HP60MPGF

8mm,1W Pure Green LED
1W Power LED Light Source

Technical Data Sheet

Features:

- long operating life
- Small footprint and low profile
- Energy efficient
- High current operation
- Silicone encapsulation
- The product itself will remain within RoHS compliant Version

Descriptions:

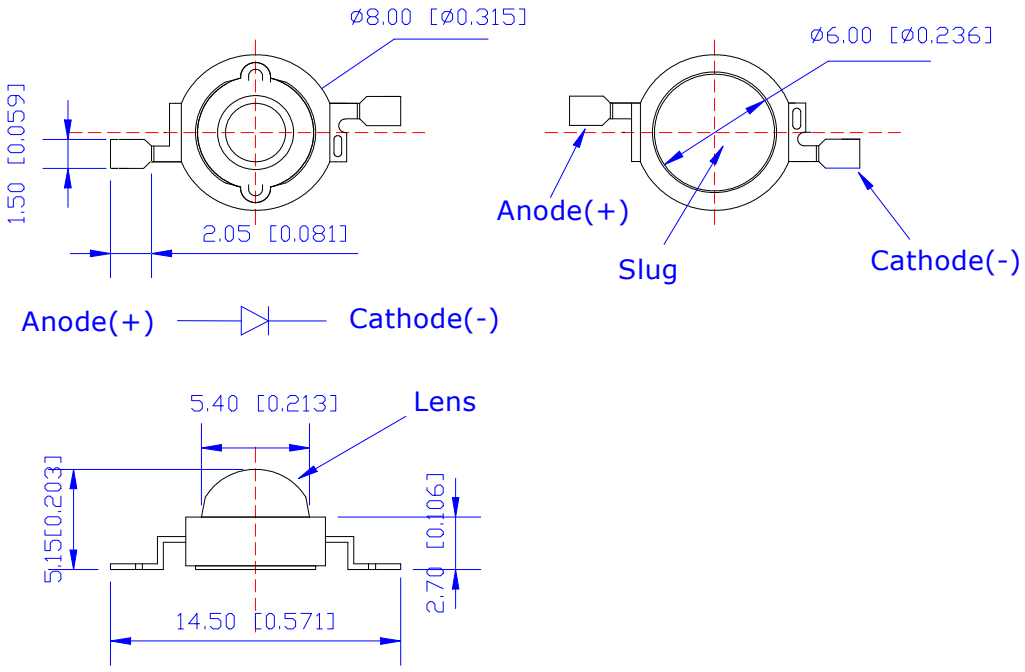
- The HP60M series is available in Red, Orange, Yellow, Green, Blue and White. The White Power LED is available in the range of color temperature from 2700K to 10000K
- This 1W Power LED Light Source is a high energy efficient device which can handle high thermal and high driving current. The exposed pad design enables excellent heat transfer from the package to the motherboard
- The package design is suitable for a wide variety of applications especially where height is a constraint.

Applications:

- Architectural lighting
- Channel backlighting
- Contour lighting
- Retail Display lighting
- Decorative lighting
- Garden lighting

Part No.	Emitting Color
HP60MPGF	Pure Green

Package Dimension:



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (.010″) unless otherwise noted.

Absolute Maximum Ratings at Ta=25℃

Parameters	Symbol	Max	Unit
Power Dissipation	Pd	1330	mW
Peak Forward Current[a]	IFP	500	mA
DC Forward Current[b]	IF	350	mA
Reverse Voltage	VR	5	V
LED Junction Temperature	Tj	125	℃
Operating Temperature Range	Topr	-40℃ to +85℃	
Storage Temperature Range	Tstg	-40℃ to +85℃	

Notes:
a. Duty Factor = 10%, Frequency = 1 kHz

Electrical Optical Characteristics at Ta=25℃

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Flux [a]	Φv	70	90	---	Lm	IF=350mA
Viewing Angle	2θ1/2	---	135	---	Deg	IF=350mA
Peak Emission Wavelength	λp	---	520	---	nm	IF=350mA
ominant Wavelength[b]	λd	---	525	---	nm	IF=350mA
Spectrum Radiation Bandwidth	Δλ	---	35	---	nm	IF=350mA
Forward Voltage[C]	VF	2.80	3.40	3.80	V	IF=350mA
Reverse Current	IR	---	---	50	μA	V_R=5V

Notes:

