INFRARED EMITTING DIODES

BL-L513XX-IR

Features:

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

Application

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

RoHs Compliance

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

Part Number	Chip		Lens Type	¦¤Ë	Ir (Vr=5V, uA)	Forward Voltage(VF) Unit:V		Radiant Power (mw/sr)	Viewing Angle 2¦È1/2(deg)
	Material	?p j (nm)				Typ	Max	Typ	
BL-L513IRAC	GaAs	940	Water Clear	50	10	1.40	1.60	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	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 I_F	50	mA
Power Dissipation P_d	150	mW
Reverse Voltage V_R	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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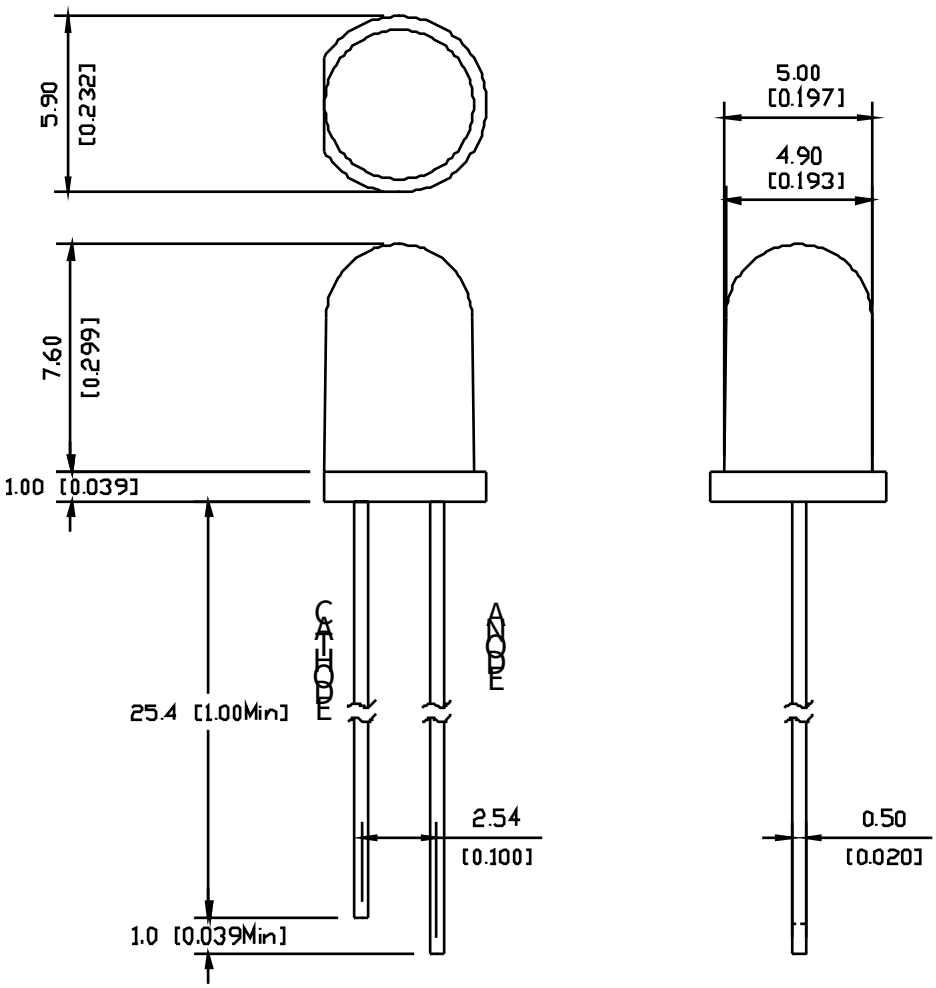
Package configuration & Internal circuit diagram



