX, USA, [www.esigned.com](http://www.esigned.com)

**ETAP**

Malle, Belgium, [www.etaplighting.com](http://www.etaplighting.com)

**N E Technology Ltd**

Cambridgeshire, UK, [www.netledlighting.co.uk](http://www.netledlighting.co.uk)

**Eternaleds Inc.**

Los Angeles, CA, USA, [www.eternaleds.com](http://www.eternaleds.com)

**Etlin Daniels**

Weston, ON, Canada, [www.etlin.com](http://www.etlin.com)

**Evatec Ltd**

Lochrietstrasse 14, CH 8890 Flums, Switzerland, Tel: 00 41 81 720 1080, Fax: 00 41 81 720 1081, [info@evatecnet.com](mailto:info@evatecnet.com), [www.evatecnet.com](http://www.evatecnet.com)

Evatec offers thin film batch or continuous production platforms for thin film deposition and plasma etch in LED manufacturing processes. Custom engineering solutions include automated handling for wafer sizes up to 8 inch and we offer complete process solutions for metals and TCOs including ITO.

**Everbright Lights Inc.**

Richmond Hill, ON, Canada, [www.everbrightlights.com](http://www.everbrightlights.com)

**Everbrite Lighting**

Greenfield, WI, USA, [www.e-l-t.com](http://www.e-l-t.com)

**Everlight Electronics Co. Ltd.**

No.25, Land 76, Sec 3rd, Chung Yang Rd, Tu Cheng, Taipei, 23671 Taiwan, Tel: +886-2-22672000, Fax: +886-2-22676300, [marketing@everlight.com](mailto:marketing@everlight.com), [www.everlight.com](http://www.everlight.com)

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Everlight Electronics Co. Ltd is a leading edge LED technology company for LED components, digital displays, infrared and optocoupler components serving various applications in the lighting, consumer, computing, automotive, telecommunication and industrial market. Founded in 1983, Everlight today is a \$400 million company headquartered in Taipei, Taiwan, with over 5,300 employees and operations all over Asia, North America and Europe. Please visit us at : [www.everlight.com](http://www.everlight.com)

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**Eversan, Inc.**

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**Evident Technologies, Inc.**

Troy, NY, USA, [www.evidotleds.com](http://www.evidotleds.com)

**Evluma**

Seattle, WA, USA, [www.evluma.com](http://www.evluma.com)

**Exalos**

Schlieren, Switzerland, [www.exalos.com](http://www.exalos.com)

**Excellence Opto. Inc.**

Hsin-Chu, Taiwan, [www.eoi.com.tw](http://www.eoi.com.tw)

**Excelsys Technologies Limited**

Cork, Ireland, [www.Excelsys.com](http://www.Excelsys.com)

**Excelsys Technologies**

519 Interstate 30, #309, Rockwal, TX 75087, USA, Tel: 972-771-4544, Fax: 972-421-1805, [salesusa@excelsys.com](mailto:salesusa@excelsys.com), [www.excelsys.com](http://www.excelsys.com)

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Excelsys Technologies is a leading Power Supply designer and manufacturer of high efficiency, high reliability, agency approved power supplies for the lighting industry, backed by a robust warranty. Constant current and constant voltage supplies have wide input voltages and weather proof, IP67 construction for demanding exterior and interior applications over broad temperature ranges. Customers are supported with Excelsys offices in Europe, North America and Asia.

**Exclara**

Santa Clara, CA, USA, [www.exclara.com](http://www.exclara.com)

**Eyeleds International**

Goes, Netherlands, [www.eyeleds.com](http://www.eyeleds.com)

**Fa. GK Technik**

Augsburg, Germany, [www.elektronik-von-gk.de](http://www.elektronik-von-gk.de)

**Fairfield Crystal Technology**

New Milford, CT, USA, [www.fairfieldcrystal.com](http://www.fairfieldcrystal.com)

**Fawoo Technology Co. Ltd.**

2BL 6LT Ojeong Industrial Complex, Ojeong-dong, Ojeong-gu, Bucheon, Korea, 421-170 Republic of Korea, Tel: 82-32-670-3251, Fax: 82-32-670-3101, [agency1017@fawoo.com](mailto:agency1017@fawoo.com), <http://www.fawoo.com>

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In January 2009, Fawoo moved to a new 42,000 m<sup>2</sup> building. The company has developed its unique heat dissipation technology to control the heat of LED lamps. With such technology, we offer wide range of products including MR16, Lumidas-H, Explosion Proof LED Lamp, LED Street Light and so on. We have received UL and CE mark for all Lumidas-H series and Lumisheet lamp, and expect to complete all products UL and CE marked within the first half of 2009.

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The Feasa range of LED Analysers are a powerful, fast and easy to use test solution to measure the color and intensity (brightness) emitted by Light Emitting Diodes (LEDs) and other lighting devices such as LCD Displays.

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**Fiberdyne Energy/Edison LED**

Frankfort, NY, USA, [www.edisonled.com](http://www.edisonled.com)

**FiberGraf Materials**

Nashport, OH, USA

**Fiberguide Industries, Inc.**

Stirling, NJ, USA, [www.fiberguide.com](http://www.fiberguide.com)

**FiberVision GmbH**

Würselen, Germany, [www.fibervision.de](http://www.fibervision.de)

**Firstar Electronic Technology Co., Ltd.**

Dongguan, Guangdong, China-PRC, [www.fsdled.com](http://www.fsdled.com)

**Fischer Elektronik GmbH**

Lüdenscheid, Germany, [www.fischerelektronik.de](http://www.fischerelektronik.de)

**Fivestar Corp**

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The Old Railway, Prince's St, Ulverston, LA12 7NQ  
UK, Tel: +44 (0) 1229 580000, Fax: +44 (0) 1229  
586890, [info@forge-europa.co.uk](mailto:info@forge-europa.co.uk),  
[www.forge-europa.co.uk](http://www.forge-europa.co.uk)

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**Forward Electronics**Sanshia Town, Taipei County, Taiwan, [www.fwd.com.tw](http://www.fwd.com.tw)**4D Optical LLC**Edmonds, WA, USA, [www.4doptical.com](http://www.4doptical.com)**Fourlight**Warsaw, Poland, [www.fourlight.eu](http://www.fourlight.eu)**The Fox Group Inc**Montreal, QC, Canada, [www.thefoxgroupinc.com](http://www.thefoxgroupinc.com)**Foxsemicon Integrated Technology Inc**San Jose, CA, USA, [www.foxsemicon.com](http://www.foxsemicon.com)**Fraen Corporation**Reading, MA, USA, [www.fraensrl.com](http://www.fraensrl.com)**Freescale Semiconductor**Austin, TX, USA, [www.freescale.com/led](http://www.freescale.com/led)**FrontAnd Technology**

No.261, Min-Sheng Rd., Hsinchu 300 Taiwan,  
Hsinchu, 300 Taiwan, Tel: +886-3-5326601, Fax:  
+883-3-5326692, [info@frontand.com.tw](mailto:info@frontand.com.tw),  
[www.frontand.com.tw](http://www.frontand.com.tw)

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19 Wheeling Avenue, Woburn, MA 01801, USA,  
Tel: 781.995.0805, Fax: 781.995.0803,  
[info@fusionoptix.com](mailto:info@fusionoptix.com), [www.fusionoptix.com](http://www.fusionoptix.com)

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Fusion Optix's world-class team is pioneering high performance, energy efficient solutions, products, and technologies for global markets, such as LED lighting and flat panel displays. Our approach to focus on leading edge optical design, fundamental materials science, and advanced manufacturing techniques has resulted in a unique, highly customizable product platform and system designs that leverage this platform. Our product offering covers the entire optical system, including optical films, lenses, light guides, LED arrays, and system designs.

**Future Lighting Solutions Network**

Pointe Claire, PQ, Canada,  
[www.futurelightingsolutions.com/network](http://www.futurelightingsolutions.com/network)

**Future Lighting Solutions**

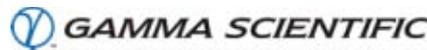
Pointe-Claire, PQ, Canada, [www.futurelightingsolutions.com](http://www.futurelightingsolutions.com)

**Gaggione SAS**

Montréal la Cluse, France, [www.gaggione.com](http://www.gaggione.com)

**Galaxia, Inc.**

Carmel, IN, USA, [www.galaxialighting.com](http://www.galaxialighting.com)

**Gamma Scientific**

8581 Aero Dr, San Diego, CA 92123, USA, Tel:  
800-637-2758, [info@gamma-sci.com](mailto:info@gamma-sci.com),  
[www.gamma-sci.com](http://www.gamma-sci.com)

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**Gautam Polymers**

New Delhi, Delhi, India, [www.gautampolymers.com](http://www.gautampolymers.com)

**GE Consumer & Industrial**

Cleveland, OH, USA, [www.gelighting.com](http://www.gelighting.com)

**GE Global Electronics Services**

Santa Clara, CA, USA, [www.geelectronicsweb.com](http://www.geelectronicsweb.com)

**GE Lumination**

1975 Noble Road, Building 338E, East Cleveland,  
OH 44112, USA, Tel: 1-888-MY-GE-LED, Fax: 216  
266 2158, [info@led.com](mailto:info@led.com), [www.led.com](http://www.led.com)

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**Gemma Lighting And Displays**

Portsmouth, Hants, UK, [www.gemmalighting.com](http://www.gemmalighting.com)

**General LED**

San Luis Obispo, CA, USA, [www.generalled.com](http://www.generalled.com)

**Genex Vision Inc.**

Rouyn-Noranda, PQ, Canada, [www.genex.qc.ca](http://www.genex.qc.ca)

**Genius Electronic Optical Co., Ltd**

Taichung County, Taiwan, [www.gseo.com](http://www.gseo.com)

**Gerber Energy Solutions**

North Billerica, MA, USA, [www.gerberenergysolutions.com](http://www.gerberenergysolutions.com)

**Gerber Sales**

North Billerica, MA, USA, [www.gerberrep.com](http://www.gerberrep.com)

**Gigahertz-Optik GmbH**

Puchheim/Munich, Germany, [www.gigahertz-optik.de](http://www.gigahertz-optik.de)

**Gigahertz-Optik Inc**

Newburyport, MA, USA, [www.light-measurement.com](http://www.light-measurement.com)

**GlacialLight**

9F, No.352, Sec.2, Jung Shan Rd., Jung He City,  
Taipei County, 235 Taiwan, Tel: +886 2 2244  
1227, Fax: +886 2 2244 1228,  
[sales@glacialtech.com](mailto:sales@glacialtech.com), [www.glacialtech.com](http://www.glacialtech.com)

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**G-LEC Europe**

Oettingheim, Germany, [www.g-lec.com](http://www.g-lec.com)

**g-Lite Technologies**

Columbus, OH, USA, [www.glitetech.com](http://www.glitetech.com)

**Glo AB**

Lund, Sweden, [www.glo-len.com](http://www.glo-len.com)

