Round Helmet Type LED lamp

BL-L102

Features:

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





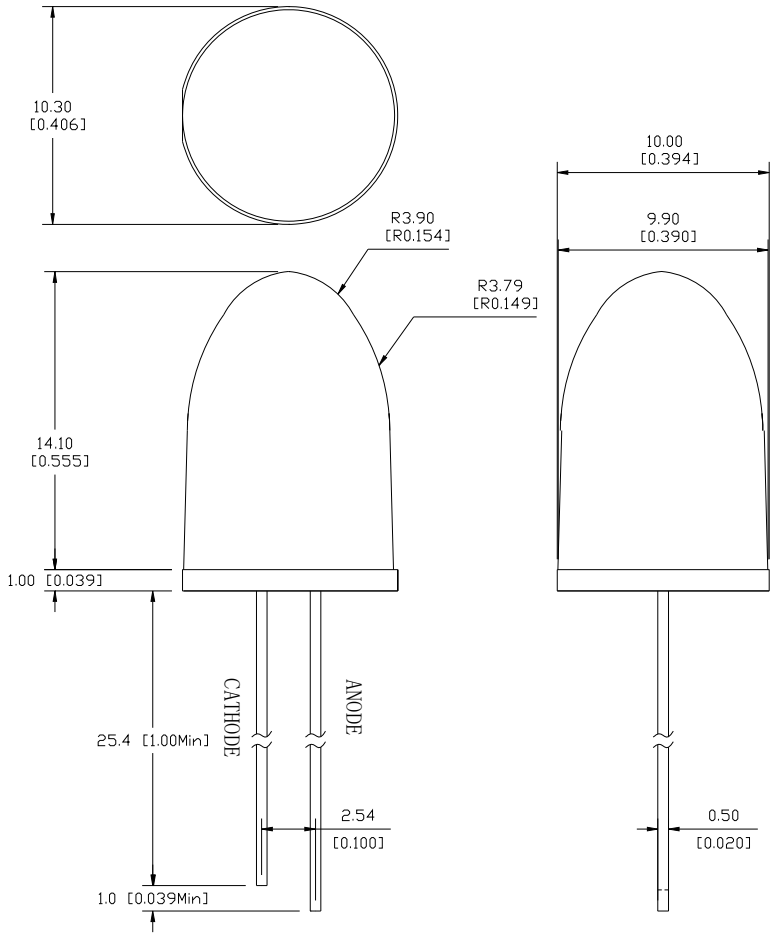
■ Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)

Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ1/2 (deg)
	Emitted Color	Material	λP (nm)		Typ	Max	Min.	Typ.	
BL-L102SRC	Hi Red	AlGaAs,SH	660	Water Clear	1.85	2.20	150	350	15
BL-L102LRC	Super Red	AlGaAs,DH	660		1.85	2.20	350	800	
BL-L102URC	Ultra Red	AlGaAs,DDH	660		1.95	2.20	800	1200	
BL-L102UEC	Ultra Red	AlGaInP	630		2.10	2.50	800	1800	
BL-L102UYC	Ultra Yellow	AlGaInP	590		2.10	2.50	600	1500	
BL-L102UGC	Ultra Green	AlGaInP	574		2.20	2.50	300	800	
BL-L102PGC	Ultra Pure Green	InGaN	525		3.80	4.50	1500	6000	
BL-L102BGC	Ultra Bluish Green	InGaN	505		3.80	4.50	1000	5000	
BL-L102BC	Blue	InGaN	430		3.80	4.50	500	1000	
BL-L102UBC	Ultra Blue	InGaN	470		2.70	4.20	1000	3000	
BL-L102VC	UV	InGaN	405		3.80	4.50	80	200	
BL-L102UWC	Ultra White	InGaN	/		2.70	4.20	5000	10000	

■ Absolute maximum ratings (Ta=25°C)

