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## 3x1W HIGH POWER LED

### OF-HPRGB-1EL RGB



#### ATTENTION

OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



#### Features

- Long operating life
- Highest flux
- Wide range of colors:2500K-25000K
- Lambertian radiation pattern
- More energy efficient than incandescent and most halogen lamps
- Low voltage DC operated
- Cool beam, safe to the touch
- Instant light (less than 100ns )
- Fully dimmable
- No UV
- Superior ESD protection
- Eutectic die bonding
- RoHS compliant

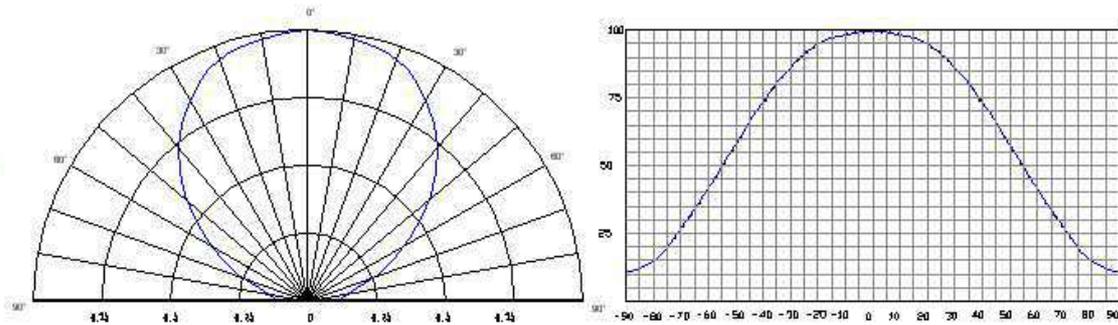
#### Applications

- Reading lights (car, bus, aircraft)
- LCD Backlights/light Guides
- Fiber optic alternative/ Decorative / Entertainment
- Mini-accent/Up lighters/Down lighters/Orientation
- Indoor/Outdoor commercial and Residential Architectural
- Cove/Under shelf/Task
- Bollards/Security/Garden
- Portable (flashlight, bicycle)
- Edge-lit signs (Exit, point of sale)
- Automotive Exit (Stop-Tail-Turn,CHMSL, Mirror Side Repeat)
- Traffic signaling / Beacons / RailCrossing and Wayside



## 3x1W HIGH POWER LED

### ■ Radiation Pattern



### ■ Typical Optical/ Electrical Characteristics @ $T_a=25^{\circ}\text{C}$

Item	Symbol	Condition	Min.	Typ.	Mix.	Unit
Forward Voltage	$V_{F(R)}$	$I_F=350\text{mA}$	2.2	2.4	2.6	V
	$V_{F(G)}$		3.0	3.4	3.6	
	$V_{F(B)}$		3.0	3.4	3.6	
Reverse Current	$I_R$	$V_R=5\text{v}$	--	--	50	$\mu\text{A}$
50% Power Angle	$2\theta_{1/2}$	$I_F=350\text{mA}$	--	140	--	deg
Luminous Intensity	$\Phi_{V(R)}$	$I_F=350\text{mA}$	23.5	28	39.8	lm
	$\Phi_{V(G)}$		39.8	50	67.2	
	$\Phi_{V(B)}$		4.9	7	8.2	
Recommend Forward Current	$I_F$	--	--	350	--	mA
Wavelength	$\lambda_d(R)$	$I_F=350\text{mA}$	610	--	645	nm
	$\lambda_d(G)$	$I_F=350\text{mA}$	510	--	550	
	$\lambda_d(B)$	$I_F=350\text{mA}$	440	--	490	
Thermal Resistance, Junction to Case	$R_{JP}$	$I_F=350\text{mA}$	--	18	--	K/W



## 3x1W HIGH POWER LED

- Notes:**
1. Tolerance of measurement of forward voltage  $\pm 0.1V$ .
  2. Tolerance of measurement of peak Wavelength  $\pm 2.0nm$ .
  3. Tolerance of measurement of luminous intensity  $\pm 15\%$ .

### ■ Absolute Maximum Rating

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	$I_F$	350	mA
Peak Forward Current*	$I_{FP}$	500	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	1000	mW
Electrostatic discharge	$E_{SD}$	$\pm 4500$	V
Operation Temperature	$T_{OPR}$	-40~+80	$^{\circ}C$
Storage Temperature	$T_{STG}$	-40~+100	$^{\circ}C$
Lead Soldering Temperature*	$T_{SOL}$	Max. 260 $^{\circ}C$ for 6sec Max.	