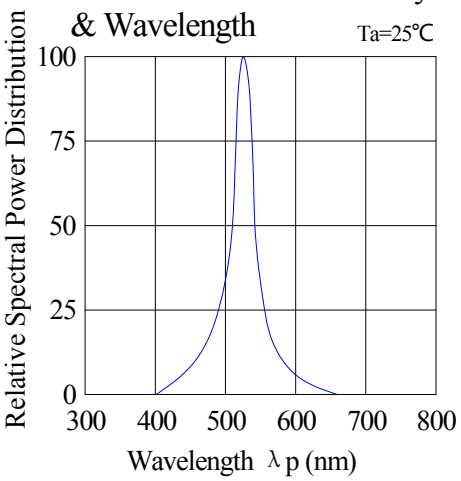
a. Luminous flux measurement tolerance: ±10%.

b. Wavelength measurement tolerance: ±1nm

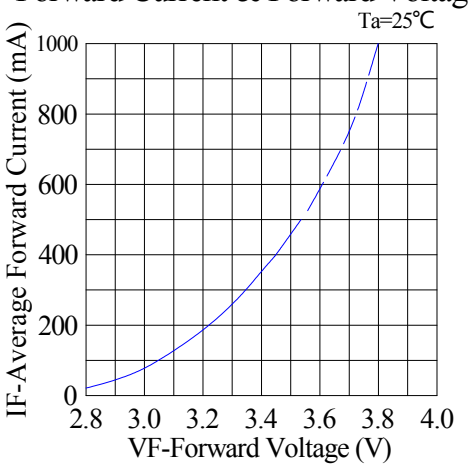
c. Forward voltage measurement tolerance: ±0.1V

Typical Electrical / Optical Characteristics Curves
(25℃ Ambient Temperature Unless Otherwise Noted)

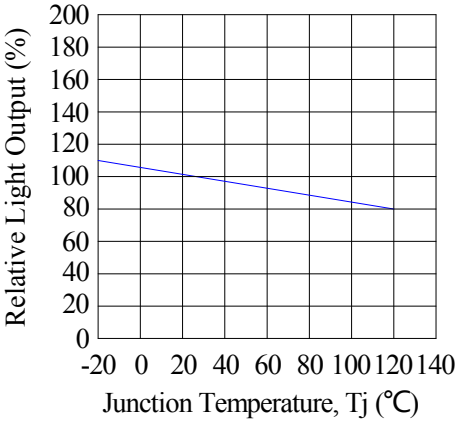
Relative Luminous Intensity & Wavelength



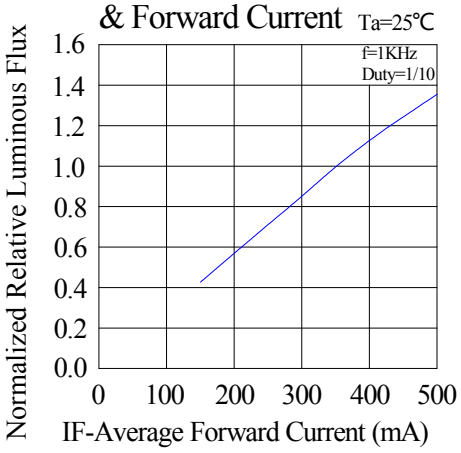
Forward Current & Forward Voltage



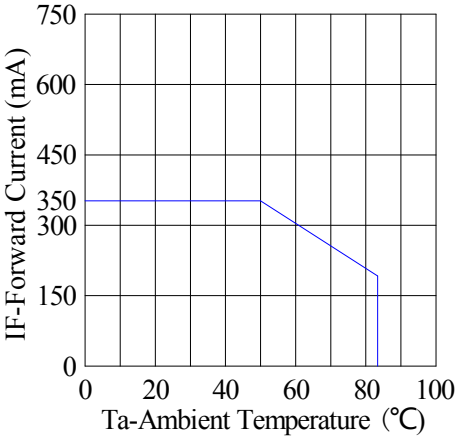
Light Output Characteristics



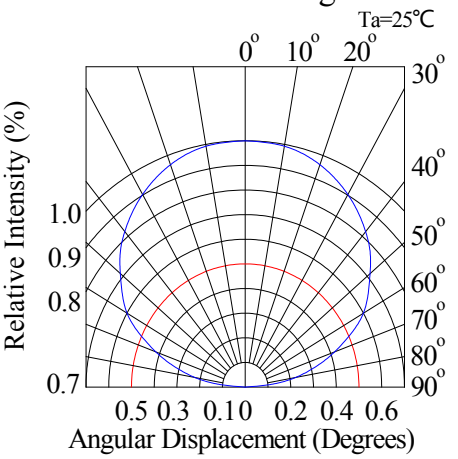
Relative Luminous Flux & Forward Current