**GlobalGreen Energy**

San Francisco, CA, USA, [www.gg-energy.com](http://www.gg-energy.com)

**Global Lighting Technologies**

55 Andrews Circle, Brecksville, OH 44141, USA,  
Tel: 440-922-4584, Fax: 440-922-4585,  
[info@glthome.com](mailto:info@glthome.com), [www.glthome.com](http://www.glthome.com)

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**Goldeneye, Inc**

Carlsbad, CA, USA, [www.goldeneyeled.com](http://www.goldeneyeled.com)

**Golden Sources (HK) Ltd**

HangZhou City, China-PRC, [www.golden-sources.com](http://www.golden-sources.com)

**GO Lighting Technologies Inc.**

Toronto, ON, Canada, [www.goenergyeffective.com](http://www.goenergyeffective.com)

**GP Lighting Technology**

Huizhou, China-PRC, [www.gplighting.com.cn](http://www.gplighting.com.cn)

**GrafTech International**

Parma, OH, USA, [www.egraf.com](http://www.egraf.com)

**Green Electrician**

Kingsgrove, Nsw, Australia, [www.greenelectrician.com.au](http://www.greenelectrician.com.au)

**Greengage Lighting Ltd**

Buckingham, UK, [www.greengagelighting.com](http://www.greengagelighting.com)

**Green Lighting LLC**

St. Cloud, MN, USA, [www.4greenlighting.com](http://www.4greenlighting.com)

**Greenlite Solutions**

Singapore, Singapore, [www.greenlite.sg](http://www.greenlite.sg)

**GreenMark Inc.**

Taipei County, Taiwan, [www.green-mark.com](http://www.green-mark.com)

**Green Ray LED Lighting**

Santa Rosa, CA, USA, [www.greenrayled.com](http://www.greenrayled.com)

**Groupe LCX sas**

Le Mans, France, [www.lcx.fr](http://www.lcx.fr)

**Grupo Antolin**

Burgos, Spain, [www.grupoantolin.com](http://www.grupoantolin.com)

**Guang Li-Light Power Technology**

970 Hualien, Taiwan, [www.guangli-lightpower.com](http://www.guangli-lightpower.com)

**Guangzhou AURORA LED Lighting Co.,Ltd**

Guangzhou, China-PRC, [www.led-aurora.com](http://www.led-aurora.com)



company directory | HEATRON INC



**GVA Lighting Inc**

3400 Ridgeway Dr, #14, Mississauga, ON, Canada  
L5L 0A2, Tel: 1-905-569-6044, Fax:  
1-905-569-9823, info@gvalighting.com,  
www.gvalighting.com

GVA Lighting, Inc. is a Canadian designer and manufacturer of monochromatic and color changing high quality LED luminaires for Architectural, Commercial and Retail markets. Key products include: STR9© wallwash, wall grazing and delineation luminaire (IP66); PixelLEDT and PixelDOMET color changing pixel type fixture for media facades (IP66); FLT series powerful projector and flood light (IP66); STR8©, STR7T & STR2T fixtures for undercounter, undercabinet, cove and delineation; DUCAT-IVT and KRONA-IVT high lumen downlight luminaire; CoinLight© recessed mini-downlight and marker fixture.

**Hai Chang Industrial Co., Ltd.**

Chengdu, Sichuan, China-PRC, www.haichanglight.com

**Haiku Tech, Inc.**

Miami, FL, USA, www.haikutech.com

**HAMAMATSU**

**Hamamatsu Corporation**

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908-252-7251, usa@hamamatsu.com,  
sales.hamamatsu.com

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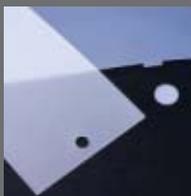
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LED-Linear provides linear LED based lighting solutions with a superior cost-/benefit ratio. The signature product lines are VarioLED Flex and XooLux®. The product scope contains interior LED lamps, exterior LED lamps (IP67) and luminaires (IP54). The lighting class product line provides 6 different color temperatures from 2700K to 6500K, up to 500 lumens per foot and 92 CRI. The maximum available efficacy is 75 lm/W. With true lighting class LED products LED Linear helps its customers to shape a better world through energy efficient lighting solutions.

**Ledlink Optics, Inc.**11F-2, No.800, Chung-Cheng Rd., Chung-Ho City, Taipei, 235 Taiwan, Tel: +886-2-8227-6126 #89, Fax: +886-2-8227-6127, [stacy\\_huang@ledlink-optics.com](mailto:stacy_huang@ledlink-optics.com), [www.ledlink-optics.com](http://www.ledlink-optics.com)

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Ledlink Optics, has been recognised by Cree, Edison, Osram, and Seoul Semi as their optical solution provider. With the integration of in house optical design, tooling, and mass production, the flexibility of lead time and the quality of our products are ensured. We are not only able to provide innovating secondary optics for solid state lighting fixture but also facilitate our customers to meet rapid market shift.

**Ledlite Power**Farnborough, Hants, UK, [www.ledlite-power.com](http://www.ledlite-power.com)**LED Neon Flex**Moncton, NB, Canada, [www.ledneonflex.com](http://www.ledneonflex.com)**LED One (Hangzhou) Co Ltd**Hangzhou, Zhejiang, People's Republic of China, [www.mountor.cn:8727/index.asp](http://www.mountor.cn:8727/index.asp)

# LEDON

**Ledon Lighting Jennersdorf GmbH**  
Technologiepark 10, A-8380 Jennersdorf, Austria,  
Tel: +43 (0)3329 9010 840 0, Fax: +43 (0)3329  
9010 840 1, [info@ledonlighting.com](mailto:info@ledonlighting.com),  
[www.ledonlighting.com](http://www.ledonlighting.com)

Manufactures energy efficient LED light sources. As a company of the Zumtobel Group, Ledon supplies all brands of the Zumtobel group with its innovative, high quality and durable LED components, LED modules and LED Light Engines. Ledon's market leading XED module range designed for application in LED retrofit bulbs and downlights is sold worldwide via its sales network. Founded in Jennersdorf, Austria (2001), the company fosters strong international strategic partnerships and owns an impressive intellectual property portfolio. For further information on Ledon, please visit [www.ledonlighting.com](http://www.ledonlighting.com)

**LED Optical Solutions**Washington, MI, USA, [www.ledoscorp.com](http://www.ledoscorp.com)**LEDpartners**Zug, Switzerland, [www.ledpartners.ch](http://www.ledpartners.ch)**LED Retro8**Parsippany, NJ, USA, [www.LEDretro8.com](http://www.LEDretro8.com)**LedRise Ltd**Kwun Tong, Hong Kong, [www.ledrise.com](http://www.ledrise.com)**LED Roadway Lighting Ltd.**Halifax, NS, Canada, [www.ledroadwaylighting.com](http://www.ledroadwaylighting.com)**leds.com.mx**Barcelona, Mexico, [www.leds.com.mx](http://www.leds.com.mx)**Ledsgo**Kharkov, Ukraine, [www.ledsgo.com.ua](http://www.ledsgo.com.ua)**LEDSigns Co.,Ltd**Shenzhen, Guangdong, China-PRC, [www.ledsigns.cn](http://www.ledsigns.cn)**LEDs N Solar**Ahmedabad, India, [www.ledsnsolar.com](http://www.ledsnsolar.com)**LED Specialists, Inc.**Kings Park, NY, USA, [www.ledspecialists.com](http://www.ledspecialists.com)**LedStore**Capital Federal, Buenos Aires, Argentina, [www.ledstore.com.ar](http://www.ledstore.com.ar)**The LED Store/DirectLights**La Crosse, WI, USA, [www.directlights.net](http://www.directlights.net)

**LEDStreetLights.us.com**Bristol, RI, USA, [www.ledstreetlights.us.com](http://www.ledstreetlights.us.com)**LEDSupply**Randolph, VT, USA, [ledsupply.com/index.php](http://ledsupply.com/index.php)**L.E.D. The Way Store**Charlotte, NC, USA, [www.LEDtheway.com](http://www.LEDtheway.com)**LED Transformations, LLC**Stanton, NJ, USA, [www.ledtransformations.com](http://www.ledtransformations.com)**LEDtronics, Inc.**Torrance, CA, USA, [www.ledtronics.com](http://www.ledtronics.com)**LEDvista Limited**Enniscorthy, County Wexford, Ireland, [www.ledvista.com](http://www.ledvista.com)**LED\*Waves**Brooklyn, NY, USA, [www.ledwaves.com](http://www.ledwaves.com)**LEDworx GmbH**Vienna, Austria, [www.ledworx.com](http://www.ledworx.com)**Leicester Circuits Ltd**Leicester, Leics, UK, [www.leicestercircuits.com](http://www.leicestercircuits.com)**Lenoo Electronics Co.,Ltd.**Tu-Cheng City, Taipei, Taiwan, [www.lenoo.com](http://www.lenoo.com)**Leotek Electronics USA Corp.**Santa Clara, CA, USA, [www.leotek.com](http://www.leotek.com)**Leviton Manufacturing Company**Melville, NY, USA, [www.leviton.com](http://www.leviton.com)**Leyard Electronic Technology**Shen Zhen, China-PRC, [www.leyard.com](http://www.leyard.com)**LG Innotek**

Seoul Square-20F, Namdaemunno-5-ga, Jung-gu, Seoul, Korea, 100-714 Republic of Korea, Tel: 031-450-4561, Fax: 031-450-4596, [ledlighting@lginnotek.com](mailto:ledlighting@lginnotek.com), [www.lginnotek.com](http://www.lginnotek.com)

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LG Innotek has all the capabilities to serve the LED backlight and the LED lighting applications with technical competence at every level of integration from LED chips to light engines. As a globally-recognized leader in electronic components, LG Innotek exercises a strict quality control over the whole development and manufacturing processes to deliver the highest level of customer satisfaction. With its commitment to technology and quality, LG Innotek strives to be the first partner to your lighting projects.

**LichtwerkBerlin Ltd.**Berlin, Germany, [www.berlinled.de](http://www.berlinled.de)**LightBulb International Plc**Dundee, UK, [www.lightbulb.co.uk](http://www.lightbulb.co.uk)**Lightech SRL**Capriate S.G., Italy, [www.lightech-fo.com](http://www.lightech-fo.com)**Light Emission Technology, Ltd**ShenZhen, China-PRC, [www.ledemission.com](http://www.ledemission.com)**Light Emitting Designs, LLC**North Barrington, IL, USA, [www.led-llc.com](http://www.led-llc.com)

**Light Engine Ltd**  
6/F, Photonics Centre, 2 Science Park East Ave, Hong Kong Science Park, Shatin N/A, Hong Kong, Tel: 852 - 2144-2082, Fax: 852 - 2144-2081, [sales@lightengine-tech.com](mailto:sales@lightengine-tech.com), [www.lightengine-tech.com](http://www.lightengine-tech.com)

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A pioneer in the rapid advancement of LEDs' efficiency and brightness, Light Engine remains perfectly placed to satisfy the world's growing need for environmentally-friendly lighting solutions. Our competencies in technology integration and manufacturing are indispensable elements in globalizing the LED supply chain. Backed by over 25 years' specialist LED experience, we are thoroughly grounded in all LED-relevant engineering and manufacturing disciplines. Our many specific areas of expertise include thermal management, optics design, power management, white balancing and chip-on-boards.

