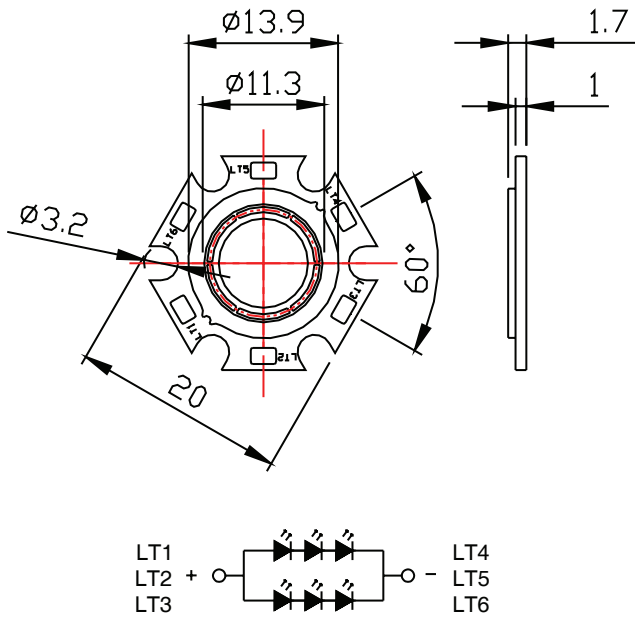


3W High Power LED



Package Dimensions:



Features:

- Pb-Free soldering application
- Multi-Chip package
- High reliability

Applications:

- Bulb
- Indoor decoration lighting
- Signal and symbol luminaries
- Reading lights
- Portable flashlight

All dimensions are in mm
Tolerance: $\pm 0.25\text{mm}$

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|--|--------------|---|------------------|
| Power Dissipation* | P_D | 540 | mW |
| LED Junction Temperature* | T_j | 120 | V |
| Reverse Voltage* | V_r | 5 | mA |
| D.C. Forward Current* | I_r | 150 | μA |
| Peak Current (1 / 10 Duty Cycle, 0.1ms Pulse Width)* | I_f (Peak) | 500 | mA |
| Storage Temperature Range | $T_{stg.}$ | -40 to +85 | $^\circ\text{C}$ |
| Soldering Temperature (1.6mm from body) | $T_{sld.}$ | Dip Soldering: 260°C for 5sec. Hand Soldering: 350°C for 3sec. | |
| Electric Static Discharge Threshold (HBM)* | ESD | 300 | V |

* The values are based on 1 die performance.

3W High Power LED



Electrical & Optical Characteristics

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit | |
|--------------------------------------|----------|------------------|---------|--------|------|------------------|------|
| Luminous Flux | Φ_v | IF=1,050mA | 200 | 250 | | lm | |
| | | | Rank L1 | 200 | | | 250 |
| | | | Rank L2 | 250 | | | 300 |
| Forward Voltage | VF | IF=1,050m | | 9.5 | | V | |
| | | | Rank V1 | 9 | | | 9.5 |
| | | | Rank V2 | 9.51 | | | 10 |
| | | | Rank V3 | 10.01 | | | 10.5 |
| Correlated Colour Temperature | CCT | IF=1,050mA | 5,250 | 5,750 | | K | |
| CIE Chromaticity Coordinates: X Axis | X | IF=1,050mA | | 0.3287 | | | |
| CIE Chromaticity Coordinates: Y Axis | Y | IF=1,050mA | | 0.3417 | | | |
| Reverse Current | IR | Vr=5V | | | 50 | μ A | |
| Colour Rendering Index | CRI | IF=1,050mA | | 72 | | Ra | |
| Viewing Angle at 50% | | $2\theta_{1/2}$ | | 120 | | Deg | |
| Thermal Resistance Junction to Case | | R θ_{j-c} | | 15 | | $^{\circ}$ C / W | |

Notes: 1. The data is tested by IS tester.
2. Customer's special requirements are also welcome.

