

## High Power LED

BL-HP12EXXL

### Features:

- ∅ 5W LEDs suitable for illumination lamps and decorative lighting
- ∅ Longer service and less luminosity loss, 50,000hours
- ∅ Different emitting colors are available
- ∅ With or without heat sink are both available
- ∅ Lambertian, batwing and side emitting are all available

### Applications:

Commercial lighting  
Residential lighting  
Decorative lighting



**1Watt Lambertian**

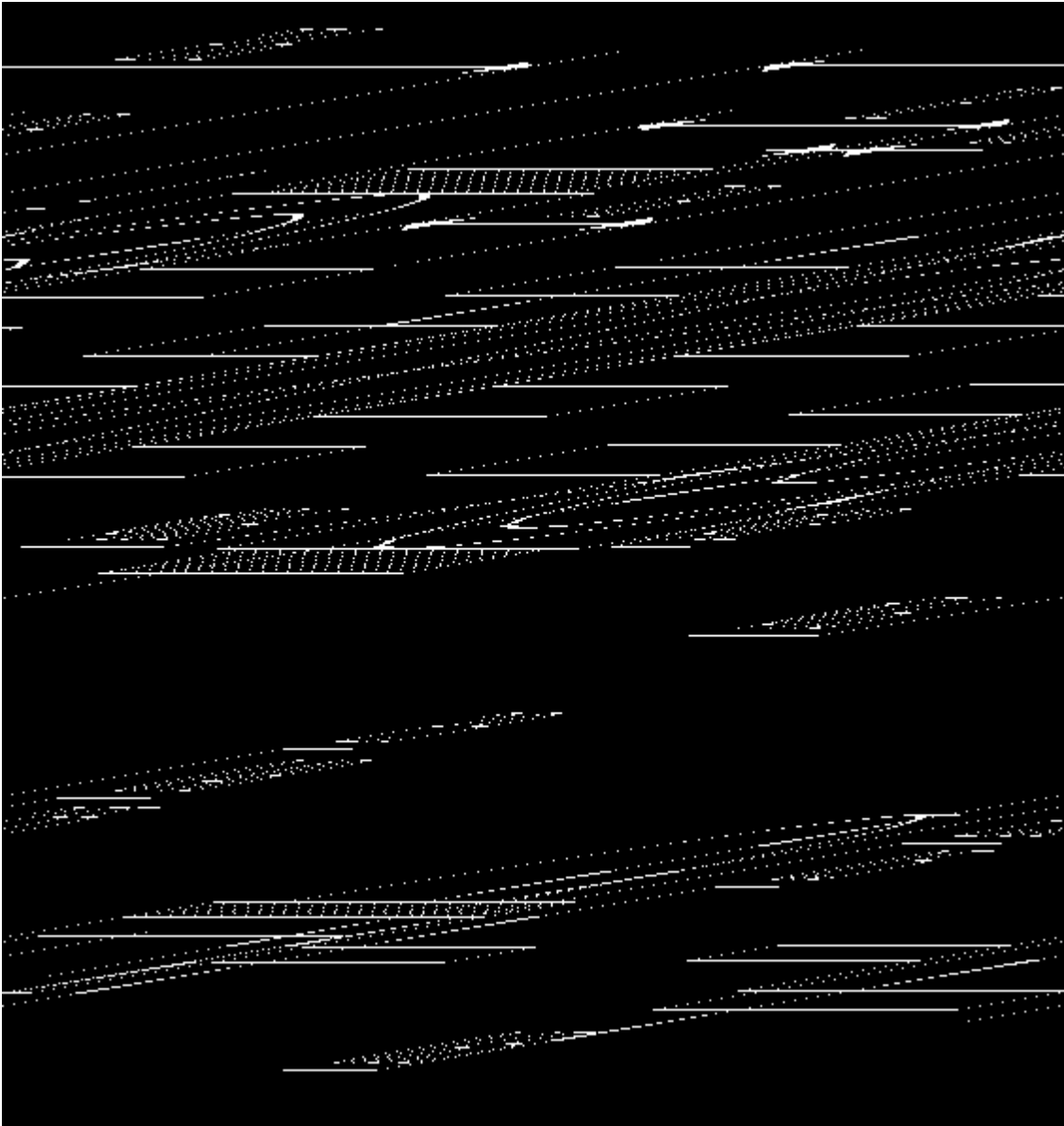
### Electrical-optical characteristics: (Ta=25°C)

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.	
				BL-HP12EUECL	Ultra Orange	630	2.2	
BL-HP12EUYCL	Ultra Yellow	590	2.2	2.75	150	160		
BL-HP12EPGCL	Ultra Pure Green	525	6.4	7.6	200	250		
BL-HP12EBGCL	Ultra Bluish Green	505	6.4	7.6	180	220		
BL-HP12EUBCL	Ultra Blue	470	6.4	7.6	50	60		
BL-HP12EUWCL	Ultra White	6000k	6.4	7.6	250	300		
BL-HP12EUW2CL	Ultra Warm White	3200k	6.4	7.6	150	200		

