

SPECIFICATION

FOR APPROVAL

Part No. SLQ3WXXXX-60

Product Name: 3W Power LED

Customer:

Customer Part No.

Date 2006/04/13

APPROVED SIGNATURES		
Approved by	Checked by	Prepared by

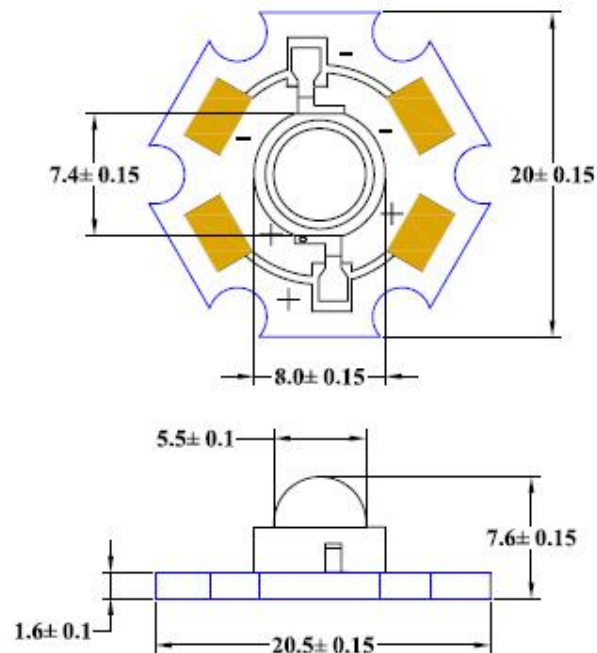
Typical Applications:

- * Read lights(car,bus,aircraft)
- * Portable (flashlight,bicycle)
- * Decorative
- * Sign and channel letter
- * Appliance
- * Lcd backlight
- *Automotive Exterior(Stop-Trail-Turn)

Features:

- * High Flux per LED
 - * Very long operating life (up to 100k hours)
 - * Available in White,Green,Blue,Red-Orange and Red
 - * Lambertian or Collimated Radiation Pattern
 - * More Energy Efficient than incandescent and most Halogen lamps
 - *Cool beam ,safe to the touch
 - * Instant light (less than 100ns)
 - *No UV
 - *Superior ESD protection
 - *Soldering methods:Ir reflow soldering and Hand soldering
-

Mechanical Dimensions



Notes:

- * Slots in aluminum-core PCB for M3 Or #4 mounting screw.
 - * Electrical interconnection pads labeled on the aluminum-core PCB with "+" and "-" to denote positive and negative, respectively. All positive pads are interconnected, as are all negative pads, allowing for flexibility in array interconnection.
 - * Drawing not to scale.
 - * All dimensions are in millimeters.
-

Part Number Matrix:

Color	Part Number	Beam Pattern
White	SLQ3WB80-60	Lambertian
Green	SLQ3WVP55-60	Lambertian
Blue	SLQ3WAZ25-60	Lambertian
Red	SLQ3WR65-60	Lambertian
Yellow	SLQ3WA55-60	Lambertian

Flux Characteristics at 350 mA, Junction Temperature, $T_j=25^\circ\text{C}$

Color	Luminous Flux(lm)		Viewing Angle $2\theta_{1/2}$ (degree)
	Minimum	Typical	
White	50	80	60
Green	25	55	60
Blue	15	25	60
Red	35	65	60
Yellow	30	55	60

Optical Characteristics

at 350mA, Junction Temperature, $T_j=25^{\circ}\text{C}$

Color	$\lambda_D(\text{nm})$ & CCT(K)			$\lambda_D(\text{nm})_{1/2}$
	Min.	Typ.	Max.	
White	5000 K	5500K	6500 k	-
Green	515	520	530	35
Blue	460	470	480	25
Red	620	625	630	20
Yellow	585	591	595	20

Note: 1.Dominant Wavelength λ_D
 2.Color Temperature(CCT)
 3.Spectral Half-width(nm) $\lambda_{D1/2}$

Absolute Maximum Ratings:

Parameter	White/Green/Blue	Amber/Red
DC Forward Current(mA)	350	380
Peak Pulsed Forward current(mA)	500	550
Average Forward Current (mA)	350	350
ESD Sensitivity	$\pm 16000\text{V HBM}$	
LED Junction Temperature($^{\circ}\text{C}$)	120	120
Aluminum-core PCB Temperature($^{\circ}\text{C}$)	100	100
Storage & Operating Temperature($^{\circ}\text{C}$)	-40 to +105	-40 to +105
Soldering Temperature($^{\circ}\text{C}$)	260 $^{\circ}\text{C}$ for 5 seconds Max.	

Electrical Characteristics

at 350mA, Junction Temperature, $T_j=25^\circ \text{C}$

Color	Forward Voltage Vf(V)		
	Min.	Typ.	Max.
White	3.2	3.6	3.99
Green	3.4	3.8	3.99
Blue	3.4	3.8	3.99
Red	2.0	2.5	3.10
Yellow	2.0	2.5	3.10

Note: 1.Forward Voltage Vf(V)
2.Spectral Half-width(nm) λ D1/2

Photometric Luminous Flux Bin Structure

Bin Code	Min.Photometric Flux(lm)	Max.Photometric Flux(lm)
A	3.8	4.9
B	4.9	5.3
C	5.3	8.2
D	8.2	10.7
E	10.7	13.9
F	13.9	18.1
G	18.1	23.5
H	23.5	30.6
I	30.6	39.8
K	39.8	51.7
L	51.7	67.2

Color Bins Yellow

Bin Code	Min. Dominant Wavelength(nm)	Max. Dominant Wavelength(nm)
a	585	590
b	590	595

Color Bins Red

Bin Code	Min. Dominant Wavelength(nm)	Max. Dominant Wavelength(nm)
a	612.5	620.5
b	620.5	631
c	631	645

Color Bins Blue

Bin Code	Min. Dominant Wavelength(nm)	Max. Dominant Wavelength(nm)
a	460	465
b	465	470
c	470	475
d	475	480

Color Bins Green

Bin Code	Min. Dominant Wavelength(nm)	Max. Dominant Wavelength(nm)
a	515	520
b	520	525
c	525	530
d	530	535

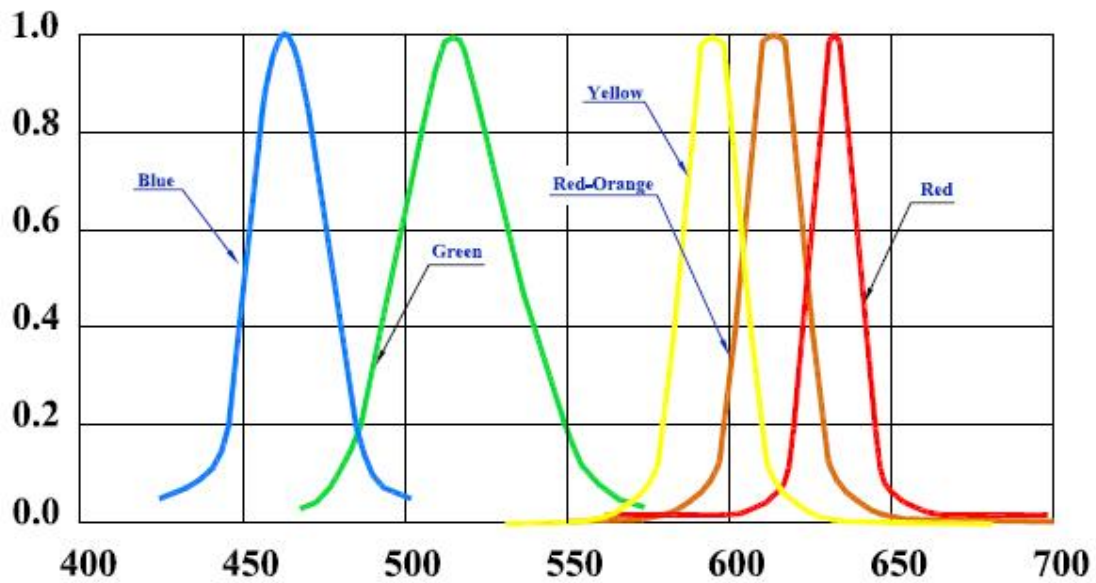
Forward Voltage Bins:

Bin Code	Min.Forward Voltage(V)	Max.Forward Voltage(V)
1	1.80	2.00
2	2.00	2.20
3	2.20	2.40
4	2.40	2.60
5	2.60	2.80
6	2.80	3.00
7	3.00	3.20
8	3.20	3.40
9	3.40	3.60
10	3.60	3.80
11	3.80	3.99

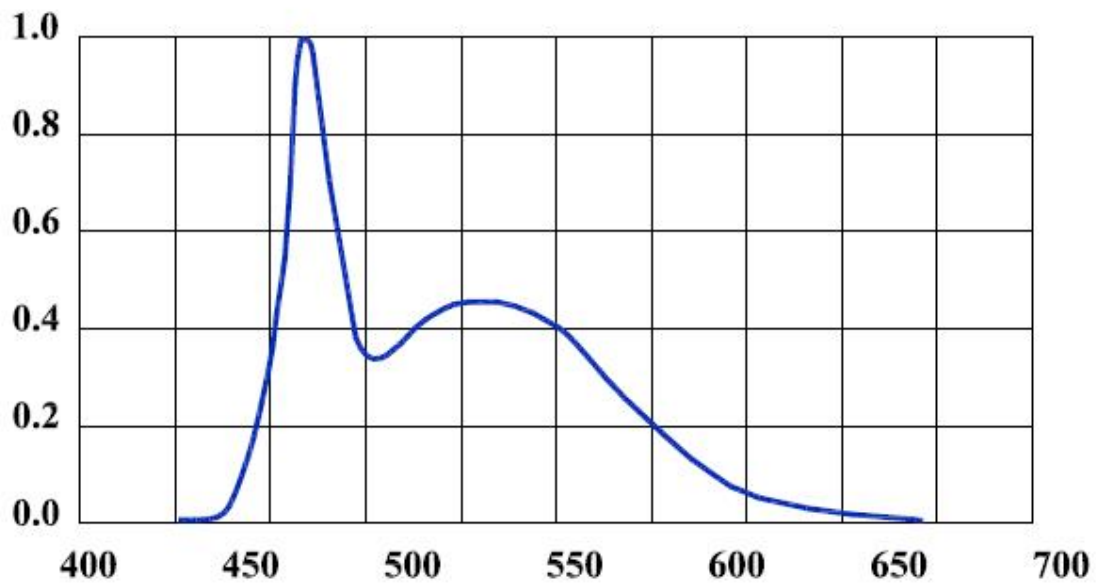
White Color Bins:

Bin Code	Tempeter of Color (Tc)
B	8000K-15000K
W	5000K-8000K
Y	3000K-5000K

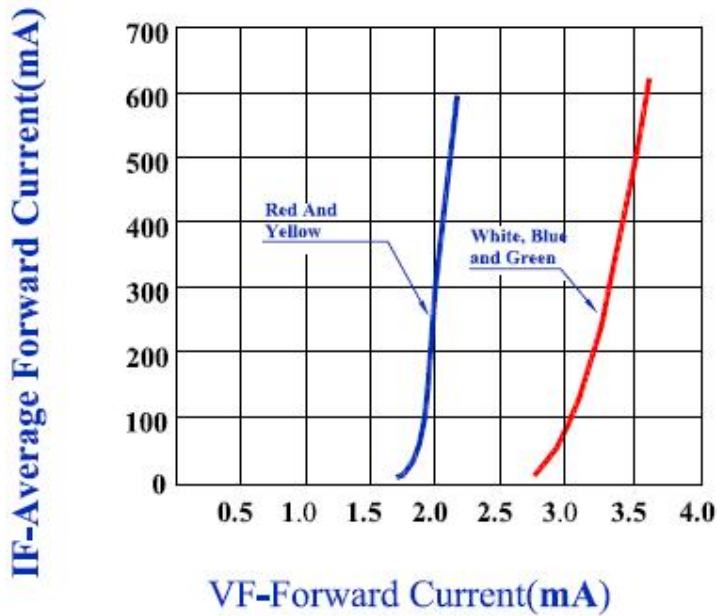
Wavelength Characteristics, $T_j=25^\circ\text{C}$