Typical Electrical & Optical Characteristics Curves:

(25 $^{\circ}$ C Ambient temperature unless otherwise noted)

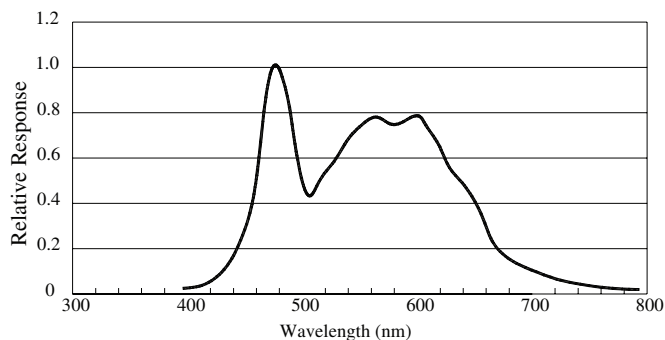
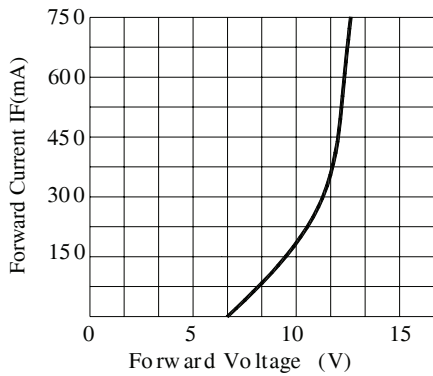
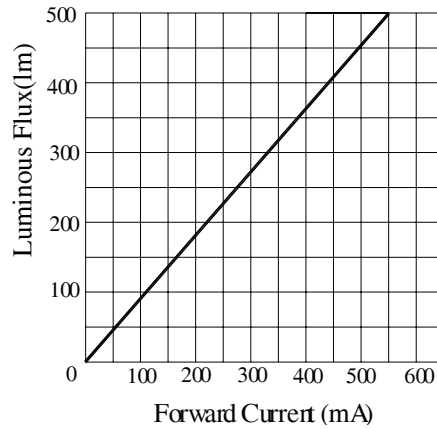


Fig.1 WHITE LED Spectrum VS. WAVELENGTH

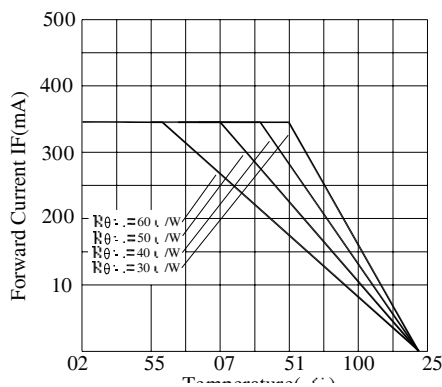
3W High Power LED



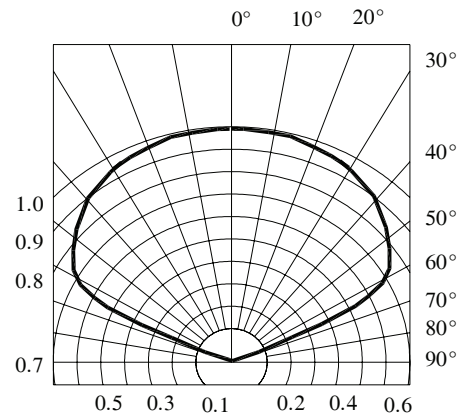
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Flux



Ambient Temperature VS. Forward Current



Radiation Diagram

Chromaticity Coordinates Specifications for Bin Grading:

| Bin | Rank | | | | | Bin | Rank | | | | |
|-----|------|--------|--------|--------|--------|-----|------|--------|--------|--------|--------|
| WB6 | X | 0.3327 | 0.3394 | 0.3390 | 0.3324 | WB7 | X | 0.3324 | 0.3390 | 0.3385 | 0.3324 |
| | Y | 0.3650 | 0.3719 | 0.3591 | 0.3519 | | Y | 0.3519 | 0.3591 | 0.3465 | 0.3388 |
| WC6 | X | 0.3264 | 0.3327 | 0.3324 | 0.3268 | WC7 | X | 0.3268 | 0.3324 | 0.3324 | 0.3272 |
| | Y | 0.3551 | 0.3650 | 0.3519 | 0.3430 | | Y | 0.3430 | 0.3519 | 0.3388 | 0.3305 |
| WD6 | X | 0.3210 | 0.3264 | 0.3268 | 0.3218 | WD7 | X | 0.3218 | 0.3268 | 0.3272 | 0.3227 |
| | Y | 0.3468 | 0.3551 | 0.3430 | 0.3353 | | Y | 0.3353 | 0.3430 | 0.3305 | 0.3233 |
| WE6 | X | 0.3164 | 0.3210 | 0.3218 | 0.3175 | WE7 | X | 0.3175 | 0.3218 | 0.3227 | 0.3186 |
| | Y | 0.3395 | 0.3468 | 0.3353 | 0.3283 | | Y | 0.3283 | 0.3353 | 0.3233 | 0.3169 |