**Light Engines**Sturbridge, MA, USA, [lightengines.com](http://lightengines.com)**Lighter Europe AB**

Stockholm, Sweden

**LightGuard**Burgaw, NC, USA, [www.lightguard.com](http://www.lightguard.com)**Lighthouse Technologies Ltd.**Shatin, Hong Kong, [www.lighthouse-tech.com](http://www.lighthouse-tech.com)**Lighthouse WorldWide, LLC**Milford, CT, USA, [www.lighthouseww.com](http://www.lighthouseww.com)**Lighting and Production Resources**Orlando, FL, USA, [www.lightingandproductionresources.com](http://www.lightingandproductionresources.com)**Lighting Association Laboratories, The**Telford, Shropshire, UK, [www.lightingassociation.com](http://www.lightingassociation.com)**Lighting Orient Co Ltd**Shenzhen, People's Republic of China, [www.ledlightsorient.com](http://www.ledlightsorient.com)**Lighting Sciences Inc.**Scottsdale, AZ, USA, [www.lightingsciences.com](http://www.lightingsciences.com)**Lighting Ways Foreign Trade Co.**Istanbul, Turkey, [www.ledlightingmarket.com](http://www.ledlightingmarket.com)**Light Ocean Technology Corp.**Hsinchu City, Taiwan, [www.lightocean.com.tw](http://www.lightocean.com.tw)**Lightolier**Fall River, MA, USA, [www.lightolier.com](http://www.lightolier.com)**Light Prescriptions Innovators, LLC**Altadena, CA, USA, [www.lpi-llc.com](http://www.lpi-llc.com)**Lightscape Materials Inc.**Princeton, NJ, USA, [www.lightscapematerials.com](http://www.lightscapematerials.com)**Lightspeed Technologies**Campbell, CA, USA, [www.light-speed-tech.com](http://www.light-speed-tech.com)**LightTest Labs**Winter Springs, FL, USA, [www.lighttestlabs.com](http://www.lighttestlabs.com)**Light Vision Corp.**Santa Fe Springs, CA, USA, [www.lightvision-led.com/](http://www.lightvision-led.com/)**LightWild**Overland Park, KS, USA, [www.lightwild.com](http://www.lightwild.com)**Ligitek Electronics Co. Ltd.**Tucheng, Taipei Hsien, Taiwan, [www.ligitek.com](http://www.ligitek.com)**Line Lite International BV**Amsterdam, Netherlands, [www.linelite.com](http://www.linelite.com)**LiteLED Ltd**Leeds, UK, [www.liteled.co.uk](http://www.liteled.co.uk)**LiteOn, Inc**Milpitas, ca, CA, USA, [www.us.liteon.com/opto.index.html](http://www.us.liteon.com/opto.index.html)**L.I.T. Surgical**Plano, TX, USA, [www.LITSurgical.com](http://www.LITSurgical.com)**LittleFootprint Lighting, Inc.**Santa Cruz, CA, USA, [www.lfplighting.com](http://www.lfplighting.com)**Logah Technology Corp.**Hsinchu, Taiwan, [www.logah.com](http://www.logah.com)**Logolight**Quint-Fonsegrives, France, [www.logolight.fr](http://www.logolight.fr)**Lotus LED Lights**Surrey, BC, Canada, [www.lotusledlights.com](http://www.lotusledlights.com)**LPA Excil Electronics Ltd**Wakefield, West Yorks, UK, [www.lpa-group.com](http://www.lpa-group.com)**LSI Industries Inc**Cincinnati, OH, USA, [www.lsi-industries.com](http://www.lsi-industries.com)**LSI Smartvision® LED Video Displays**North Canton, OH, USA, [www.lsi-industries.com](http://www.lsi-industries.com)**LTSS ltd**Alton, Hants, UK, [www.ltss.co.uk](http://www.ltss.co.uk)**Lucid-Lighting**Cwmbran, Gwent, UK, [www.lucid-lighting.co.uk](http://www.lucid-lighting.co.uk)**Lumagine**Burnsville, MN, USA, [www.lumagine.com](http://www.lumagine.com)**Lumec**Boisbriand, PQ, Canada, [www.lumec.com](http://www.lumec.com)**Lumentra Inc**Toronto, ON, Canada, [lumentra.com](http://lumentra.com)**Lumex / An ITW Company**Palatine, IL, USA, [www.lumex.com](http://www.lumex.com)**Lumicrest Lighting Solutions Inc.**Markham, ON, Canada, [www.lumicrest.com](http://www.lumicrest.com)**Lumilens Optoelectronics Inc.**Las Vegas, NV, USA, [www.lumilensopto.com](http://www.lumilensopto.com)**Lumi Lime Limited**Kowloon Tong, Hong Kong, [www.lumilime.com](http://www.lumilime.com)**Luminit**Torrance, CA, USA, [www.luminitco.com](http://www.luminitco.com)**Luminous Flux**

Bailey, NC, USA

**Luminus Devices**Billerica, MA, USA, [www.luminus.com](http://www.luminus.com)**Lumitech Produktion- und Entwicklung GmbH**Jennersdorf, Austria, [www.lumitech.at](http://www.lumitech.at)**Lumstar Technology Inc**Huizhou, Guangdong, China-PRC, [www.lumstar.com](http://www.lumstar.com)**Lunera Lighting**Redwood City, CA, USA, [www.lunera.com](http://www.lunera.com)**Lustrous Technology Ltd**Taipei County, Taiwan, [www.lustrous.com.tw](http://www.lustrous.com.tw)**Lutron Electronics**Coopersburg, PA, USA, [www.lutron.com](http://www.lutron.com)**Luums International BV**Culemborg, Gelderland, Netherlands, [www.luums.com/](http://www.luums.com/)**LuxInTec SL**Boecillo - Valladolid, Spain, [www.luxintec.com](http://www.luxintec.com)

## company directory | LYNK LABS



**Lynk Labs**  
2511 Tehnology Drive, Suite 108, Elgin, IL 60124, USA, Tel: 847.783.0123, Fax: 847-783-0130, lynk@lynklabs.com, www.lynklabs.com  
■ SEE AD ON PAGE 2

Lynk Labs is the LED industry's leading manufacturer of AC LED packages, light engines, drive and system technology. The bulb n' ballast simplicity of Lynk Labs AC LED light engine technology delivers products that simplify the design and integration challenges of LEDs into AC power sources. Accelerate product design and time to market with Lynk Labs AC LED technology — EFFICIENT — SIMPLE — NO DRIVERS.



**Macroblock Inc.**  
6F-4 No.18 Pu-Ting Rd., Hsinchu, 300 Taiwan, Tel: +886-3-579-0068, Fax: +886-3-579-0125, marketing@mblock.com.tw, www.mblock.com.tw  
■ SEE AD ON PAGE 102

Macroblock Inc. provides reliable and intelligent LED drivers for a wide range of LED applications. Solutions for LED video displays and traffic signs feature advanced color enhancement, smart error detections, current adjustment, and power saving. Solutions for LED architectural lighting feature reliable transmission and color performances. Solutions for LED general lighting and automotive lighting feature high efficiency and safety. Solutions for LED backlighting feature high efficiency, LED brightness adjustment without color shift, and full protections. Macroblock professional team assists customers to go into the market faster with reliable products, short lead time, and full technical support.

**MAC SRL**  
Recanati (MC), Italy

**Madrix**  
Dresden, Germany, www.madrix.com

**Magic Lite Ltd.**  
Oakville, ON, Canada, www.magiclite.com



**Magtech Industries Corporation**  
5625-A S. Arville Street, Las Vegas, NV 89118, USA, Tel: 1-702-364-9998, Fax: 1-702-364-1562, csupport@magtechind.com, www.magtechind.com

Magtech Industries Corporation is a US based company dedicated exclusively to the design, manufacture, and distribution of high quality, switch-mode power supplies. We provide solutions from wall-mount, desktop adaptors, LED power supply and LED drivers. Industry standard open frame and close frame power supplies. Magtech Industries currently operates from its 20,000- sq. ft. facility in Las Vegas, Nevada, with much of its manufacturing capabilities being handled overseas in Taiwan and China.

**Majantys**  
Le Bourget du Lac, France, www.majantys.com

**MAL Effekt Technik**  
Bebra, Germany, www.mal-effekt.de

**Mango Electronics**  
Bexhill on Sea, East Sussex, UK, www.sauna-steam.co.uk

**Marc Signage**  
Kolkata, West Bengal, India, www.marcsignage.com

**Marktech Optoelectronics**  
Latham, NY, USA, www.marktechopto.com

**Marl International Limited**  
Ulverston, Cumbria, UK, www.marl.co.uk

**Martin Professional**  
Aarhus N, Denmark, www.martin.com

**Marubeni America Corporation**  
Santa Clara, CA, USA, www.Tech-LED.com

**Master Bond**  
Hackensack, NJ, USA, www.masterbond.com

**Matheson Tri-Gas, Inc.**  
Newark, CA, USA, www.matheson-trigas.com



**Matrix Lighting**  
7811 Lemona Avenue, Van Nuys, CA 91405, USA, Tel: 1-877-847-4276, sales@viribright.com, www.viribright.com  
■ SEE AD ON BACK COVER

Matrix Lighting Inc., manufacturer of VIRIBRIGHT LED Light Bulbs, concentrates its business on the development of LED lighting and manufacturing. Matrix Lighting has a development team focused on research, development of LED drivers, heat management, optics, mechanical and lamp design. VIRIBRIGHT LED light bulbs are suitable for direct replacement of any indoor fixture for commercial and residential lighting. With an impressive 2700 light distribution, VIRIBRIGHT LED light bulbs are the next generation in lighting technology.

**Matsuo Sangyo Co., Ltd**  
Singapore, Singapore, www.matsuo-sangyo.co.jp

**Maxim Integrated Products**  
Sunnyvale, CA, USA, www.maxim-ic.com/led

**MAZeT GmbH**  
Jena, Germany, www.mazet.de

**McDonald Technologies Int**  
San Antonio, TX, USA, www.mcdonald-tech.com



**Mean Well USA, Inc.**  
44030 Fremont Blvd, Fremont, CA 94538, USA, Tel: 510-683-8886, Fax: 510-683-8899, michael@meanwellusa.com, www.meanwellusa.com  
■ SEE AD ON PAGE 72

Mean Well has complete LED series power supplies, open frame PCB power supply as well as enclosed type units, please visit us at www.meanwellusa.com, click on Products or New Products to make your selections. Please call us at 510-683-8886 for assistance.