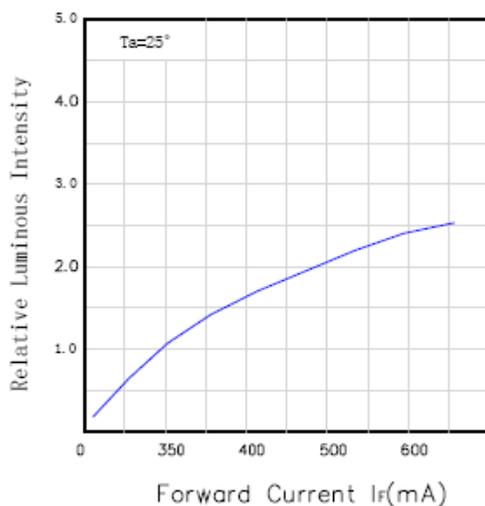
\*IFP Conditions □ Pulse Width  $\leq 10msec$  duty  $\leq 1/10$

\* All high power emitter LED products mounted on aluminum metal-core printed circuit board, can be lighted directly, but we do not recommend lighting the high power products for more than 5 seconds without a appropriate heat dissipation equipment.

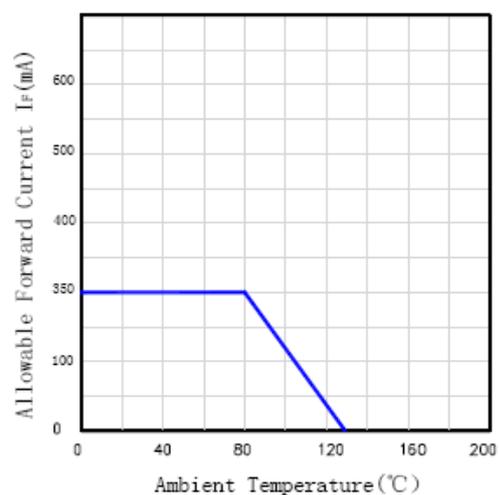
### ■ Typical Optical/Electrical Characteristics Curves

( $T_a = 25^{\circ}C$  Unless Otherwise Noted )

