

## luxeon lighting



21st century lighting from the Silicon Valley. Revel in the brightness of patented Luxeon technology. Pioneered by the enlightened minds at Lumileds, Luxeon is the light engine inside Lumileds' high-power semiconductor light sources. This is not a conventional LED. Luxeon is a high output, long life, solid-state source that lights at halogen lamp efficacy. Now you can create your own design, confident that the look will endure. Light it with white Luxeon or paint it with color. See the Light from Silicon Valley—brilliant, energy saving and industry leading.

Luxeon is expanding the frontiers of lighting innovation and opportunity. Unique advantages over conventional lighting enable never before possible luminaires and lighting designs. Discover Luxeon's distinctive features and you'll agree.

# lighting

### Luxeon generates the highest solid-state light output in the world

Luxeon is today's brightest solid-state light source, producing 10-20 times the output of a standard LED lamp. With a white source efficacy of 25 LPW and rapidly rising, Luxeon is a realistic source for general and directional lighting.

### Luxeon has long life and high lumen maintenance

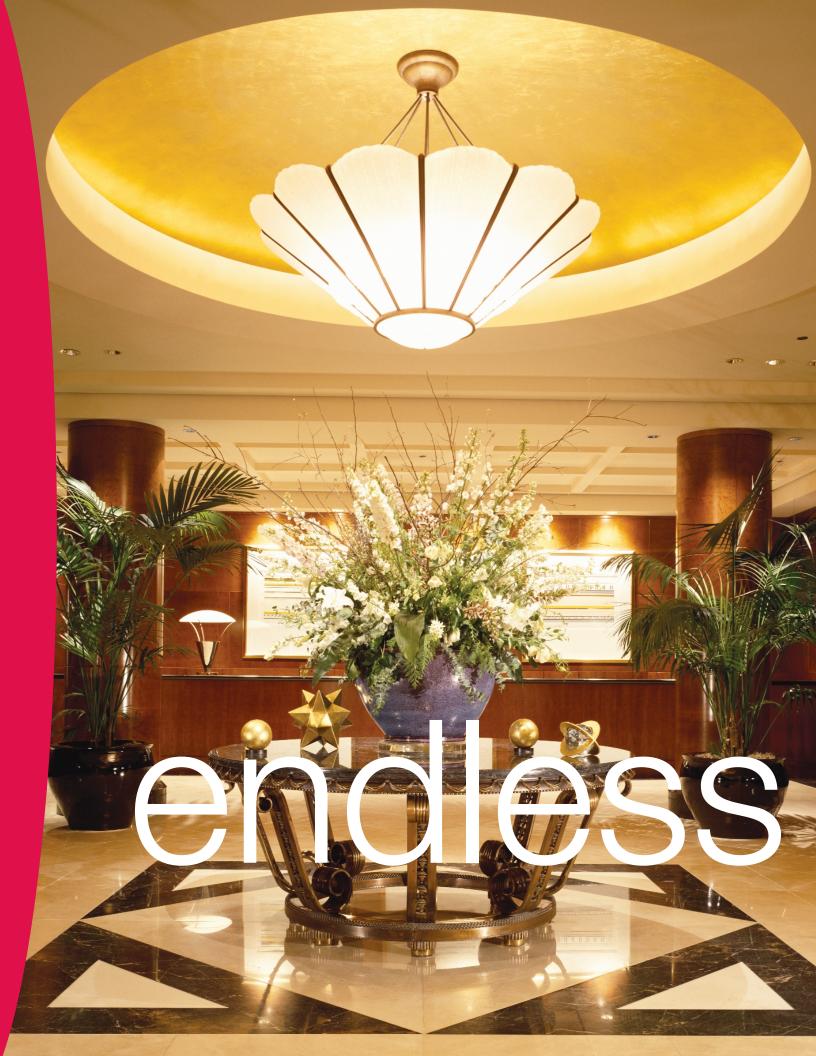
50,000 hours rated life...and then some. Luxeon is the 12-year lamp\*. Advanced lumen maintenance technology inside Luxeon minimizes degradation to less than 30% over the rated life. Ongoing independent testing is confirming our ratings. Now a lamp can be integrated directly into a fixture without ever needing to be replaced. Fit and forget. That's Never Before Possible. Add in the savings for replacement lamps, maintenance and labor costs, and everyone wins. That's Light from Silicon Valley.



#### Luxeon: a virtual point source

Luxeon is tiny—measured in millimeters. Optics and fixture sizes are optimized to form sleeker, smaller, and lighter-in-weight luminaires. Create your own lighting designs or a new breed of luminaires with discrete emitters. Or, "plug and play" with any of our Luxeon Products—some even come with their own highly efficient collimating optics. "Invisible" luminaires, precisely controlled light distributions, compact directional lighting... the freedom of design with a point source. This is going to be fun!

<sup>\*</sup> Based on 10-12 hours per day operation.









#### Light by Luxeon—the beautiful light

Luxeon colors are vivid, saturated and incredibly energy efficient—up to 60 lumens per watt. How about white? You've got choices. Take advantage of our off-the-shelf white Luxeon, or mix your own "white" using an advanced controller and an array of red, green and blue (RGB) Luxeon. And the color rendering (CRI) shows respectably. Already par with today's tri-phosphor fluorescent, the CRI of Luxeon white is rapidly improving. Here's another bonus, no UV or IR in the beam. Imagine the design possibilities.

Electronic switching means unlimited dimming, with no color variation, and instant "on" at full brightness, in true color. Add in the ability for discrete device control and create a highly energy efficient and long life lighting system. With Luxeon, infinite control is in your hands.

