

## Round Type, FULL COLOR LED lamp

BL-L105

### Features:

- 10mm Round LED Lamps, Full color
- Ultra brightness.
- Choice of various viewing angles.
- Diffused, Transparent and Water clear lens are available.
- IC compatible /Low current capability.
- RoHs Compliance



### ■ Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)

Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ1/2 (deg)
	Emitted Color	Material	I <sub>P</sub> (nm)		Typ	Max	Min.	Typ.	
					BL-L105RGBC-CA	Ultra Orange	AlGaInP	630	
	Ultra Pure Green	InGaN	525		3.10	3.80	800	2000	
	Blue	InGaN	430		3.00	4.20	800	1500	
BL-L105RGBW-CA	Ultra Orange	AlGaInP	630	Water Diff.	2.10	2.50	200	500	30
	Ultra Pure Green	InGaN	525		3.10	3.80	300	1000	
	Blue	InGaN	430		3.00	4.20	300	800	
BL-L105RGBC-CC	Ultra Orange	AlGaInP	630	Water Clear	2.10	2.50	500	800	20
	Ultra Pure Green	InGaN	525		3.10	3.80	800	2000	
	Blue	InGaN	430		3.00	4.20	800	1500	
BL-L105RGBW-CC	Ultra Orange	AlGaInP	630	Water Diff.	2.10	2.50	200	500	30
	Ultra Pure Green	InGaN	525		3.10	3.80	300	1000	
	Blue	InGaN	430		3.00	4.20	300	800	

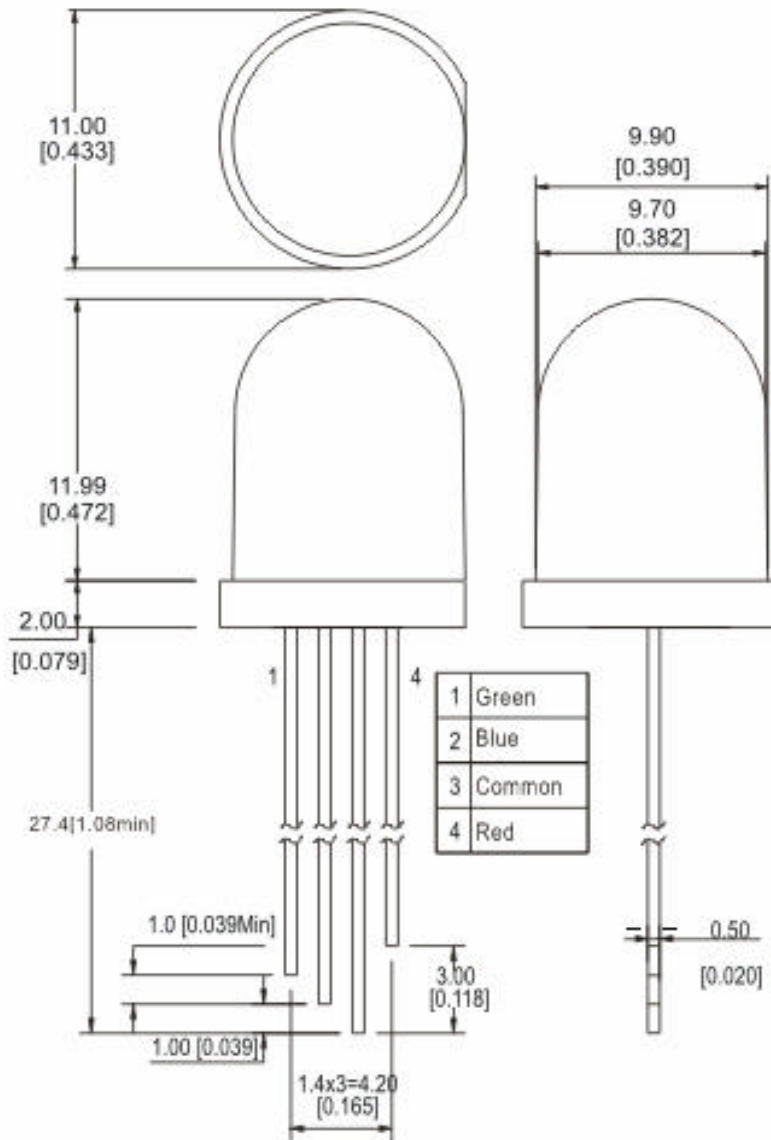
Note: -CC: common Cathode, -CA: common Anode