**Megaman Nederland**  
Almere, Netherlands, www.megaman.nl

**Meiji Techno America**  
Santa Clara, CA, USA, www.meijitechno.com

**Melexis**  
Ieper, Belgium, www.melexis.com

**ME Lighting**  
St Peters, Nsw, Australia, www.melthing.com.au

**Membrane Switch and Panel, Inc.**  
Costa Mesa, CA, USA, www.membraneusa.com

**Mentor Graphics Corporation**  
Marlborough, MA, USA, www.mentor.com/mechanical

**Microdiamant AG**  
Lengwil, Switzerland, www.microdiamant.com

**Micro-Lite, Inc**  
Thorndike, MA, USA, www.micro-lite.com

**Micron Technology**  
Boise, ID, USA, www.micron.com

**Micropress S.A.**  
Sao Paulo, Brazil, www.micropress.com.br

**Microsemi Corporation**  
Garden Grove, CA, USA, www.microsemi.com

**Microsharp Corporation Ltd**  
Watchfield, Oxfordshire, UK, www.microsharp.co.uk

**Midwest Circuits**  
Ferndale, MI, USA

**Mighty Power Solutions Corp.**  
Sindien City, Taipei County, Taiwan, www.mightypower.com.tw

**Mimaki ECO Lighting Solutions**  
San Marcos, CA, USA, www.mimaki-ls.com

**Minispotlight.com**  
Kewaunee, WI, USA, minispotlight.com

**Minleon International (USA) Ltd**  
Camp Hill, PA, USA, www.minleon.com

**Minleon International Limited**  
Dongguan, Guangdong, China-PRC, www.minleon.com

**MKS Instruments Inc**  
Andover, MA, USA, www.mksinst.com

**Modo Lights**  
Dubai, United Arab Emirates, www.modolights.com

**Modular International Inc**  
Pittsburgh, PA, USA, www.modularinternational.com

**Molex Inc**  
Lisle, IL, USA, www.molex.com

**MonkeyLectric LLC**  
Berkeley, CA, USA, www.MonkeyLectric.com

**Monolithic SA**  
Barcelona, Spain



**Mouser Electronics**  
1000 N Main St, Mansfield, TX 76063, USA, Tel: 817-804-3800, Fax: 817-804-3803, sales@mouser.com, www.mouser.com

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**MP Lighting**  
Vancouver, BC, Canada, www.mplighting.com

**MSC Vertriebs GmbH**  
Stutensee, Germany, www.msc-ge.com

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National's PowerWise© energy-efficient LED drivers provide constant current to arrays of LEDs, enabling color and brightness matching over a wide temperature range. With best-in-class features to enable dimming and thermal management, National's drivers ensure differentiation, high performance, and reliability in LED bulbs, indoor/downlight and outdoor fixtures, automotive, projectors, and other general illumination applications. Reference designs, application notes, and the WEBENCH© LED Designer online tool allow for fast selection and simulation of complete LED driver designs. For more, visit: [national.com/led](http://national.com/led).

**National Signal Inc**Fullerton, CA, USA, [www.nationalsignallinc.com](http://www.nationalsignallinc.com)**NCW (Holdings) Ltd**Kowloon, Hong Kong, [www.botex.com](http://www.botex.com)**NEC Electronics America Inc**Santa Clara, CA, USA, [www.am.necel.com](http://www.am.necel.com)**Neon-EC Ltd**Saint-Petersburg, Russia, [www.e-neon.ru](http://www.e-neon.ru)**Neo-Neon LED Lighting International Ltd**Gong He Town, He Shan City, Guang Dong, 529728 People's Republic of China, Tel: 86-750-8300941, Fax: 86-750-8300940, [sales@neo-neon.com](mailto:sales@neo-neon.com), [www.neo-neon.com](http://www.neo-neon.com)

Neo-Neon's LED products cover Street, Bridge, Tunnel and Public Area Illumination, Recessed Downlight, Direct Replacement Bulbs, T5 and T8 Tubes, Trougher, Embedded Accent, Wall, Sconce, Track, Pendant, Flush Mount, Security, Light Engine, LED Chip and Packages, Architectural, Entertainment, and Decorative. All Neo-Neon illumination products are manufactured to the highest standards. Neo-Neon is an Energy Star Partner and is focused on cost effective energy saving illumination solutions in the White and RGBW space.

**Neon-LED International (HK) Ltd**Guangzhou, Guangdong, People's Republic of China, [www.neon-led.com](http://www.neon-led.com)**NeoPac Optoelectronics Inc**Chu-Bei City, Hsinchu County, Taiwan, [www.neobulb.com](http://www.neobulb.com)**New Age Lightings**Los Angeles, CA, USA, [www.NewAgeLightings.com](http://www.NewAgeLightings.com)**Next Generation Lights Inc**Flushing, NY, USA, [www.nextgenlights.com](http://www.nextgenlights.com)**Nextreme**Durham, NC, USA, [www.nextreme.com](http://www.nextreme.com)**Nexus Lighting Inc**124 Floyd Smith Dr, Suite 300, Charlotte, NC 28262, USA, Tel: 704-405-0416, Fax: 704-405-0422, [www.nexuslighting.com](http://www.nexuslighting.com)

Nexus Lighting is a leading, multi-brand lighting company providing high quality, energy saving solutions to the commercial, residential and institutional marketplace. Nexus Lighting's most recent product development, Array Lighting LED Lamps, utilize Selective Heat Sink and Quantum Dot technology to provide the highest efficacy, lightest weight lamp in the industry while maintaining consistent, pure color rendering with true dimming capabilities.

**NIC Components**Melville, NY, USA, [www.niccomp.com](http://www.niccomp.com)**Nichia America Corp**Wixom, MI, USA, [www.nichia.com](http://www.nichia.com)**NIOS Lighting**Bottelare (Merelbeke), Belgium, [www.nios-lighting.com](http://www.nios-lighting.com)**Nitride Crystals Inc**Deer Park, NY, USA, [www.nitride-crystals.com](http://www.nitride-crystals.com)**Noctron Soparfi SA**Bridel, Luxembourg, [www.noctron.com](http://www.noctron.com)**Nooteboom Elektronica**Helmond, Noord Brabant, Netherlands, [www.nooteboom.biz](http://www.nooteboom.biz)**Notis Design**Novocherkassk, Rostov-on-don, Russia, [notis-group.biz/](http://notis-group.biz/)**Novagard Solutions**Cleveland, OH, USA, [www.novagard.com](http://www.novagard.com)**Novicomm**Alamo, CA, USA, [www.novicomm.com](http://www.novicomm.com)**Nozon Green Technologies nv/sa**Anzegem, Belgium, [www.nozon.eu](http://www.nozon.eu)**NSH Electronics**Coleshill, UK, [www.nshelectronics.com](http://www.nshelectronics.com)**NuaLight Ltd**Cork, Ireland, [www.nualight.com](http://www.nualight.com)**NuArt Lighting**Fullerton, CA, USA, [www.nuartlighting.com](http://www.nuartlighting.com)**Nudec SA**Polinya, Barcelona, Spain, [www.nudec.es](http://www.nudec.es)**Nu Horizons Electronics**Melville, NY, USA, [www.nuhorizons.com](http://www.nuhorizons.com)**NuLEDs by Numinus LLC**Carlsbad, CA, USA, [www.NuLEDS.com](http://www.NuLEDS.com)**NuSil Technology LLC**Carpinteria, CA, USA, [www.nusil.com/engineering/photronics](http://www.nusil.com/engineering/photronics)**Nuventix Inc**Austin, TX, USA, [www.nuventix.com](http://www.nuventix.com)**Nu Vue Lighting**Las Vegas, NV, USA, [www.nuvuelighting.com](http://www.nuvuelighting.com)**NXP Semiconductors**High Tech Campus 45, 5656 AE Eindhoven, The Netherlands, Tel: +33 2 31 45 62 66, [ssl@nxp.com](mailto:ssl@nxp.com), [www.nxp.com](http://www.nxp.com)

NXP Semiconductors provides High Performance Mixed Signal and Standard Product solutions that leverage its leading Lighting, RF, Analog, Power, Digital Processing and manufacturing expertise. NXP is the number one supplier of lighting ICs with a strong portfolio of high voltage solutions emphasizing superior control of deep dimming and highly efficient current control for both CFL and SSL technologies.

**Nye Lubricants Inc**Fairhaven, MA, USA, [www.nyeoptical.com](http://www.nyeoptical.com)**OAS-ISUSA**

Seminole, FL, USA

**Obducat AB**Malmö, Sweden, [www.obducat.com](http://www.obducat.com)**Ocean Optics EMEA**Duiven, Netherlands, [www.oceanoptics.eu](http://www.oceanoptics.eu)**Ocean Optics Inc**Dunedin, FL, USA, [www.oceanoptics.com](http://www.oceanoptics.com)**O C White Co**Thorndike, MA, USA, [www.ocwhite.com](http://www.ocwhite.com)**OEC AG**Munich, Germany, [www.oec.net](http://www.oec.net)**Omachron Lighting Corp**Hampton, ON, Canada, [www.omachronlighting.com/](http://www.omachronlighting.com/)**Omega Communications**Gauteng, South Africa, [www.omegacom.co.za](http://www.omegacom.co.za)**Omron Electronic Components LLC**Schaumburg, IL, USA, [www.components.omron.com](http://www.components.omron.com)**OnChip Devices**Santa Clara, CA, USA, [www.onchip.com](http://www.onchip.com)**ON Semiconductor**5005 E McDowell Rd, Phoenix, AZ 85008, USA, Tel: 602-244-6600, [www.onsemi.com](http://www.onsemi.com)

ON Semiconductor provides an extensive range of LED drivers for various end applications. As a premier supplier of energy efficient solutions, ON Semiconductor leverages its strengths in power management and high-volume manufacturing to develop application-specific LED drivers tailored to the needs of evolving automotive, mobile, LCD backlighting, addressable signage and general lighting for residential and commercial applications. For more information on the latest LED driver products and solutions, visit [www.onsemi.com](http://www.onsemi.com).

**Onstate Technologies**Abbotsford, BC, Canada, [www.onstatetech.com](http://www.onstatetech.com)**Operations Technology Inc. (OPTEK)**Blairstown, NJ, USA, [www.optek.net](http://www.optek.net)**opsira GmbH**Weingarten, Germany, [www.opsira.de](http://www.opsira.de)**OPTEK Technology**Carrollton, TX, USA, [www.optekinc.com](http://www.optekinc.com)**Op-Test**Redding, CA, USA, [www.op-test.com](http://www.op-test.com)**Optical Illumination Corp.**Craig, CO, USA, [www.oic-us.com](http://www.oic-us.com)



OPTICAL  
RESEARCH  
ASSOCIATES

**Optical Research Associates**

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Optical Research Associates (ORA©) is the world's leading developer of optical and illumination design software, providing CODE V© for image-forming optics, and LightTools© for innovative illumination design, including backlight and projection displays, automotive instrumentation, LEDs, reflectors, and more. ORA is also the largest independent supplier of optical engineering services with more than 4,700 completed projects since the company was founded in 1963.

