

INFRARED EMITTING DIODES

BL-L513XX-IR

Features:

- Ø 5.0mm Round Type Infrared LED
- Ø High Reliability
- Ø Peak Wavelength at 940, 880, 850nm
- Ø Water Clear, yellow Transparent, Blue Transparent available
- Ø IC compatible /Low current capability.

Application

- Ø Free air transmission system
- Ø Infrared remote control units with high power requirement
- Ø Smoke detector
- Ø Infrared Camera
- Ø Infrared applied system



Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=50mA)

Part Number	Chip		Lens Type	λp *	λp *	Ir (Vr=5V, uA)	Forward Voltage(VF) Unit:V		Radiant Power (mw/sr)	Viewing Angle 2θ1/2(deg)		
	Material	λp *					(nm)					
						Typ						
BL-L513IRAC	GaAs	940	Water Clear	50	10	1.40	1.60	30	30			
BL-L513IRAB	GaAs	940	Blue Trans.	50	10	1.40	1.60	30				
BL-L513IRBC	GaAlAs	880	Water Clear	50	10	1.70	2.00	30				
BL-L513IRBB	GaAlAs	880	Blue Trans.	50	10	1.70	2.00	30				
BL-L513IRCC	GaAlAs	850	Water Clear	50	10	1.70	2.00	50				
BL-L513IRCB	GaAlAs	850	Blue Trans.	50	10	1.70	2.00	50				
BL-L513IRCY	GaAlAs	850	Yellow Trans.	50	10	1.70	2.00	50				

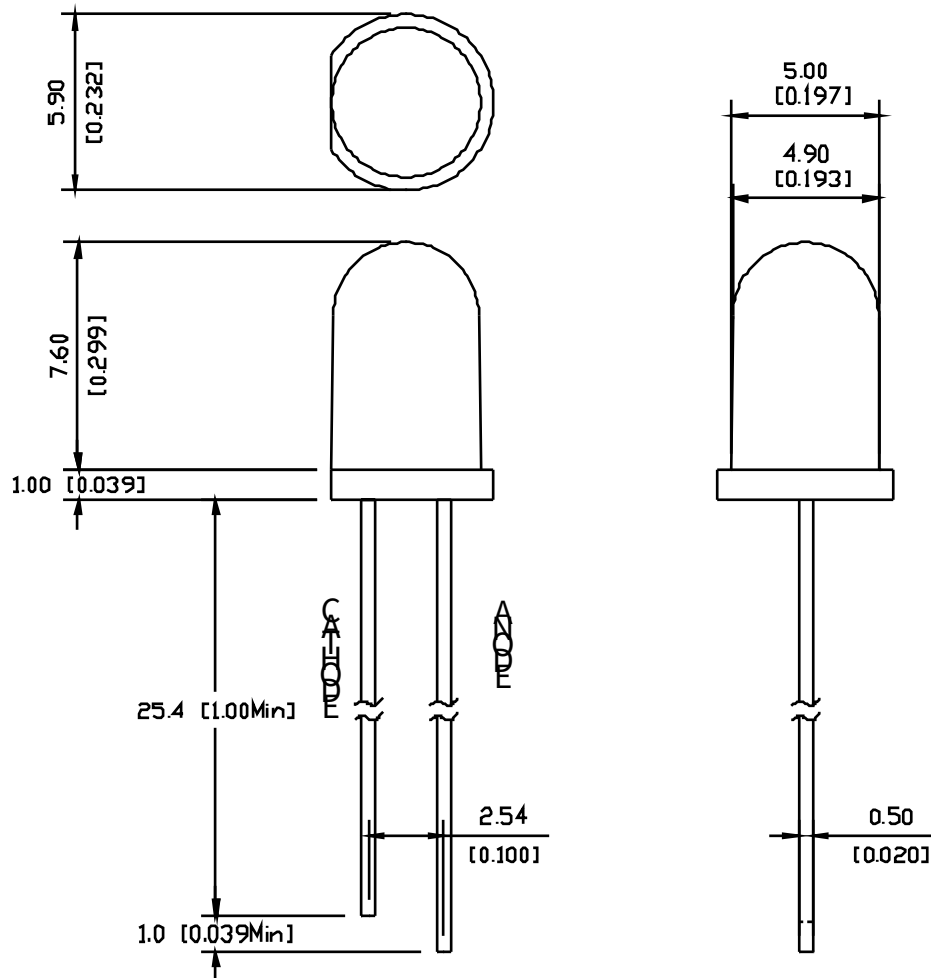
Absolute maximum ratings (Ta=25°C)