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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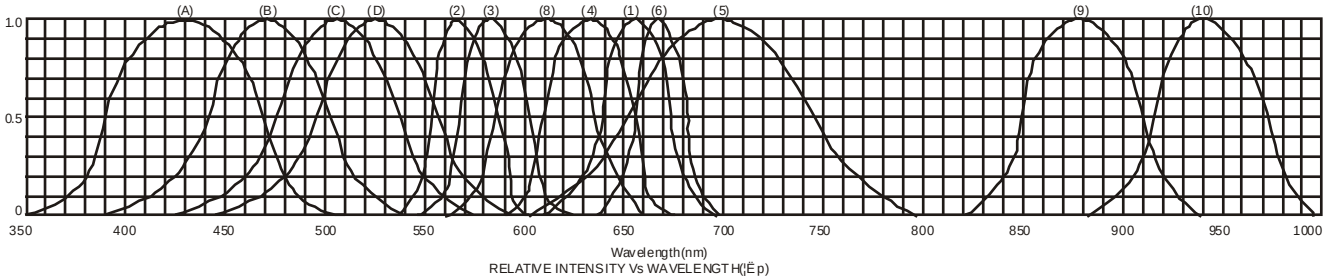
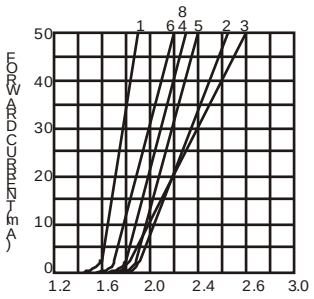
Typical electrical-optical characteristics curves:

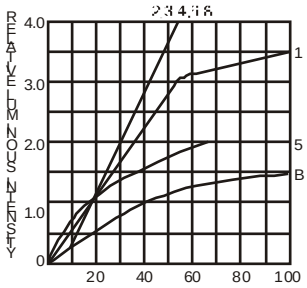


RELATIVE INTENSITY Vs WAVELENGTH(λp)

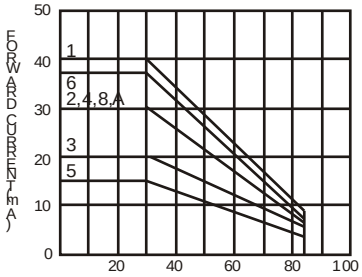
(1) - GaAsP/GaAs 655nm/Red
(2) - GaP 570nm/Yellow Green
(3) - GaAsP/GaP 585nm/Yellow
(4) - GaAsp/GaP 635nm/Orange & Hi-Eff Red
(5) - GaP 700nm/Bright Red
(6) - GaAlAs/GaAs 660nm/Super Red
(8) - GaAsP/GaP 610nm/Super Red
(9) - GaAlAs 880nm
(10) - GaAs/GaAs & GaAlAs/GaAs 940nm
(A) - GaN/SiC 430nm/Blue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



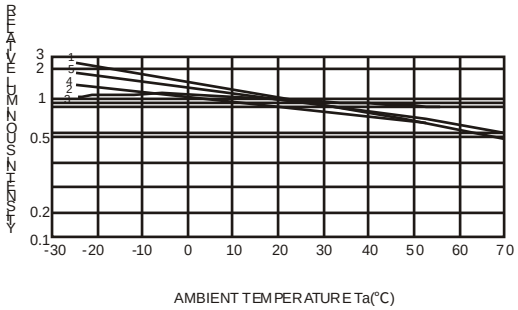
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



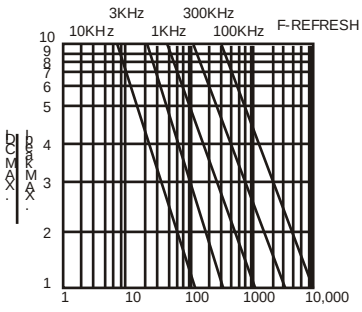
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



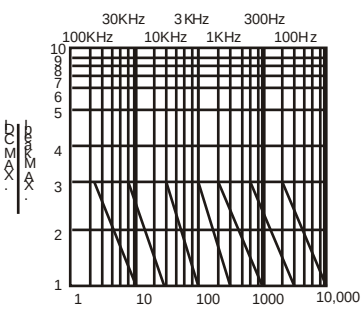
AMBIENT TEMPERATURE Ta(°C)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE Ta(°C)



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



tp-PULSE DURATION uS
(5)

NOTE:25°C free air temperature unless otherwise specified