**Optical Semiconductors Inc**

Peekskill, NY, USA

**Optics Balzers AG**

Balzern, Liechtenstein, [www.opticsbalzers.com](http://www.opticsbalzers.com)

**Optics Lite srl**

Osnago, Italy, [www.opticslite.com](http://www.opticslite.com)

OPTILED

**OPTILED Lighting International Ltd**

Suite 2302, 23/F, One Landmark East, 100 How Ming Street, Kwun Tong, Kowloon 000, Hong Kong, Tel: 852 2607 4268, Fax: 852 2638 5631, [info@optiled.com](mailto:info@optiled.com), [www.optiled.com](http://www.optiled.com)

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OPTILED is a brand and a company that is purely focused on providing LED lighting solutions, specializing in both LED lamps and the fixtures that go with them. We are positioned on the bright side of the lighting technology curve and continually introduce new innovative products.

OPTIS

**Optis**

BP 275, Ze La Farlede, 83078 Toulon Cdx 9, France, Tel: +33 494086690, Fax: +33 494086694, [sales@optis-world.com](mailto:sales@optis-world.com), [www.optis-world.com](http://www.optis-world.com)

OPTIS provides physics based CAD integrated Software & services for light modelling, virtual product visualization and readability/visibility studies. OPTIS solutions enable physics-based simulation for optimizing lighting, modeling lit appearance for automotive, electronics, architecture and aircraft applications. Integrated in CATIA V5, SolidWorks and now Pro/ENGINEER, they incorporate measured libraries of new-generation LEDs and OLEDs. Simulate HB, warm-white LEDs; model the spectral emission in visible, UV and IR fields, forward current and ambient temperature.

optocore

**Optocore Ltd**

LED Lighting & Sustainable Resources  
Mesogion 27, Athens, GR11526 Greece, Tel: 210-7759433, Fax: 210-7781118, [info@optocore.gr](mailto:info@optocore.gr), [www.optocore.gr](http://www.optocore.gr)

Optocore designs, develops, produces and implements LEDs for the lighting industry. Working in accordance with our customers, each and every product is manufactured, using our seamless integration of design and production. Produces light engines for a vast range of applications for industrial use but also architectural lighting, consumer goods, video display and other, using its commercial brand LEIDS.

**Opto Diode Corporation**

Newbury Park, CA, USA, [www.optodiode.com](http://www.optodiode.com)

OPTO  
electronix

**OptoElectronix Inc.**

1735 Technology Drive, Suite 175, San Jose, CA 95110, USA, Tel: 408-437-9455, Fax: 408-437-9431, [corp@optoelectronix.com](mailto:corp@optoelectronix.com), [www.optoelectronix.com](http://www.optoelectronix.com)

You don't need an engineering degree to design great LED lighting. Every OptoElectronixT LED light engine is a complete system—simply connect the wires to a power source and you're done. Our plug-&-play LED lights fully integrate the LEDs, optics, heat sink, electronics, and power supply in one compact package. Features: Sixty to over 1,000 lumens of warm or cool white LED light; many models are Triac dimmable; wide range of UL-recognized LED light engines; five-year warranty.

**Optosupply Ltd**

Fo Tan, N.T., Hong Kong, [www.optosupply.com](http://www.optosupply.com)

**Opto System Co Ltd**

Kyotanabe City, Kyoto, Japan, [www.opto-system.co.jp/en/](http://www.opto-system.co.jp/en/)

**Opto Tech**

Hsinchu, Taiwan, [www.opto.com.tw](http://www.opto.com.tw)

**Opto Technology, Inc.**

Wheeling, IL, USA, [www.optotech.com](http://www.optotech.com)

**Optotek Limited**

Ottawa, ON, Canada, [www.optotek.com](http://www.optotek.com)

**Optronic Laboratories**

Orlando, FL, USA, [www.olinet.com](http://www.olinet.com)

**Opulent Technologies Inc**

San Jose, CA, USA, [www.opulentech.com](http://www.opulentech.com)

**Opulent Techno Pte Ltd**

Singapore, [www.opulent.com.cn](http://www.opulent.com.cn)



**Orb Optronix, Inc.**

1003 7th Ave, Suite B, Kirkland, WA 98003, USA, Tel: 425-605-8500, Fax: 801-912-2645, [sales@OrbOptronix.com](mailto:sales@OrbOptronix.com), [www.OrbOptronix.com](http://www.OrbOptronix.com)

Orb Optronix offers the most innovative and useful LED test and measurement products in the world to meet the needs of real-world LED technology implementation. Designing LED-based products just got a whole lot easier for companies using Orb's complete electrical-thermal-optical LED characterization systems. In addition, Orb is a premier OEM HB LED design partner, offering engineering services in optical, thermal, electrical, mechanical and industrial engineering, as well as, a world-class LED measurement laboratory facility.

**Orca Green Marine (OGM)**

Austin, TX, USA, [www.orcagreen.com](http://www.orcagreen.com)

**Oree Inc**

Ramat Gan, Israel, [www.oree-inc.com](http://www.oree-inc.com)

**Orient Lighting Co. Ltd.**

Sydney, Nsw, Australia, [www.orientlighting.com](http://www.orientlighting.com)

**Oried**

Portland, OR, USA, [www.oriented.com](http://www.oriented.com)

**OSA Opto Light GmbH**

Berlin, Germany, [www.osa-opto.com](http://www.osa-opto.com)

**OSCI Inc.**

Corvallis, OR, USA, [www.oscintl.com](http://www.oscintl.com)

**Oshino Architectural LED Lighting**

Nottingham, UK, [www.oshino-led.co.uk](http://www.oshino-led.co.uk)

**OSRAM GmbH**

München, Germany, [www.osram.com/led](http://www.osram.com/led)

OSRAM  
Opto Semiconductors

**OSRAM Opto Semiconductors GmbH**

Leibnizstr. 4, 93055 Regensburg, Germany, Tel: 0049 941 850 1700, Fax: 0049 941 850 3302, [support@osram-os.com](mailto:support@osram-os.com), [www.osram-os.com](http://www.osram-os.com)

■ SEE AD ON FRONT COVER AND PAGE 13

Winning the 2007 German Future Prize was the latest highlight in the research history of OSRAM Opto Semiconductors, which stretches back almost thirty years. The company has long been one of the most innovative outfits in Germany. As one of the world's leading manufacturers of optoelectronic semiconductors for the lighting, sensor and visualization sectors, OSRAM Opto Semiconductors regularly launches new technologies and products that make a lasting difference to these sectors.

## company directory | OSRAM SYLVANIA

**OSRAM SYLVANIA**

100 Endicott St, Danvers, MA 01923, USA, Tel: 978.777.1900, Fax: 978.750.2152, LEDlighting@sylvania.com, [www.sylvania.com](http://www.sylvania.com)

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OSRAM SYLVANIA offers innovative, integrated SSL system solutions for automotive and general lighting applications that leverage more than a century of experience in serving the lighting industry. Products and services offered include the design, development and manufacturing of SSL modules, power supplies and control systems with industry-leading quality and a strong product warranty. Direct access to OSRAM Opto Semiconductor, the second largest supplier of LEDs, enables the rapid introduction of innovative, high-performance SSL products that reflect the state-of-the-art in LED technology.

**Oxford Instruments Plasma Technology**

Bristol, UK, [www.oxford-instruments.com](http://www.oxford-instruments.com)

**Oxley Group Ltd**

Ulverston, Cumbria, UK, [www.oxleygroup.com](http://www.oxleygroup.com)

**Oxley Inc**

Branford, CT, USA, [www.oxleyinc.com](http://www.oxleyinc.com)

**Oznum.com**

Concord, CA, USA, [www.oznum.com](http://www.oznum.com)

**Pacer International Ltd**

Reading, Berks, UK, [www.pacer.co.uk](http://www.pacer.co.uk)

**Pacific Global Energy LED**

San Jose, CA, USA, [www.pacificglobalenergyled.com](http://www.pacificglobalenergyled.com)

**Paleco BV**

Eindhoven, The Netherlands, [www.paleco.com](http://www.paleco.com)

**Pall Corporation**

Port Washington, NY, USA, [www.pall.com/micro](http://www.pall.com/micro)

**Palomar Technologies Inc**

Carlsbad, CA, USA, [www.palomartechnologies.com](http://www.palomartechnologies.com)

**PandA Europe**

Lambourn, Berkshire, UK, [www.pandaeurope.com](http://www.pandaeurope.com)

**Paragon-Firstronic**

Suhl, Germany, [www.paragon-firstronic.de/](http://www.paragon-firstronic.de/)

**Para Light Corp**

Walnut, CA, USA, [www.paralight.us](http://www.paralight.us); [www.para.com.tw](http://www.para.com.tw)

**Pegasus Associates Lighting**

Beaver Falls, PA, USA, [www.pegasusassociates.com](http://www.pegasusassociates.com)

**Pentamaster Instrumentation Sdn Bhd**

Bayan Baru, Penang, Malaysia, [www.pentamaster.com](http://www.pentamaster.com)

**PerkinElmer Inc**

Wheeling, IL, USA, [www.perkinelmer.com/lighting](http://www.perkinelmer.com/lighting)

**Permlight for Signs**

Tustin, CA, USA, [www.permlightforsigns.com](http://www.permlightforsigns.com)

**Pharos Life Corp**

Cambridge, ON, Canada, [www.pharoslife.com](http://www.pharoslife.com)

**Phenoptix Ltd**

Nottingham, UK, [www.phenoptix.co.uk](http://www.phenoptix.co.uk)

**Phihong Technology**

Tao Yuan Hisen, Taiwan, [www.phihongeu.com](http://www.phihongeu.com)

**Phihong USA**

47800 Fremont Blvd, Fremont, CA 94538, USA, Tel: 5103604100, [usales@phihongusa.com](mailto:usales@phihongusa.com), [www.phihong.com](http://www.phihong.com)

Phihong designs and manufactures an extensive range of power supplies and drivers for outdoor applications, such as LED street lighting, LED flood, wash, spot, parking and walkway lighting and LED traffic signals, as well as indoor application, including LED light bar and multi-light bars and general indoor LED, such as projection, commercial, architectural, recessed, kitchen, flood, wash, down, and spot lighting.

**Philips Color Kinetics**

Burlington, MA, USA, [www.colorkinetics.com](http://www.colorkinetics.com)

**Philips Emergency Lighting**

236 Mt Pleasant Rd, Collierville, TN 38017, USA, Tel: 800-223-5728, Fax: 901-853-8694, [bodineinfo@philips.com](mailto:bodineinfo@philips.com), [www.philips.com/bodine](http://www.philips.com/bodine)

Philips Emergency Lighting, the industry leader in solution-driven technology, answers the call for emergency lighting in LED applications. The company's Philips Bodine branded emergency LED drivers allow solid-state fixtures to serve as code-compliant emergency lighting units. Philips Bodine emergency LED drivers are available for a variety of fixture types and for indoor and outdoor usage. In business since 1962, Philips Emergency Lighting is a division of Philips Lighting Electronics North America.