Current Derating Curves

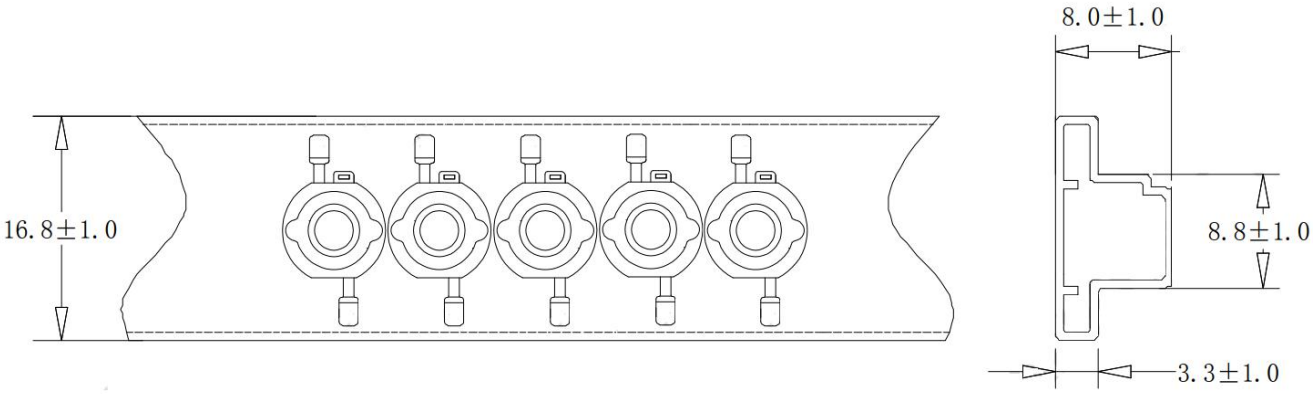


Radiation Diagram



Dimensions for Cannulation and Packaging

Quantity: 50PCS



CAUTIONS

1.Storage:

To avoid moisture, we recommend storage conditions for the unopened LED +5 ~ +30 °C, relative hu-midity <60%. LED should be used within 24 Hrs. of opening the package. Please make sure to dehumid-ify and vacuum pack the remaining/ unused LED. Dehumidifying condition: +60 ° C ± 5 ° C, 12 Hrs. Effective age for the sealed led is one year.

2.The assembly notes:

Soldering Conditions: Reflow soldering is recommended for this LED, the maximum temperature of reflow should not exceed 210°C (when using at 700mA, please adopt the soldering operation mode with copper pad at the bottom. Please consider the life time risk if use the thermal conductive resin with Copper pad at the bottom). If hand soldering, set soldering iron temperature at 350°C and soldering time not More than 3 seconds, after the first soldering, make sure the substrate surface temperature returns to ambient temperature be-fore a second soldering. Do not bend the LED PCB after soldering. Use recommended cleaning agent for PCB cleaning (Should not be use directly in the fluid) Please make sure when soldering, there is no external force on the soldering surface (such as pressure, friction or sharp metal nails, etc.), to avoid gold wire deformation or damage and other abnormalities.

If beyond recommended conditions, we cannot guarantee the LED stability, please do the risk assess-ment first.

3.Anti-Static Measures:

Please take adequate measures to prevent electrostatic generation, such as wearing electrostatic ring or anti-static fingerstall etc; any relative products like plant equipment, machinery, carrier and transporta-tion units shall be connected to discharging unit/ ground. After assembly, please make sure to discharge Static Electricity with proper ESD equipment.

4.Temperature Control:

Recommended temperature conditions for enhanced product life: The temperature of copper pad is <75°C . Dur-ing assembly, please ensure that a good quality thermal paste is applied and distributed evenly over the surface. While using thermal pad (Heat Sink), make sure LED is firmly tightened and there is no gap between surfaces. This product Heating conditions, tested at 500V with medium surface contact.

5.drive control:

Drive this product at constant current. Output current range specifications should be according to the operational and other conditions, as mentioned in data sheet. Before using a constant voltage source or altered specifications, other than recommended, please consider risk factors.

6.Other:

Product is not suitable to use in following conditions;

—-Direct or indirect wet / damp conditions, such as rain, etc;

—-in contact with sea water and erosive materials;

—-Exposed to corrosive gases (e.g., Cl2, H2S, NH3, SOx, NOx, etc.);

—-Exposed to dust, liquids or oils;

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