

## High Power LED

BL-HP51AXX

### Features:

- Ø 1W LEDs , suitable for illumination lamps and decorative lighting
- Ø Longer service and less luminosity loss, 50,000hours
- Ø Different emitting colors are available Working current: 200-350mA
- Ø With or without heat sink are both available

### Applications:

Commercial lighting  
Residential lighting  
Decorative lighting



**1Watt Lambertian**

### Electrical-optical characteristics: (Ta=25°C)

Part Number	Chip		Lens Type	Forward Voltage(VF) Unit: V		Flux Unit:lm		Viewing Angle 2θ/2 (deg)
	Emitted Color	λ <sub>p</sub> (nm) or CTT		Typ	Max	Min.	Typ.	
				Water Clear				
BL-HP51AU EC	Ultra Orange	630		6.0	6.5	60	70	
BBL-HP51AU YC	Ultra Yellow	590		6.0	6.5	60	70	
BL-HP51AP GC	Ultra Pure Green	525		9.5	11.0	100	150	
BL-HP51AB GC	Ultra Bluish Green	505		9.5	11.0	80	130	
BL-HP51AU BC	Ultra Blue	470		9.5	11.0	25	35	
BL-HP51AU WC	Ultra White	6000k		9.5	11.0	100	150	
BL-HP51AU W2C	Ultra Warm White	3200k		9.5	11.0	80	120	

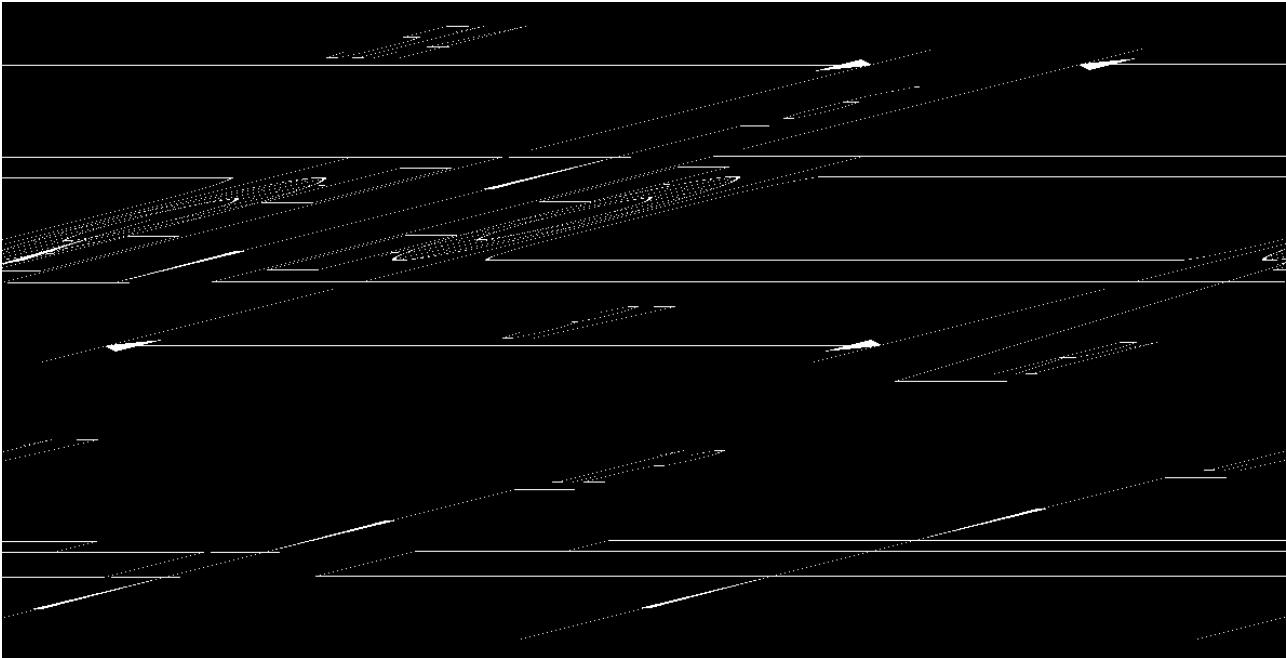
### Absolute maximum ratings (Ta=25°C)

Parameter	UE	UY	BG	PG	UB	UW	Unit
Forward Current I <sub>F</sub>	270	270	270	270	270	270	mA
LED Junction Temperature	120	120	120	120	120	120	°C
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	500	500	500	500	500	500	mA
Operation Temperature T <sub>OPR</sub>	-40 to +80						°C
Storage Temperature T <sub>STG</sub>	-40 to +100						°C
Aluminum-Core Pcb Temperature	105						°C