Now, for the first time ever, you can confidently design solid-state lighting into the most critical applications—that's Light by Luxeon.

#### Luxeon is safe and rugged

Made without glass, filaments and mercury, Luxeon provides an unparalleled measure of safety and durability. Exploding "non-passive" failures associated with halogen and HID lamps are eliminated, as are the short life of "banged" or "vibrated" incandescent bulbs. Luxeon is an environmentally sound choice, free from the increasing costs and restrictions of mercury disposal. Operation on low voltage DC, without a high-volt starting arc, shores up the safety net. If you're thinking "green" or lighting a safety sensitive area, look to Luxeon to safeguard your space.

# options

Dreaming about impossible lighting designs or innovative luminaires?

Look to Lumileds. *De-light* from the conventional and delight in Luxeon.

## luxeon product family

The award winning Luxeon Product family is the world's first commercially available high-output solid-state lighting source. Luxeon breaks through as the brightest and most efficient semiconductor based lighting source available today. Available in single units and modules, Luxeon light sources are available in white and colors: green, cyan, blue, royal blue, red, red-orange and amber. General, specialty and stage & studio lighting will never be the same. Enclosed is our Luxeon Plug and Play Guide, which includes up to date information on lumen output, efficacy, lumen maintenance and CRI.











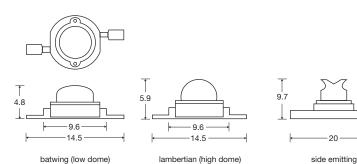






#### Luxeon emitter

This is Luxeon in its most basic form. With a lambertian, batwing, or side-emitting light pattern, the Luxeon emitter is ideal for luminaire and wave-guide designs. Or, design the emitter directly into concealed areas and tight spots—like coves, display cases, safety and landscape lighting. Highly versatile, the Luxeon emitter lets you dream and design unique solutions for every specification.

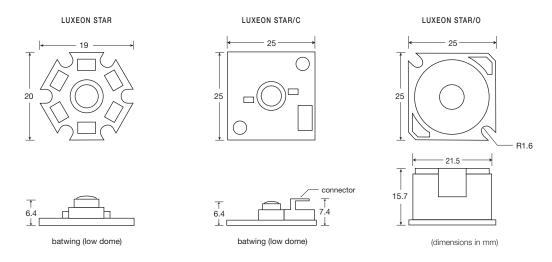


#### Luxeon star—Luxeon star/C—Luxeon star/O

The Luxeon star family is a single source "platformed" on a metal-core PC board for standardized assembly. Available with lambertian and batwing radiation patterns, the three are differentiated as follows:

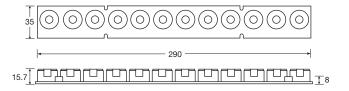
- Luxeon star—mounted on hexagonal board
- Luxeon star/C—mounted on a rectangular board with connectors for wiring
- Luxeon star/O—mounted on a rectangular board with an efficient 12° collimating lens

An excellent choice for décor, accent, appliance and portable lighting, the Luxeon Star family works great in high volume assembly. This rugged little unit is fun! It's very easy to use and allows for maximum design creativity.



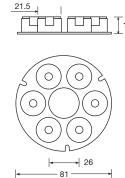
#### **Luxeon line**

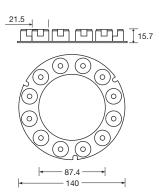
Luxeon Line takes brightness and beauty to great lengths—as long as you like. Twelve Luxeon emitters are aligned on a solid board and fitted with efficient collimating lenses to project the light forward. Luxeon line is fantastic for cove, shelf and architectural lighting—indoors and outdoors. Line 'em up!



#### Luxeon ring 6— Luxeon ring 12

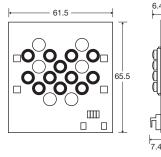
The 6 and 12 unit Luxeon rings elicit stunning effects individually and form a smooth pattern when combined. Uplight the ceiling, wash a wall, brighten with a bollard. Solidly mounted collimated lenses focus light forward—very alluring for general, architectural and entertainment lighting.

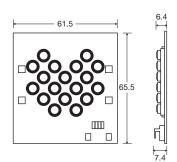




#### Luxeon flood

Need some horsepower? Luxeon flood is an array of either 12 or 18 emitters mounted closely together to crank out the light. The batwing configuration provides a more even light distribution. The lambertian configuration maximizes light output. Flood a space with light, backlight the work, shine brightly with Luxeon flood.





(dimensions in mm)











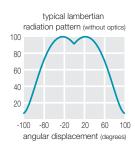


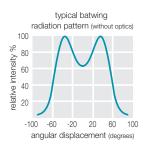
## technical story

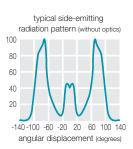
#### **Light distribution**

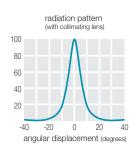
Luxeon is available with three different lenses and a collimator.

- Lambertian—an even distribution in all directions
- Batwing—a flatter, forward distribution designed to evenly fill the illuminated surface.
- Side-emitting—a radial distribution, ideal for reflector design and waveguides
- Collimator—a lens that tightens the beam angle to 12 degrees

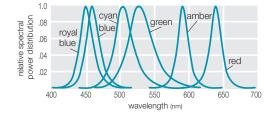


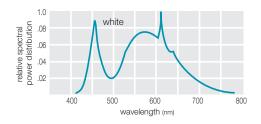






#### **Spectral distribution curves**





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