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

Parameter	UE	PG	UB	Unit
Forward Current I <sub>F</sub>	30	30	30	mA
Power Dissipation P <sub>d</sub>	65	110	120	mW
Reverse Voltage V <sub>R</sub>	5	5	5	V
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	150	150	100	mA
Operation Temperature T <sub>OPR</sub>	-40 to +80			°C
Storage Temperature T <sub>STG</sub>	-40 to +85			°C
Lead Soldering Temperature T <sub>SOL</sub>	Max.260±5 °C for 3 sec Max. (1.6mm from the base of the epoxy bulb)			°C

■ Package configuration & Internal circuit diagram

# BL-L105



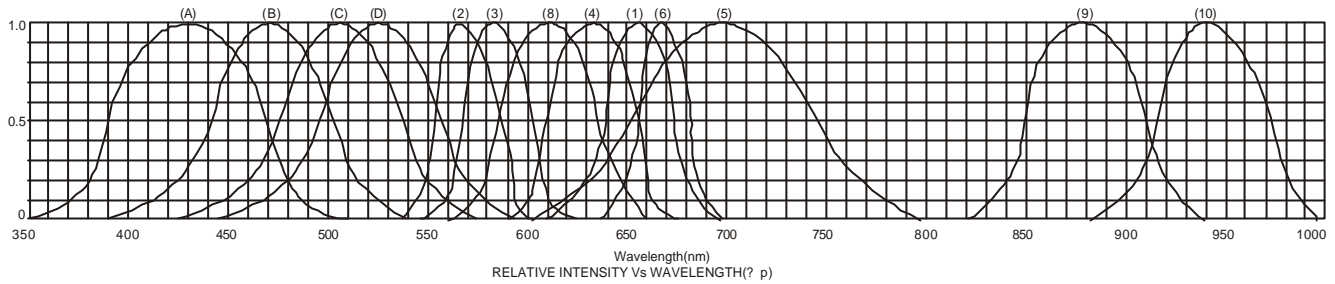
Notes:

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

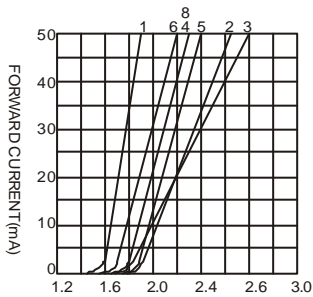
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**BL-L105**

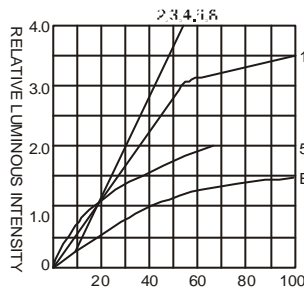
## Typical electrical-optical characteristics curves:



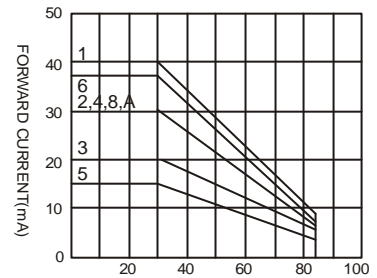
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



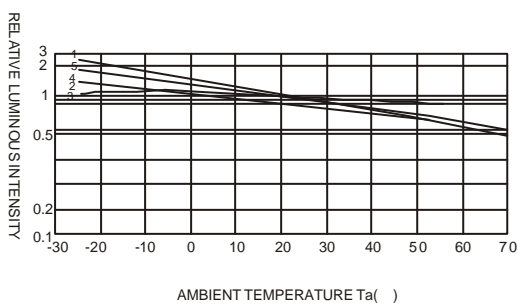
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



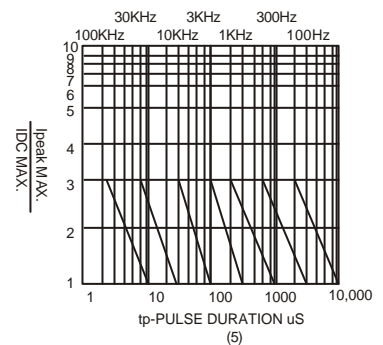
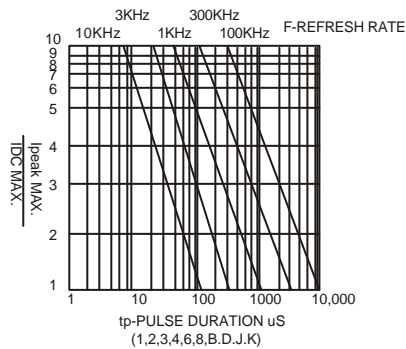
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta ( )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta ( )



NOTE:25 free air temperature unless otherwise specified

■ Packing and weighting