Note: X, Y

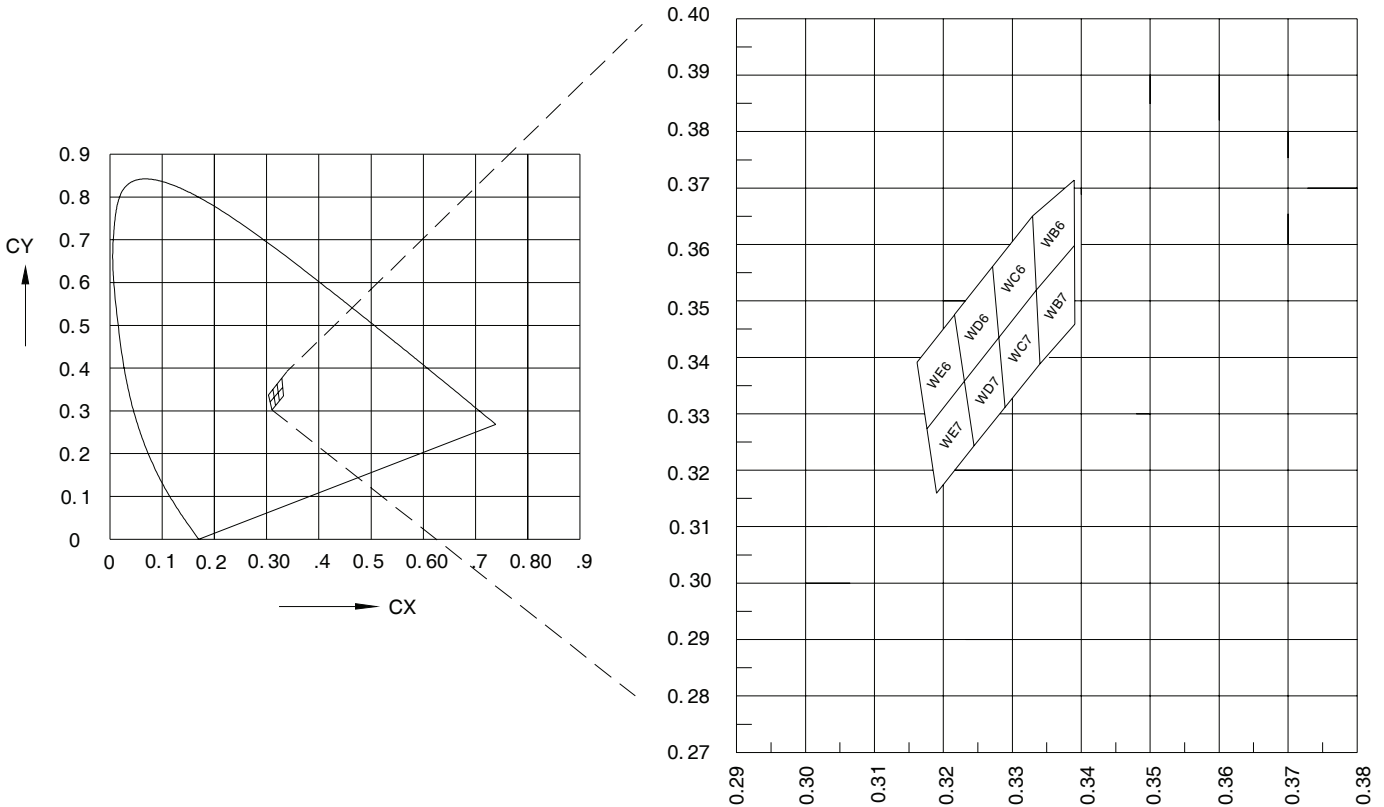
Tolerance each Bin limit is ± 0.01



3W High Power LED



Chromaticity Coordinates & Bin Grading Diagram:



Part Number Table

| LED Chip | | Lens Colour | Part Number |
|----------------|--------------------|-----------------|-------------|
| Material | Colour Coordinates | | |
| InGaN/Sapphire | White | Yellow diffused | 703-0114 |

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