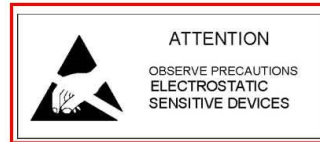


Round Tower Type LED lamp
BL-L189
Features:

- 1.8 mm Round Tower Type LED Lamps..
- Ultra brightness.
- Choice of various viewing angles.
- Full color Display application.
- IC compatible /Low current capability.
- RoHs Compliance


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

Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (lv) Unit:mcd		Viewing Angle 2θ/2 (deg)
	Emitted Color	Material	λp (nm)		Typ	Max	Min.	Typ.	
BL-L189SRC	Hi Red	AlGaAs,SH	660	Water Clear	1.85	2.20	50	200	50
BL-L189LRC	Super Red	AlGaAs,DH	660		1.85	2.20	200	500	
BL-L189URC	Ultra Red	AlGaAs,DDH	660		1.95	2.20	500	700	
BL-L189UEC	Ultra Orange	AlGaInP	630		2.10	2.50	120	700	
BL-L189UYC	Ultra Yellow	AlGaInP	590		2.10	2.50	150	600	
BL-L189UGC	Ultra Green	AlGaInP	574		2.20	2.50	50	800	
BL-L189PGC	Ultra Pure Green	InGaN	525		3.80	4.50	400	1200	
BL-L189BGC	Ultra Bluish Green	InGaN	505		3.80	4.50	400	1000	
BL-L189BC	Blue	InGaN	430		3.80	4.50	400	800	
BL-L189UBC	Ultra Blue	InGaN	470		2.70	4.20	400	1200	
BL-L189VC	UV	InGaN	405		3.80	4.50	100	150	
BL-L189UWC	Ultra White	InGaN	/		2.70	4.20	400	2500	

Absolute maximum ratings (Ta=25°C)

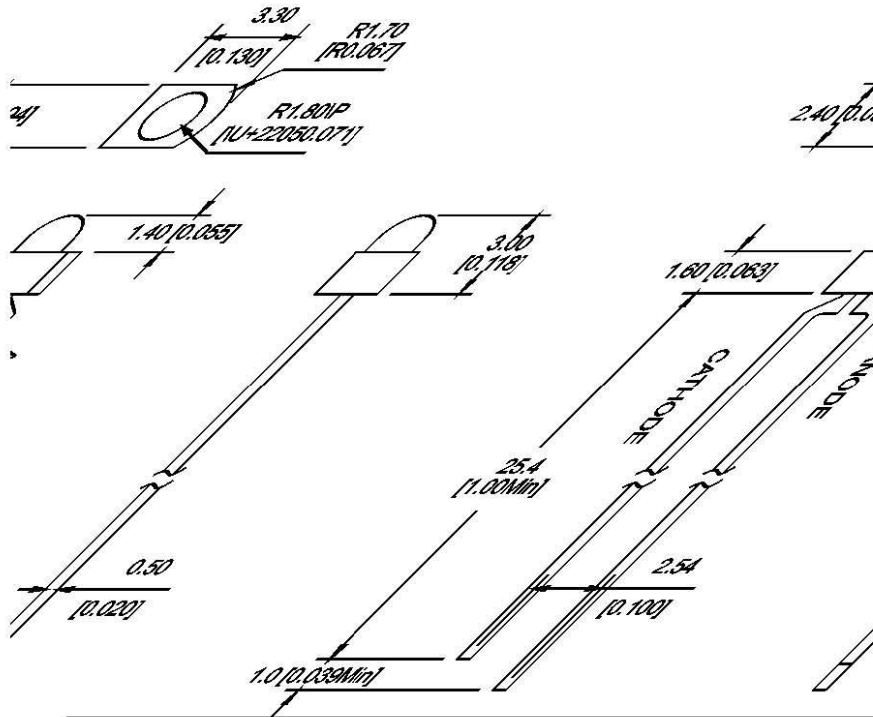
Parameter	SR	LR	UR	UE	UY	UG	PG	BG	B	UB	UV	W	Unit
Forward Current I _F	25	25	25	30	30	30	30	30	30	30	30	30	mA
Power Dissipation P _d	60	60	60	65	65	75	110	110	120	120	120	120	mW
Reverse Voltage V _R	5	5	5	5	5	5	5	5	5	5	5	5	V
Peak Forward Current I _{PF} (Duty 1/10 @1KHZ)	150	150	150	150	150	150	150	100	100	100	100	100	mA
Operation Temperature T _{OPR}	-40 to +80												°C
Storage Temperature T _{STG}	-40 to +85												°C
Lead Soldering Temperature TSOL	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)												°C