**Philips Lighting UK**

Guildford, Surrey, UK, [www.lighting.philips.co.uk](http://www.lighting.philips.co.uk)

**Philips Lumileds Lighting Co**

370 West Trimble Rd, San Jose, CA 95131, USA, Tel: +1 877-298-9455, [info@lumileds.com](mailto:info@lumileds.com), [www.philipslumileds.com](http://www.philipslumileds.com)

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Philips Lumileds delivers illumination-grade power LEDs and outstanding world-wide service and design support that customers need to rapidly develop solid-state lighting solutions. As the industry leader in LEDs, Lumileds' LUXEON® LEDs are used widely in retail, entertainment, outdoor, automotive, portable, digital imaging, and many other applications. Lumileds is a technological pioneer in LED development delivering the most lumens per watt, per package and per dollar with the widest operating range, reliability and lumen maintenance.

**Phoenix Green Solutions**

Phoenix, AZ, USA, [www.phoenixgreensolutions.com](http://www.phoenixgreensolutions.com)

**Phoenix Products Co Inc**

Milwaukee, WI, USA, [www.phoenixproducts.com](http://www.phoenixproducts.com)

**Phoster Industries**

Montreal, QC, Canada, [phosterindustries.com](http://phosterindustries.com)

**Photonic Lattice Inc**

Sendai, Miyagi, Japan, [www.photonic-lattice.com/en/](http://www.photonic-lattice.com/en/)

**Photon Power Technology Ltd**

Emsworth, Hampshire, UK, [www.photonpower.co.uk](http://www.photonpower.co.uk)

**Picisse Elettronica srl**

Taverna di Monte Colombo, I, Italy, [www.picisse.it](http://www.picisse.it)

**PicusLED**

Son, Netherlands, [www.picusled.com](http://www.picusled.com)

**Pixalto**

Paris, France, [www.pixalto.com](http://www.pixalto.com)

**PixelRange**

Worcester, UK, [www.pixelrange.com](http://www.pixelrange.com)

**PJB Systems Technology Ltd**

Fareham, Hants, UK, [www.pjbsystems.co.uk](http://www.pjbsystems.co.uk)

**Planar Systems**

Beaverton, OR, USA, [www.planarembdedded.com](http://www.planarembdedded.com)

**Plasma-Therm**

St. Petersburg, FL, USA, [www.plasmatherm.com](http://www.plasmatherm.com)

**Plus Opto Ltd**

Leigh, Lancs, UK, [www.plusopto.co.uk](http://www.plusopto.co.uk)

**Polar Ray LLC**

Boulder, CO, USA, [www.polar-ray.com](http://www.polar-ray.com)

**Polumaire Menschen**

Reno, NV, USA, [www.lightingexecutive.com](http://www.lightingexecutive.com)

**Polymer Optics Ltd**

Wokingham, Berks, UK, [www.polymer-optics.co.uk](http://www.polymer-optics.co.uk)

**Positronic Industries**

Springfield, MO, USA, [www.connectpositronic.com](http://www.connectpositronic.com)

**Powerbox SSL**

Broomfield, CO, USA, [www.pbxssl.com](http://www.pbxssl.com)

**Power Integrations**

San Jose, CA, USA, [www.powerint.com](http://www.powerint.com)

**The Power LEDs**

Brooklyn, NY, USA, [www.thepowerleds.com](http://www.thepowerleds.com)

**Power Light Systems GmbH**

Berlin, Germany, [www.led-eshop.de](http://www.led-eshop.de)

**Powermicro Technology Sdn Bhd**

Shah Alam, Selangor, Malaysia, [www.powermicrotech.com](http://www.powermicrotech.com)

**Power Partners Inc**

43 Broad St, Hudson, MA 01749, USA, Tel: 978-567-9600, Fax: 978-567-9601, [sales@powerpartners-inc.com](mailto:sales@powerpartners-inc.com), [www.powerpartners-inc.com](http://www.powerpartners-inc.com)

Power Partners specializes in high quality power conversion products at the lowest cost of ownership and offers the industry's broadest range of LED power supplies. We commit to strict quality control measures for both design and manufacturing, coupled with experienced personnel who are qualified to assist with all aspects of engineering and sales disciplines.

**Power Sources Unlimited Inc**

Wrentham, MA, USA, [www.psu.com](http://www.psu.com)

**Power Supply Sourcing Ltd**

Stansted, Essex, UK, [www.powersupplysourcing.co.uk](http://www.powersupplysourcing.co.uk)

**Powertech**

Burnley, Lancs, UK, [www.powertechled.com/uk](http://www.powertechled.com/uk)

**Power Vector**

Kitchener, ON, Canada, [www.powervector.com](http://www.powervector.com)

**Precision-Lighting**

Yorba Linda, CA, USA, [www.precision-lighting.com](http://www.precision-lighting.com)

**Precision Photometrics Ltd**

Edinburgh, UK, [www.precisionphotometrics.com](http://www.precisionphotometrics.com)

**Prema Semiconductor GmbH**

Mainz, Germany, [www.prema.com](http://www.prema.com)

**Premier Lamp Distributors Ltd**Knaresborough, N Yorks, UK, [www.premierlamp.co.uk](http://www.premierlamp.co.uk)**Prescolite**Greenville, SC, USA, [www.prescolite.com](http://www.prescolite.com)**Prime Light Pte Ltd**Singapore, Singapore, [www.prime-light.com](http://www.prime-light.com)**Priority Energy**Reading, PA, USA, [www.priorityled.com](http://www.priorityled.com)**Pro Brand International Inc**Marietta, GA, USA, [www.pbgroup.com](http://www.pbgroup.com)**Product Safety Engineering Inc**Dade City, FL, USA, [www.pseinc.com](http://www.pseinc.com)**Professional Lamps Scandinavia ApS**Holstebro, Denmark, [www.professional-lamps.dk](http://www.professional-lamps.dk)**ProLight Opto Technology Corp**Ping Chen, Taoyuan, Taiwan, [www.prolightopto.com](http://www.prolightopto.com)**Pro-Lite Technology LLP**Cranfield, Beds, UK, [www.pro-lite.co.uk](http://www.pro-lite.co.uk)**PRP Optoelectronics Ltd**Towcester, Northants, UK, [www.prpopto.com](http://www.prpopto.com)**PSSL (Power Supply Sourcing Ltd)**Stansted, Essex, UK, [www.powersupplysourcing.co.uk](http://www.powersupplysourcing.co.uk)**Pure Lighting**Chicago, IL, USA, [www.purelighting.com](http://www.purelighting.com)**Qbas Tech Co. Ltd.**Hsinchu City, Taiwan, [www.qbascorp.com](http://www.qbascorp.com)**Quantum Silicones**Richmond, VA, USA, [www.quantumsilicones.com](http://www.quantumsilicones.com)**Quasar Light Co. Ltd.**Shenzhen, Guangdong, People's Republic of China, [www.quasarled.com](http://www.quasarled.com)**Radiant Imaging Inc**Redmond, WA, USA, [www.radiantimaging.com](http://www.radiantimaging.com)**Radix Controls Inc**Oldcastle, ON, Canada, [www.RadixControls.com](http://www.RadixControls.com)**Raled LLC**Winter Springs, FL, USA, [www.raleled.com](http://www.raleled.com)**Ray Dynamics**Coimbatore, Tamil Nadu, India, [www.raydynamics.com](http://www.raydynamics.com)**Reach Technology Inc**Fremont, CA, USA, [www.reachtech.com](http://www.reachtech.com)**Reactive NanoTechnologies Inc (RNT)**Hunt Valley, MD, USA, [www.rntfoil.com](http://www.rntfoil.com)**Real World Designs Ltd**Northampton, UK, [www.realworlddesigns.co.uk](http://www.realworlddesigns.co.uk)**RECOM Power Inc**18 Bridge St, Unit 4C, Brooklyn, NY 11201, USA,  
Tel: 718-855-9710, Fax: 718-855-9714,  
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Seoul Semiconductor's primary business areas are LED packaging and custom module manufacturing. It provides a full range of LED products including AC-driven semiconductor light source, Acriche, High-brightness Power, Side View, Top, Chip, Lamp and High Flux LEDs, and custom type modules. Applications for the company's LED products include general lighting, signage, back lighting for mobile phones, TVs, notebook computers, automotive lighting, home appliances, signals, etc.

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Sharps lighting LED portfolio comprises of around 50 LED components ranging from 3228 chip size LEDs with a luminosity of 17 lm to high power LED modules (Zenigata series) with up to 540 lm at 6.7 W. With colour temperatures from 2,200 to 11,500 Kelvin and CRI's of 85 and more Sharp LED components feature a light efficiency up to 105 lm/W at a live time of 40,000 h when operated at 80°C (Tcase).

**Shenzhen Absen Industry Co Ltd**Shenzhen, People's Republic of China, [www.szabsen.com](http://www.szabsen.com)**Shenzhen Baikang Optical Co Ltd**Shenzhen, People's Republic of China, [www.baikang.cn](http://www.baikang.cn)**Shenzhen Bang-Bell Electronics****Bldg C, JinXiongDa Industrial Pk, Huan'guan South Rd, Guanlan Town, Bao'an, Shenzhen, Guangdong, 518110 People's Republic of China, Tel: +86 755 2998 8988, Fax: +86 755 2998 8616, jasonyang@bbed.com, www.bbed.com**

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We are BBE LED, Shenzhen Bang-Bell Electronics Co., Ltd. Founded in 1998, we are a professional manufacturer, supplier and exporter of LED street lights, LED street lightings, LED light bulbs, LED lights, LED traffic lights and LED traffic signals. We have a 12,000 square meters factory, more than 200 workers, and we have exported our LED street lights, LED light bulbs and LED traffic lights to more than 80 countries or areas abroad.