Parameter	Rating	Unit
Forward Current IF	50	mA
Power Dissipation Pd	150	mW
Reverse Voltage VR	5	V
Peak Forward Current I _{PF} (Duty 1/10 @1KHZ)	250	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

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Package configuration & Internal circuit diagram



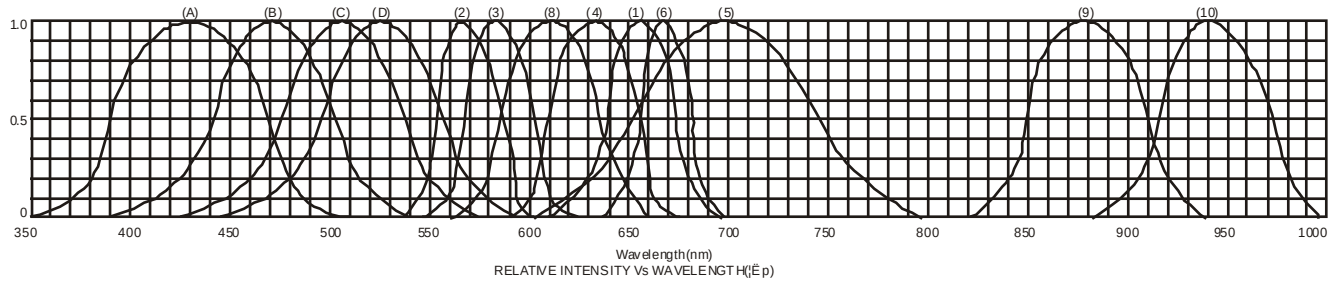
Notes:

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.

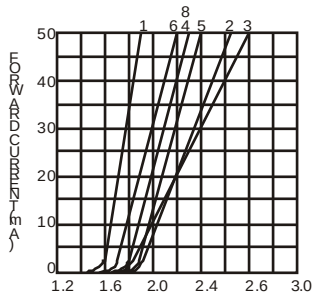
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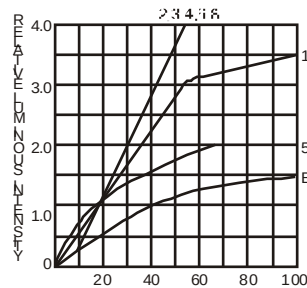
Typical electrical-optical characteristics curves:



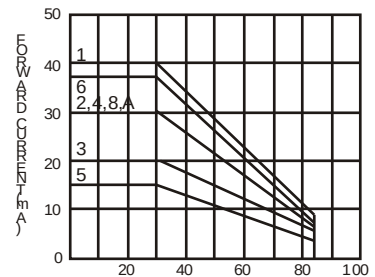
- | | |
|---|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red | (9) - GaAlAs 880nm |
| (2) - GaP 570nm/Yellow Green | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow | (A) - GaN/SiC 430nm/Blue |
| (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B) - InGaN/SiC 470nm/Blue |
| (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 | |



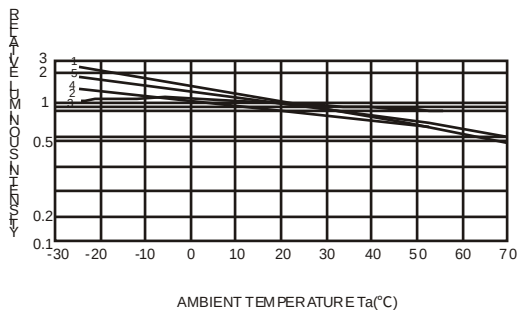
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



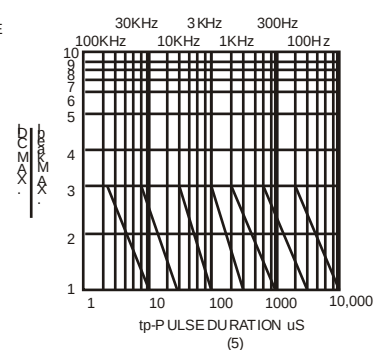
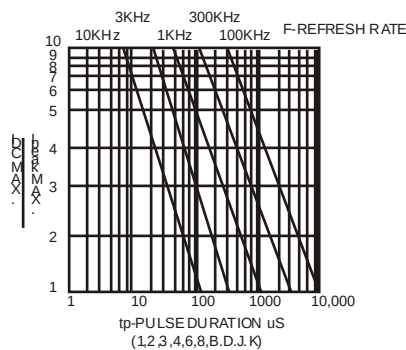
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



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



AMBIENT TEMPERATURE Ta(°C)



NOTE: 25°C free air temperature unless otherwise specified

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Packing and weighting

