power light source

Luxeon Star Option Code Selections

Introduction

Luxeon® is a revolutionary, energy efficient and ultra compact new light source, combining the lifetime and reliability advantages of Light Emitting Diodes with the brightness of conventional lighting.

Luxeon features one or more power light sources mounted onto an aluminum-core printed circuit board, allowing for ease of assembly, optimum cooling and accurate light center positioning.

For tight beams, optional and highly efficient collimating optics are available.

Luxeon Power Light Sources give you total design freedom and unmatched brightness, creating a new world of light.

For high volume applications, custom Luxeon power light source designs are available upon request, to meet your specific needs.

Luxeon Star is available in white, warm white, green, blue, royal blue, cyan, red, red-orange and amber.

Features

- Highest flux per LED family in the world
- Very long operating life (up to 100k hours)
- Available in White, Green, Blue, Royal Blue, Cyan, Red, Red-Orange and Amber
- Lambertian, Batwing, Side Emitting or Collimated radiation patterns
- More energy efficient than incandescent and most halogen lamps
- Low voltage DC operated
- Cool beam, safe to the touch
- Instant light (less than 100 ns)
- Fully dimmable
- No UV
- Superior ESD protection

Typical Applications

- Reading lights (car, bus, aircraft)
- Portable (flashlight, bicycle)
- Orientation
- Mini-accent
- Decorative
- Fiber optic alternative
- Appliance
- Sign and channel letter
- Architectural detail
- Cove lighting
- Automotive exterior (Stop-Tail-Turn, CHMSL, Mirror side repeat)
- Edge-lit signs (Exit, point of sale)

LUXEON®

Luxeon White Option Codes

Table 1.

Color	Luxeon Star	White Color Bins	Radiation Pattern
White	LXHL-MWEC-00F	V1, V0, X1, W0 X0	Batwing
White	LXHL-MWEC-00J	YA, Y0 WA W0 X0	
White	LXHL-MWEC-00M	WA, X1, W0, X0	
White	LXHL-MW1D-00F	V1, V0, X1, W0 X0	Lambertian
White	LXHL-MW1D-00J	YA, Y0 WA W0 X0	
White	LXHL-MW1D-00M	WA, X1, W0, X0	
White	LXHL-FW1C-00F	V1, V0, X1, W0 X0	Side Emitting
White	LXHL-FW1C-00J	YA, Y0 WA W0 X0	
White	LXHL-FW1C-00M	WA, X1, W0, X0	

Flux Characteristics at 350mA, Junction Temperature, T_J = 25ºC

Table 2.

Color	Luxeon Star	Minimum Luminous Flux (lm) Φ_V [1,2]	Radiation Pattern
Red	LXHL-MD1C-P00	23.5	Batwing
Amber	LXHL-ML1C-N00	18.1	
Red-Orange	LXHL-MH1D-S00	51.7	Lambertian
Amber	LXHL-ML1D-Q00	30.6	

Color Selection Characteristics at 350mA, Junction Temperature, T_J = 25ºC

Table 3.

Color	Luxeon Star	Dominant Wavelength [4] λD Min.	Max.	Pattern
Green	LXHL-MM1C-00F	520 nm	535 nm	Batwing
Cyan	LXHL-ME1C-00G	495 nm	510 nm	
Cyan	LXHL-ME1C-00H	500 nm	515 nm	
Blue	LXHL-MB1C-00F	460 nm	475 nm	
Amber	LXHL-ML1C-00G	587.0 nm	594.5 nm	
Amber	LXHL-ML1C-00H	589.5 nm	597.0 nm	
Green	LXHL-MM1D-00F	520 nm	535 nm	Lambertian
Cyan	LXHL-ME1D-00G	495 nm	510 nm	
Cyan	LXHL-ME1D-00H	500 nm	515 nm	
Blue	LXHL-MB1D-00F	460 nm	475 nm	
Amber	LXHL-ML1D-00G	587.0 nm	594.5 nm	
Amber	LXHL-ML1D-00H	589.5 nm	597.0 nm	

Color and Flux Selection Characteristics at 350mA, Junction Temperature, T_J = 25ºC

Table 4.

Color	Luxeon Star	Minimum Luminous Flux (lm) Φ_V [1,2]	Dominant Wavelength [4] λD Min.	Max.	Radiation Pattern
Amber	LXHL-ML1C-N0G	18.1	587.0 nm	594.5 nm	Batwing
Amber	LXHL-ML1C-N0H	18.1	589.5 nm	597.0 nm	
Amber	LXHL-ML1D-Q0G	30.6	587.0 nm	594.5 nm	Lambertian
Amber	LXHL-ML1D-Q0H	30.6	589.5 nm	597.0 nm	

Notes: (for Tables 1, 2, 3 & 4)

1. For definition of White Color Bin Codes, please see Application Brief AB21, *Luxeon Product Binning and Labeling*.
2. Minimum luminous flux performance guaranteed within published operating conditions. Lumileds maintains a tolerance of ± 10% on flux measurements.
3. Luxeon types with even higher luminous flux levels will become available in the future. Please consult your Lumileds Authorized Distributor or Lumileds sales representative for more information.
4. Dominant wavelength is derived from the CIE 1931 Chromaticity diagram and represents the perceived color. Lumileds maintains a tolerance of ± 0.5nm for dominant wavelength measurements.
5. All red, red-orange and amber products built with Aluminum Indium Gallium Phosphide (AlInGaP).
6. All green, cyan, blue and white products built with Indium Gallium Nitride (InGaN).
7. All power light sources represented here are IEC825 Class 2 for eye safety.

Electrical, thermal, and other optical properties are identical to those of the base part number (minus the three digit suffix). Please consult the appropriate Luxeon data sheet for more information.

LUMILEDS

Company Information

Luxeon is developed, manufactured and marketed by Lumileds Lighting, U.S., LLC. Lumileds is a world-class supplier of Light Emitting Diodes (LEDs) producing billions of LEDs annually. Lumileds is a fully integrated supplier, producing core LED material in all three base colors (Red, Green, Blue) and White. Lumileds has R&D development centers in San Jose, California and Best, The Netherlands and production capabilities in San Jose, California and Malaysia. Lumileds Lighting is a joint venture of Agilent Technologies and Philips Lighting and was founded in 1999. Lumileds is pioneering the high-flux LED technology and bridging the gap between solid-state LED technology and the lighting world. Lumileds is absolutely dedicated to bringing the best and brightest LED technology to enable new applications and markets in the Lighting world.

Lumileds may make process or materials changes affecting the performance or other characteristics of our products. These products supplied after such changes will continue to meet published specifications, but may not be identical to products supplied as samples or under prior orders.

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