**Shenzhen Bright Lighting Technology**Shenzhen, People's Republic of China, [www.bright-led-lighting.com](http://www.bright-led-lighting.com)**Shenzhen Chenze SSL Co LTD**Shenzhen, People's Republic of China, [www.9981led.com](http://www.9981led.com)**Shenzhen Chipower Technology Co Ltd**Shenzhen, People's Republic of China, [www.chipower.net](http://www.chipower.net)**Shenzhen Dicolor Optoelectronics Co Ltd**Shenzhen, People's Republic of China, [www.dicolor.cn](http://www.dicolor.cn)**Shenzhen Eastar Electronic Co Ltd**Shenzhen, Guangdong, People's Republic of China, [www.esdled.com](http://www.esdled.com)**Shenzhen Greenstar Lighting Technology**Shenzhen, People's Republic of China, [www.led-greenstar.com](http://www.led-greenstar.com)**Shenzhen Hongya Opto Electronic**Shenzhen, People's Republic of China, [www.hongyaled.com](http://www.hongyaled.com)**Shenzhen Jeeja Century Optoelectronics**Shenzhen, People's Republic of China, [www.jeja-led.com](http://www.jeja-led.com)**Shenzhen Jiuzhou Optoelectronics**Shenzhen, People's Republic of China, [www.jz-led.com](http://www.jz-led.com)**Shenzhen Lamp Technology Co., Ltd**Shenzhen, People's Republic of China, [www.szlamp.net](http://www.szlamp.net)**Shenzhen LCJH Optoelectronic Co Ltd**Shenzhen, People's Republic of China, [www.lcjh.com](http://www.lcjh.com)**Shenzhen MR Photoelectricity Co Ltd**Shenzhen, People's Republic of China, [www.mrled.cn](http://www.mrled.cn)**Shenzhen Refond Optoelectronics****6th Wing, 2nd Block of Baiwangxin Industry Pk, Songbai Rd, Nanshan District, Xili Town, Shenzhen, 518108 People's Republic of China, Tel: +86 075529675000, Fax: +86 075529675111, sales@refond.com, www.refond.com**

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2000 Foundation of Shenzhen Refond Optoelectronics Co.,Ltd.with registered capital of RMB 20 Million, 2002 Set up the first SMD LED production line in China, 2003 ISO9001:2000 Certificated, 2004 Obtained Ceramic Power LED national patent and won "High-Tech Enterprise" award, 2005 ISO14001:2000 Certificated, 2007 TS16949:2002 Certificated, 2008 The company moved into new factory, the area extended to 10308m<sup>2</sup>**Shenzhen Retop LED Display Co Ltd**Shenzhen, People's Republic of China, [www.szretop.com](http://www.szretop.com)**Shenzhen Spark Optoelectronics**Shenzhen, China-PRC, [www.spark-oe.com](http://www.spark-oe.com)**SEMILEDs****SemiLEDs****999 Main St., Suite 1010, Boise, ID 83702, USA, Tel: (208) 389-7426, Fax: (208) 728-3700, sales@SemiLEDs.com, www.semileds.com**

SemiLEDs is a US based manufacturer of ultra-high bright LED chips with state of the art fabrication facilities in Hsinchu Science Park, Taiwan. SemiLEDs specializes in the development and manufacturing of vertical LED chips in blue (white), green and UV using a patented copper alloy base. This unique design allows SemiLEDs new I-core LEDs to achieve higher performance and longer lumen maintenance while delivering over 120lm/W. The World Economic Forum recognized SemiLEDs innovations with the 2009 Technology Pioneer Award.

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  - Electronic Equipment
  - Illumination
- LED lighting manufacturers
- LED product designers
- LED makers & distributors
- Lighting designers, specifiers & architects
- Energy-efficiency organizations
- Corporate R&D staff
- Government regulators & policy-makers
- Financial analysts, investment bankers, & venture capitalists

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- General lighting/illumination
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- Mobile devices
- Outdoor lighting
- Signs & displays
- Automotive lighting
- Signals
- Backlighting

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**SphereOptics**Concord, NH, USA, [www.sphereoptics.com](http://www.sphereoptics.com)**SPI Lighting**Mequon, WI, USA, [www.spilighting.com](http://www.spilighting.com)**Spoerle**Dreieich, Germany, [www.spoerle.com](http://www.spoerle.com)**SpriteDrive**Stockton on Tees, UK, [www.spritedrive.com](http://www.spritedrive.com)**SRM-Technik GmbH**Berlin, Germany, [www.srm-technik.de](http://www.srm-technik.de)**SSLi Limited**Cardiff, UK, [www.ssli.com](http://www.ssli.com)**Stadium Power**Diss, Norfolk, UK, [www.stadiumpower.co.uk](http://www.stadiumpower.co.uk)**Stanley Electric Co. Ltd.**Tokyo, Japan, [www.stanley-components.com/en/index.cfm](http://www.stanley-components.com/en/index.cfm)**Stanley Electric Co. Ltd. (UK)**Atrium Court, The Ring, Bracknell, Berks, RG12 1BW UK, Tel: 01344 393 053, Fax: 01344 393 153, [sales@stanley-electric-eu.com](mailto:sales@stanley-electric-eu.com), [www.stanley-components.com](http://www.stanley-components.com), [www.stanley.co.jp/e/](http://www.stanley.co.jp/e/), [www.stanley-nlb.com/en/](http://www.stanley-nlb.com/en/)

Stanley Electric is a world leading manufacturer of LEDs and other optoelectronic devices. With cutting-edge development, excellent design and technical expertise together with world-class manufacturing capabilities, with a pedigree history from 1920, and is also involved currently in exciting new fields such as LED streetlighting and commercial lighting applications including retail lighting for showcases, vending machines and POS. We have core competencies not only in component manufacture, but also with assembled products including lenses, thermal management and optical simulation etc.

**Starled Inc**Carson, CA, USA, [www.starled.com](http://www.starled.com)**StellarNet Inc**14390 Carlson Circle, Tampa, FL 33626, USA, Tel: 813-855-8687, Fax: 813-855-0394, [contactus@stellarnet.us](mailto:contactus@stellarnet.us), [www.stellarnet.us](http://www.stellarnet.us)

StellarNet manufactures a complete line of LED test and measurement systems covering the 200-1700nm range. All instruments are NIST calibrated to measure the absolute intensity in watts/m<sup>2</sup>, æm watts/cm<sup>2</sup>, xy Chromaticity, dominant wavelength, CCT, etc. These systems are low cost and offer rugged, high performance measurements by utilizing shock-proof enclosures and permanently aligned optics. The powerful SpectraWiz Software Suite is included free for easy plug and play operation via USB2. Visit [www.StellarNet.us](http://www.StellarNet.us) for more information.

**Sternberg Lighting**Roselle, IL, USA, [www.sternberglighting.com](http://www.sternberglighting.com)**STMicroelectronics**Lexington, MA, USA, [www.st.com](http://www.st.com)

**StockerYale (IRL) Ltd.**

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21-4297749, [saleseurope@stockeryale.com](mailto:saleseurope@stockeryale.com),  
[www.stockeryale.com](http://www.stockeryale.com)

StockerYale is an independent designer and manufacturer of LED systems for industry leading OEMs. Our success with LED illumination is due to specialized expertise in a number of areas, including: selection and design of thermally efficient substrates; optical design; design of cooling systems for extremely high power illuminators; science of LED lifetime. The company serves a wide range of markets including the machine vision, industrial inspection, traffic control, and medical markets.

**Stouch Lighting**

Aston, PA, USA, [www.stouchlighting.com](http://www.stouchlighting.com)

**STR Group, Ltd.**

St. Petersburg, Russia,  
[www.str-soft.com/products/SimuLED/SimuLAMP/](http://www.str-soft.com/products/SimuLED/SimuLAMP/)

**StrongBase USA**

Columbus, OH, USA, [www.strongbaseusa.com](http://www.strongbaseusa.com)

**Stylmark, Inc.**

Minneapolis, MN, USA, [www.stylmark.com](http://www.stylmark.com)

**Summit UV**

Columbia City, IN, USA, [www.summituv.com](http://www.summituv.com)

**Suncolor Corporation**

North Canton, OH, USA, [www.suncolorcorp.com](http://www.suncolorcorp.com)

**Sun Export Private Limited**

Mumbai, Maharashtra, India, [www.thesungroup.com](http://www.thesungroup.com)

**Sunfire LED, LLC**

Denver, CO, USA, [www.sunfireLED.com](http://www.sunfireLED.com)

**Sunovia Energy Technologies**

Sarasota, FL, USA, [www.sunoviaenergy.com](http://www.sunoviaenergy.com)

**Sunpower (UK) Ltd**

Aldermaston, Berks, UK, [www.sunpower-uk.com](http://www.sunpower-uk.com)

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Pembroke, MA, USA, [www.sunrisesystems.com](http://www.sunrisesystems.com)

**Sunsify International**

Santa Clara, CA, USA, [www.sunsify.com](http://www.sunsify.com)

**Super Bright LEDs**

Saint Louis, MO, USA, [www.superbrightleds.com](http://www.superbrightleds.com)

**Supertex**

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**SuperViewVision**

City of Industry, CA, USA, [www.SuperViewVision.com](http://www.SuperViewVision.com)

**Supreme Components Intl Pte. Ltd.**

Singapore, [www.supremecomponents.com](http://www.supremecomponents.com)

**Surface Technology Systems plc**

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Neuchatel, Ne, Switzerland, [www.suss.ch](http://www.suss.ch)

**SUSS MicroTec**

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**Swift Canada**

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**Synapse Wireless Inc.**

Huntsville, AL, USA, [www.synapse-wireless.com](http://www.synapse-wireless.com)

**Synergy Micro Technologies**

San Clemente, CA, USA, [www.synergymt.com](http://www.synergymt.com)

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Mullingar, Co. Westmeath, Ireland, [www.taconic-add.com](http://www.taconic-add.com)

**Taiwan Mirai Industry Co. Ltd.**

Torrance, CA, USA, [www.twmirai.com.tw](http://www.twmirai.com.tw)

**Taiwan Solution Systems Corp.**

Bristol, UK, [www.solutionssystem.com.tw](http://www.solutionssystem.com.tw)

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**Tally Display Corp**

Clifton, NJ, USA, [www.tallydisplay.com](http://www.tallydisplay.com)

**Talon Aerospace**

Helena, AL, USA, [www.talonaerospace.com](http://www.talonaerospace.com)

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Plano, TX, USA, [www.taosinc.com](http://www.taosinc.com)

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Austin, TX, USA, [www.td-partners.com](http://www.td-partners.com)

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**Tecartex Digital Solutions, SL**

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Flagstaff, AZ, USA, [www.technicalwitts.com](http://www.technicalwitts.com)

**Techsign Lightpanel Co., Ltd.**

Seongnam-si, South Korea, [www.techsignlp.com](http://www.techsignlp.com)

**Techsil Ltd**

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**Tech-stream, LLC**

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**Tecnovision Australia Pty Ltd**

Langwarrin, Victoria, Australia, [www.tecnovision.com.au](http://www.tecnovision.com.au)

**TecnoVISION SPA**

Buccinasco, Lombardia, Italy, [www.tecnovision.com](http://www.tecnovision.com)

**Teledyne Lighting & Display Products**

Los Angeles, CA, USA, [www.teledynelighting.com](http://www.teledynelighting.com)

**Telops Inc.**

Quebec, PQ, Canada, [www.telops.com](http://www.telops.com)

**Tempo Industries**

Irvine, CA, USA, [www.tempindustries.com](http://www.tempindustries.com)

**100 West Electronics LLC**

Winchester, CT, USA, [www.100West.com](http://www.100West.com)