Relative Luminous Intensity -  $I_F$



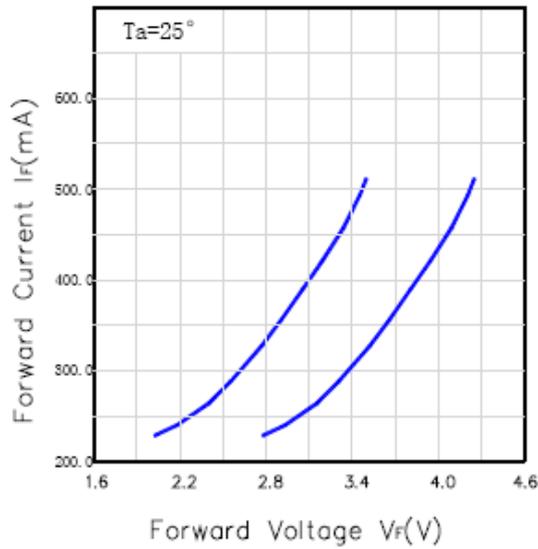
Allowable Forward Current -  $T_a$



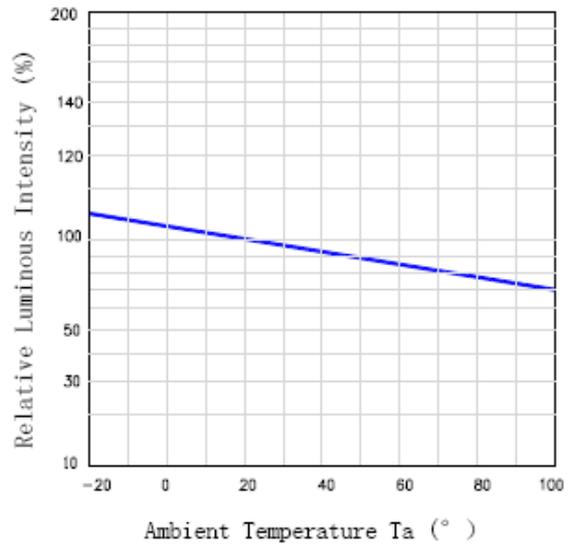


# 3x1W HIGH POWER LED

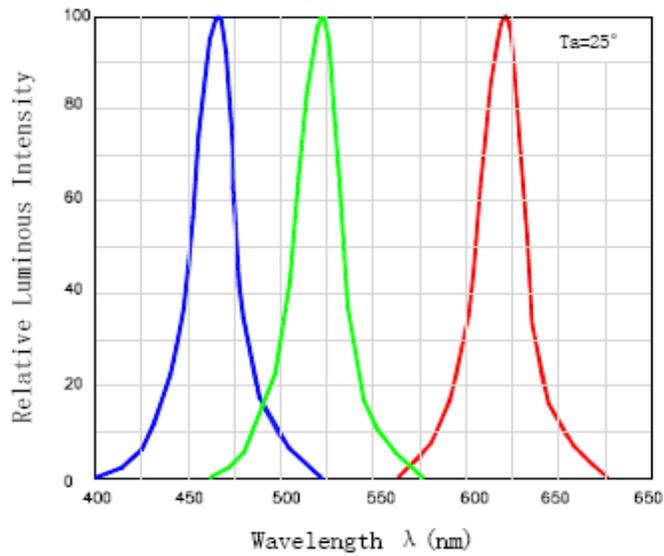
$I_f - V_f$



Relative Luminous Intensity -  $T_a$



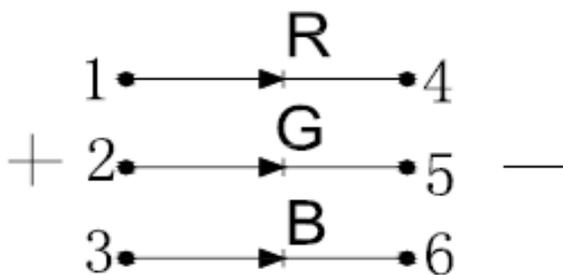
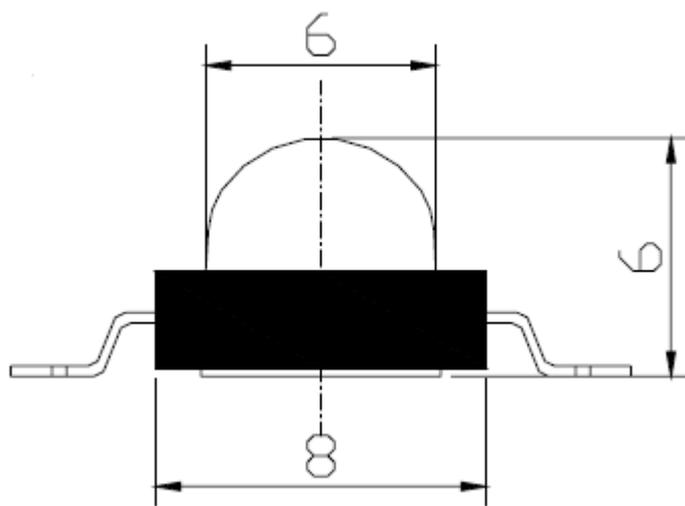
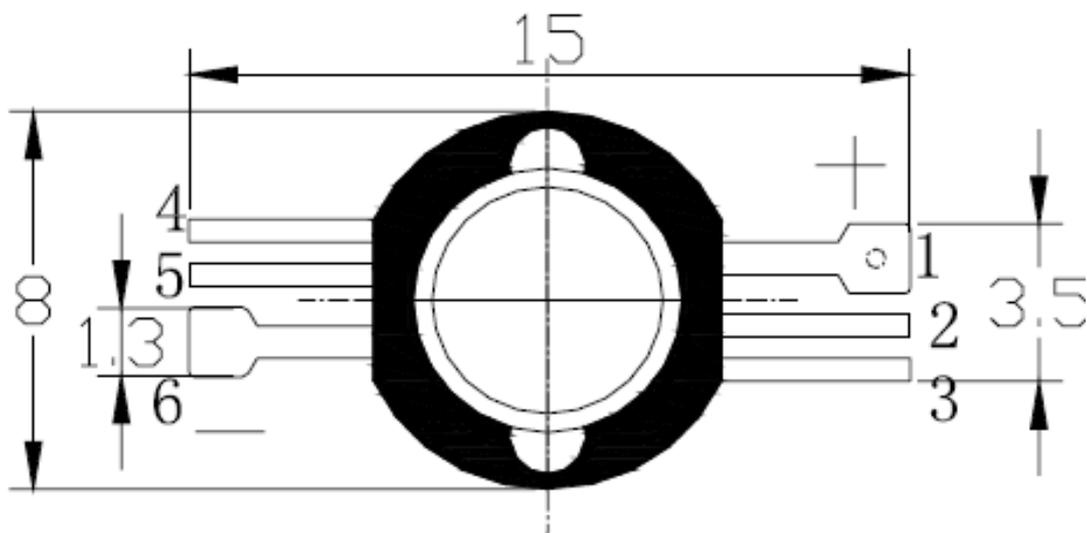
Wavelength Characteristics





# 3x1W HIGH POWER LED

## ■ Package Dimensions



- Notes:** 1. All dimension units are millimeters.  
 2. All dimension tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.