Round Tower Type LED lamp

BL-L189

□ Package configuration & Internal circuit diagram

BL-L189 Series



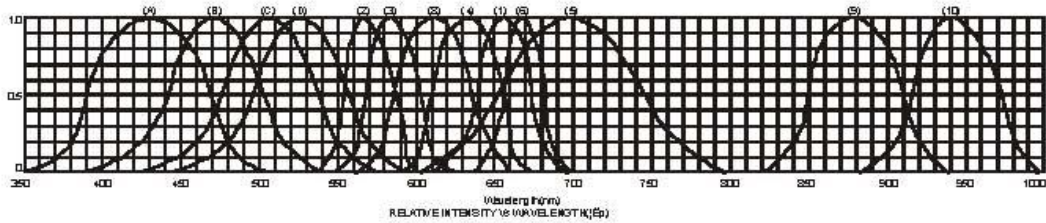
Notes:

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.

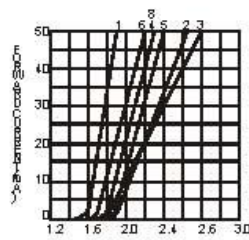
Round Tower Type LED lamp

BL-L189

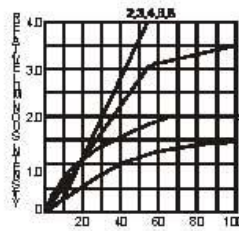
□ **Typical electrical-optical characteristics curves:**



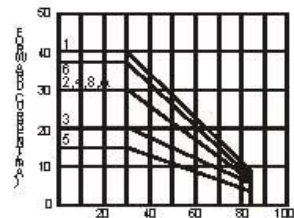
- | | |
|---|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red | (9) - GaAlAs 880nm |
| (2) - GaP 570nm/Yellow Green | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow | (A) - GaN/SiC 430nm/Blue |
| (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B) - InGaN/SiC 470nm/Blue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



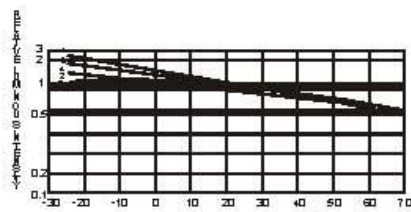
FORWARD VOLTAGE (V)
FORWARD CURRENT VS.
FORWARD VOLTAGE



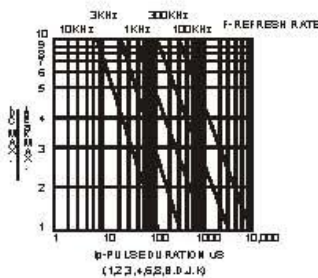
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



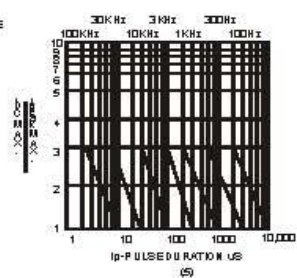
AMBIENT TEMPERATURE (°C)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE (°C)



(1, 2, 3, 4, 5, 6, 7, 8)



(9)

NO TESTED at 25°C temperature unless otherwise specified