**Tepcomp Oy**

Turku, Finland, [www.tepcomp.fi](http://www.tepcomp.fi)

**Terachips, Inc.**

Seoul, South Korea, [www.terachips.com](http://www.terachips.com)

**TerraLUX Inc.**

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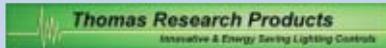
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**Tersen**Conyers, GA, USA, [www.tersenlighting.com](http://www.tersenlighting.com)**Texas Instruments**Dallas, TX, USA, [www.ti.com/led](http://www.ti.com/led)**Texim Europe BV**Lincoln, Lincs, UK, [www.texim-europe.co.uk](http://www.texim-europe.co.uk)**Tharo Systems, Inc.**Brunswick, OH, USA, [www.tharo.com](http://www.tharo.com)**Tharsus Vision Ltd**Blyth, UK, [www.tharsus.co.uk](http://www.tharsus.co.uk)**Thermalking Technology Intl. Corp.**Wugu Township, Taipei County, Taiwan, [www.ttic-tech.com.tw/](http://www.ttic-tech.com.tw/)**Thermastrate Ltd.**Cramlington, Northumberland, UK, [www.thermastrate.com](http://www.thermastrate.com)**Thomas Research Products**

11548 Smith Dr, Huntley, IL 60142, USA, Tel: 847-515-3057, Fax: 847-515-3407, [glenn@thomasresearchproducts.com](mailto:glenn@thomasresearchproducts.com), [www.thomasresearchproducts.com](http://www.thomasresearchproducts.com)

Thomas Research Products is a supplier of advanced, energy-saving electronic controls and switching power supplies for LED, Fluorescent, and H.I.D. light fixtures. We offer both standard and dimmable, UL Recognized LED drivers from 25-300W with industry leading MTBF and Life ratings. Thomas Research also offers specialty Surge Protectors and Lighting Transformers to help you solve the most complicated and rigorous lighting applications. We warmly entertain custom and low-volume design opportunities.

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Conceived from a technological breakthrough and incorporating the concept "AKARI", TOSHIBA wishes to make LED the innovation which will light people in the harmony with the environment. Toshiba is a manufacturer of LED lighting products: E-CORE. This new lighting generation uses LED Technology to make products more efficient than that of the competition.

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Hong Kong Science Park, Hong Kong, [www.traxontechnologies.com](http://www.traxontechnologies.com)

**Triad Semiconductor**Winston-Salem, NC, USA, [www.triadsemi.com](http://www.triadsemi.com)**TridonicAtco UK Limited**Basingstoke, Hampshire, UK, [www.tridonicatco.com](http://www.tridonicatco.com)**Trigon Technology Limited**

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**Tri-O-Light BV**Barneveld, Gelderland, Netherlands, [www.triolight.com](http://www.triolight.com)**Trola\*Tek**York, PA, USA, [www.trolatek.com](http://www.trolatek.com)**Tunewell Juice Group**Hoddesdon, Herts, UK, [www.tunewell.com](http://www.tunewell.com)**Turboard Technologies Inc**

Taoyuan, Taiwan

**Tyco Electronics**

3101 Fulling Mill Rd, Harrisburg, PA 17105-3608, USA, Tel: 800-522-6752, Fax: 717-986-7575, [product.info@tycoelectronics.com](mailto:product.info@tycoelectronics.com), [www.tycoelectronics.com/lighting](http://www.tycoelectronics.com/lighting)

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Tyco Electronics is in-synch with the new industry requirements for solid state lighting (SSL) applications. Tyco Electronics' system level approach to SSL applications integrates LEDs, interconnects, thermals and optics with drivers and controls - to provide complete system solutions. Our innovative products for SSL applications come with engineering, reliability and world-class support that our customers have relied on for over 50 years.

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11F-1~5, No. 258, Liancheng Rd, Junghe City, Taipei, 235 Taiwan, Tel: 886-2-6620-9666, Fax: 886-2-6620-9555, [ledsmg@u-pec.com](mailto:ledsmg@u-pec.com), [www.u-pec.com](http://www.u-pec.com)

UPEC Electronics Corp. is a technical oriented manufacturer, focusing on high brightness LED solutions for applications in Backlight System, General Lighting and System Integration. As an agile, organic, and energetic organization, we are all committed to improve our manufacturing processes and productivity to be the cost efficient LED supplier of today. Our vision is to become an optoelectronic solution provider, integrating optical, mechanical and electronic design capability together with efficient manufacturing through high-quality and high-performance products and services.

**Upstream Engineering Inc.**Oulu, Finland, [www.upstream.fi](http://www.upstream.fi)**Urban Solar Corporation**Victoria, BC, Canada, [www.urbansolarcorp.com](http://www.urbansolarcorp.com)**US A'SYCK Corporation**Irvine, CA, USA, [www.usasyck.com](http://www.usasyck.com)**USHIO America**Cypress, CA, USA, [www.ushio.com](http://www.ushio.com)**usLEDsupply**Mercer, PA, USA, [www.usledsupply.com](http://www.usledsupply.com)**Value Green Inc**Chatsworth, CA, USA, [www.valuegreen.com](http://www.valuegreen.com)**Van Deursen LLC**Essex, CT, USA, [www.vandeursenllc.com](http://www.vandeursenllc.com)**Veeco Instruments Inc**

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The new TurboDisc® K465i™ GaN MOCVD System accelerates your high-volume LED manufacturing by delivering the industry's lowest cost of ownership, highest productivity and enabling you to achieve your best yield yet. Learn more at [www.veeco.com/mocvd](http://www.veeco.com/mocvd)




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**Versabright**

Warren, MI, USA, [www.versabright.com](http://www.versabright.com)

**Vertiseit AB**

Varberg, Halland, Sweden, [www.vertiseit.com/screens/](http://www.vertiseit.com/screens/)

**Vexica Limited**

Harrogate, North Yorks, UK, [www.vexica.com](http://www.vexica.com)

**Viatech Industries**

Satellite Beach, FL, USA, [viatechind.com](http://viatechind.com)

**VioLED International Pte Ltd**

Singapore, [www.violedintl.com](http://www.violedintl.com)

**Virginia Optoelectronics Inc**

Blacksburg, VA, USA, [www.vaopto.com](http://www.vaopto.com)

**Vishay Semiconductor GmbH**

Heilbronn, Germany, [www.vishay.com](http://www.vishay.com)

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Rancho Dominguez, CA, USA, [www.VisionaireLighting.com](http://www.VisionaireLighting.com)

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Surrey, UK, [www.vision-text.com](http://www.vision-text.com)

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Wrexham, UK, [www.visivegroup.com](http://www.visivegroup.com)

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Irvine, CA, USA, [www.visualdimensions.com](http://www.visualdimensions.com)

**Visual Interactive Ltd**

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**Visual Solutions Ltd**

Budapest, Hungary, [www.visualsolutions.hu](http://www.visualsolutions.hu)

**viviLED Display Co**

Laguna Hills, CA, USA, [www.viviled.com](http://www.viviled.com)

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Mettmann, Germany, [www.vlm-light.com](http://www.vlm-light.com)

**VLSI Standards Inc**

San Jose, CA, USA, [www.vlsistandards.com](http://www.vlsistandards.com)

**Volpi AG**

Schlieren, Switzerland, [www.volpi.ch](http://www.volpi.ch)

**Voss Lighting**

Lincoln, NE, USA, [vosslighting.com](http://vosslighting.com)


**Vossloh-Schwabe Optoelectronic**

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VS Optoelectronic, which is headquartered in Kamp-Lintfort, Germany, is part of the Panasonic Electric Works Vossloh-Schwabe Group, known for their excellent product line and technological know-how in the utilization of light emitting diodes in the lighting industry. VS Optoelectronic offers a great variety of LED modules in the field of SMD- and COB-technology. Core competence is the support of customer-specific developments of a wide array of applications.

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Bao'an district, Shenzhen, China-PRC, [www.led-video-screens.com](http://www.led-video-screens.com)

**Wah Wang Holdings Co. Ltd.**

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**Waldmann Lighting**

Wheeling, IL, USA, [www.waldmannlighting.com](http://www.waldmannlighting.com)

**Wamco, Inc.**

Fountain Valley, CA, USA, [www.wamcoinc.com](http://www.wamcoinc.com)

**Watchfire Signs by Time-0-Matic**

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**Watt Works Inc.**

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**E Wave Corporation**

London, UK, [www.ewave-corp.com](http://www.ewave-corp.com)

**Wavelength Electronics Inc.**

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**W. C. Heraeus GmbH**

Hanau, Germany, [www.flexible-substrates.com](http://www.flexible-substrates.com)

**WDM Lighting**

Dallas, TX, USA, [www.wdmlighting.com](http://www.wdmlighting.com)

**Wessel LED Lighting Systems**

Davie, FL, USA, [www.Led-Lighting-Systems.net](http://www.Led-Lighting-Systems.net)

**West Bank Engineering Consultancy Ltd**

Doncaster, S. Yorks, UK, [www.wbecld.com](http://www.wbecld.com)

**WhiteOptics LLC**

Newark, DE, USA, [www.WhiteOptics.com](http://www.WhiteOptics.com)

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St. Paul, MN, USA, [www.wilbrechtledco.com](http://www.wilbrechtledco.com)

**Wilson Process Systems**

Hastings, East Sussex, UK, [www.wps.co.uk](http://www.wps.co.uk)

**World of Lights LED Solutions Inc**

Burlington, ON, Canada, [www.ledsolutions.ca](http://www.ledsolutions.ca)

**WRTL Exterior Lighting Ltd**

Tipton, West Midlands, UK, [www.wrtl.co.uk](http://www.wrtl.co.uk)

**WT&T Inc**

Pierrefonds, PQ, Canada, [www.wttechnology.com](http://www.wttechnology.com)

**Wurth Electronics Midcom Inc**

Watertown, SD, USA, [www.we-online.com](http://www.we-online.com)

**Wuxi Kinlight Optoelec Technology**

Wuxi, China-PRC, [www.ledkl.com](http://www.ledkl.com)

**XL Video Ltd**

Hemel Hempstead, Hertfordshire, UK, [www.xlvideo.com](http://www.xlvideo.com)

**XP Power**

Sunnyvale, CA, USA, [www.xppower.com](http://www.xppower.com)

**XUS LED LIGHTING**

Holland, MI, USA, [www.xusledlighting.com](http://www.xusledlighting.com)


**YEG Opto**

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YEG Opto specialises in the supply, integration and distribution of LEDs and associated components to OEMs and CEMs utilizing components from world leading suppliers such as Seoul Semiconductor, Samsung, Excellence Opto Inc., Carclo and New Japan Radio to name just a few. With our in-house expertise and global partners we can advise you on all aspects of your design from selecting the right LED and drivers to providing the correct Optics and solving problems of thermal management.

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**ZAP Light**

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**Zers Group**

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