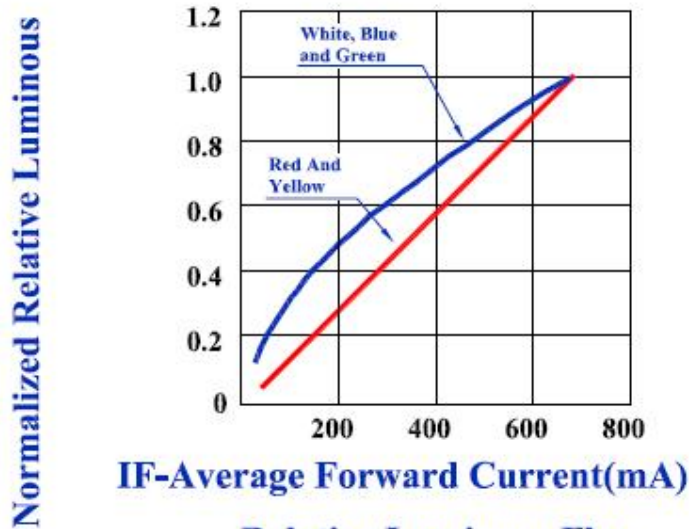
White Color Spectrum



Forward Current Characteristics, $T_j=25^\circ\text{C}$



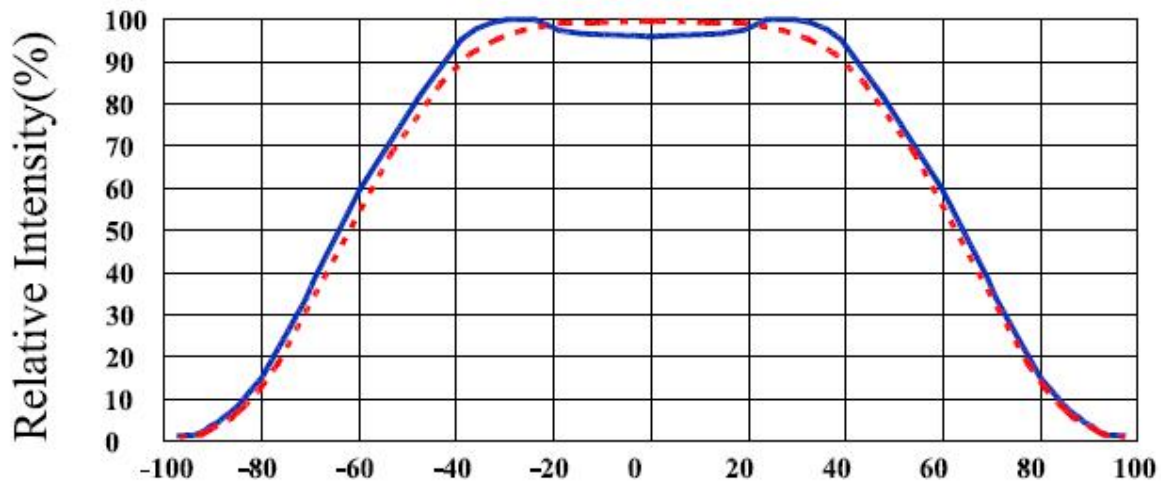
Forward Current VS. Forward Voltage for White,Blue ,Green,Red and Yellow.



Relative Luminous Flux vs. Forward Current for White,Blue,Green, Yellow,Red at $T_j=25^\circ\text{C}$

Typical Representative Spatial Radiation Pattern

Lambertian Radiation Pattern



Angular Displacement (Degree)

Typical Representative Spatial Radiation Pattern
for White ,Blue,Green,and Yellow,Red.