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

Parameter	UE	UY	BG	PG	UB	UW	Unit
Forward Current I <sub>F</sub>	1800	1800	800	800	800	800	mA
LED Junction Temperature	120	120	120	120	120	120	°C
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	3000	3000	1500	1500	1500	1500	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

### Package configuration & Internal circuit diagram



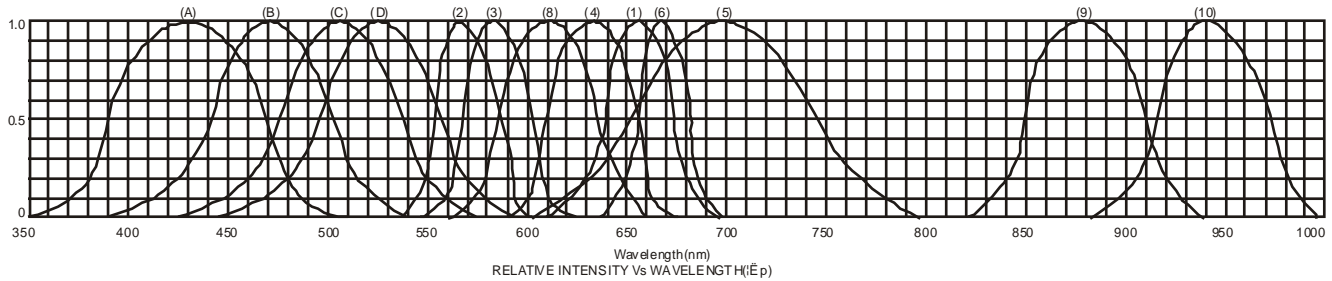
Notes:

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.

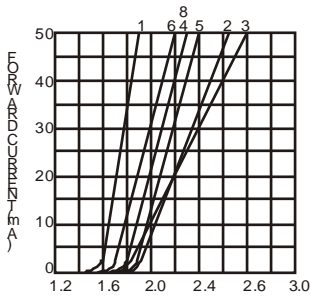
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**BL-HP12EXXL**

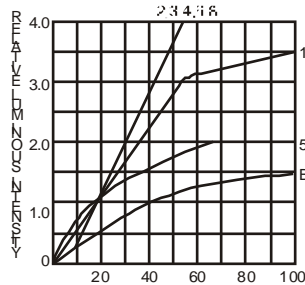
## Typical electrical-optical characteristics curves:



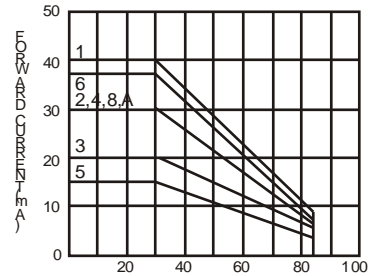
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



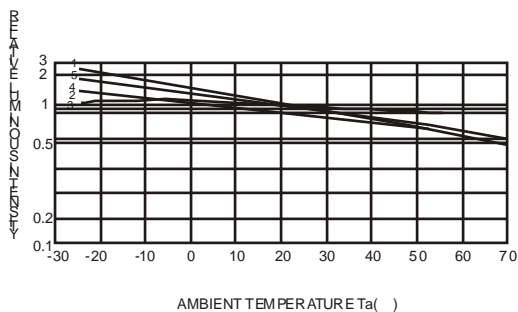
FORWARD VOLTAGE (V<sub>f</sub>)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



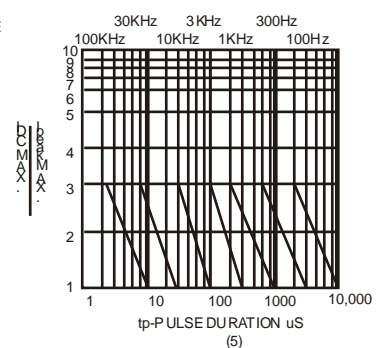
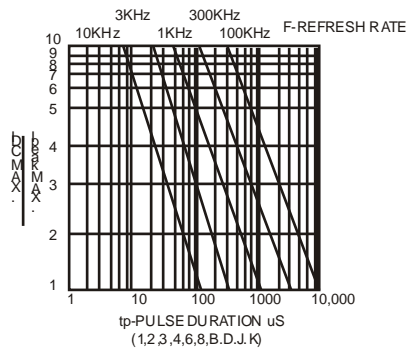
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta (°C)  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta (°C)



NOTE: 25 free air temperature unless otherwise specified

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Packing and weighting