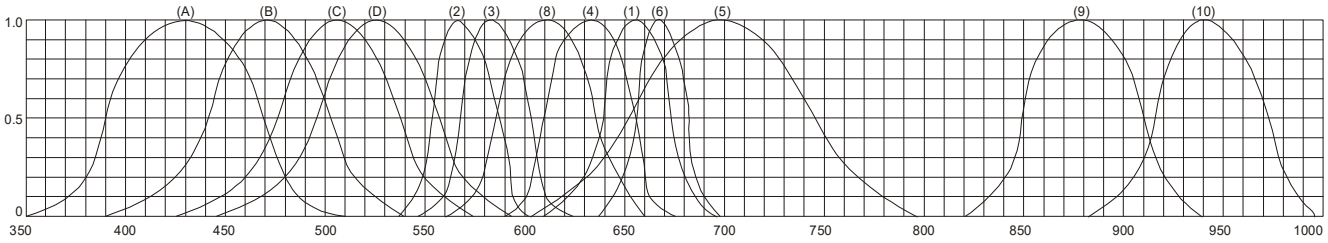
Parameter	SR	LR	UR	UE	UY	UG	PG	BG	B	UB	UV	W	Unit
Forward Current I_F	25	25	25	30	30	30	30	30	30	30	30	30	mA
Power Dissipation P_d	60	60	60	65	65	75	110	110	120	120	120	120	mW
Reverse Voltage V_R	5	5	5	5	5	5	5	5	5	5	5	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	150	150	150	150	150	150	150	100	100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

■ Package configuration & Internal circuit diagram



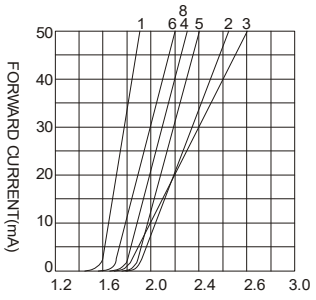
Notes:
1. All dimensions are in millimeters (inches)
2. Tolerance is ±0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

■ Typical electrical-optical characteristics curves:

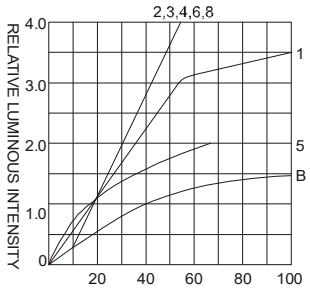


RELATIVE INTENSITY Vs WAVELENGTH(λ p)

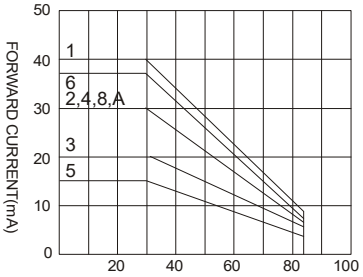
(1) - GaAsP/GaAs 655nm/Red
(2) - GaP 570nm/Yellow Green
(3) - GaAsP/GaP 585nm/Yellow
(4) - GaAsp/GaP 635nm/Orange & Hi-Eff Red
(5) - GaP 700nm/Bright Red
(6) - GaAlAs/GaAs 660nm/Super Red
(8) - GaAsP/GaP 610nm/Super Red
(9) - GaAlAs 880nm
(10) - GaAs/GaAs & GaAlAs/GaAs 940nm
(A) - GaN/SiC 430nm/Blue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



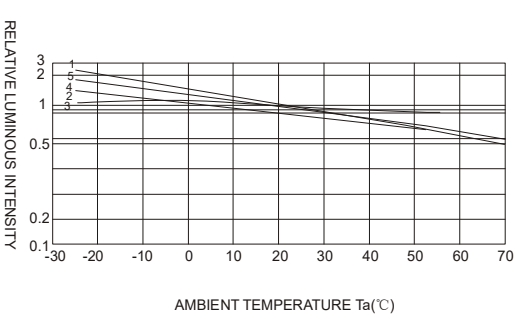
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



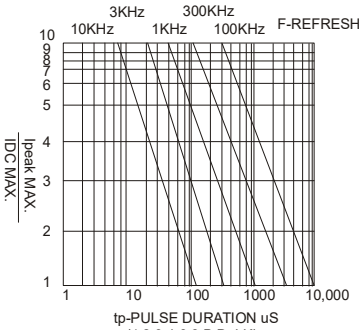
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



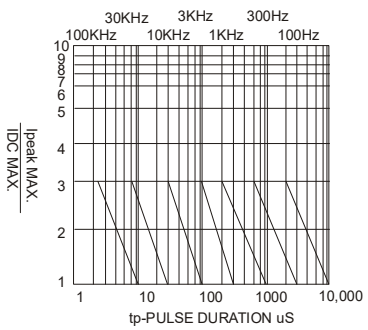
AMBIENT TEMPERATURE Ta(℃)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE Ta(℃)



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



tp-PULSE DURATION uS
(5)

NOTE:25℃ free air temperature unless otherwise specified

■ Packing and weighting