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### Package configuration & Internal circuit diagram



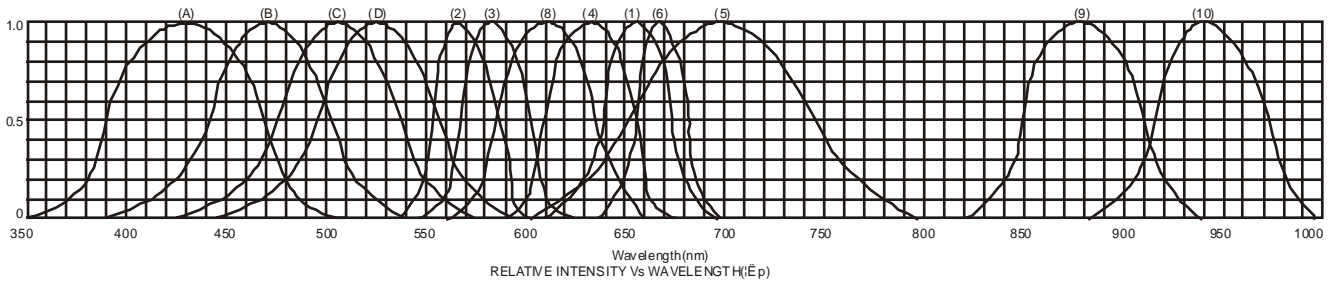
#### Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is 0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

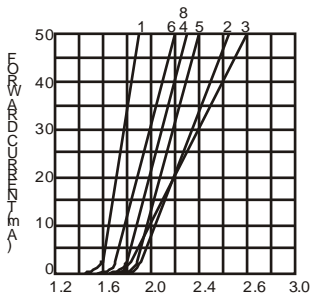
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**BL-HP51AXX**

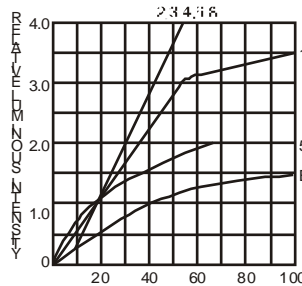
## Typical electrical-optical characteristics curves:



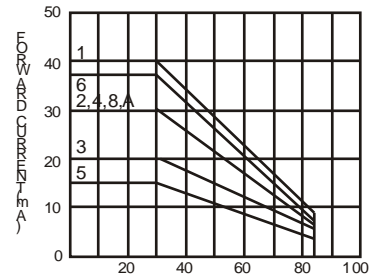
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) - GaN/SiC 430nm/Blue
- (B) - InGaN/SiC 470nm/Blue
- (C) - InGaN/SiC 505nm/Ultra Green
- (D) - InGaN/SiC 525nm/Ultra Green



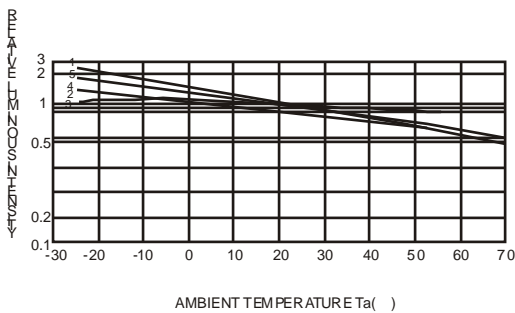
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



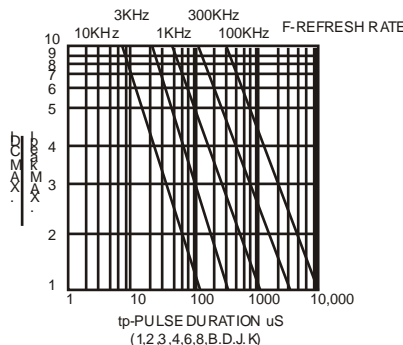
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



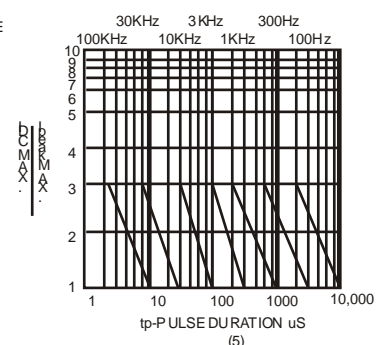
AMBIENT TEMPERATURE Ta( )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta( )



tp-PULSE DURATION µs  
(1,2,3,4,6,8,B,D,J,K)



tp-PULSE DURATION µs  
(5)

NOTE:25 free air temperature unless otherwise specified