

**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

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

Part Number	Chip		Lens Type	$\Delta\lambda$	Ir (Vr=5V, uA)	Forward Voltage(VF) Unit:V		Radiant Power (mw/sr)  Typ	Viewing Angle 201/2(deg)
	Material	$\lambda_P$ (nm)				Typ	Max		
<b>BL-L513IRAC</b>	GaAs	940	Water Clear	50	10	1.40	1.60	30	30
<b>BL-L513IRAB</b>	GaAs	940	Blue Trans.	50	10	1.40	1.60	30	
<b>BL-L513IRBC</b>	GaAlAs	880	Water Clear	50	10	1.70	2.00	30	
<b>BL-L513IRBB</b>	GaAlAs	880	Blue Trans.	50	10	1.70	2.00	30	
<b>BL-L513IRCC</b>	GaAlAs	850	Water Clear	50	10	1.70	2.00	50	
<b>BL-L513IRCB</b>	GaAlAs	850	Blue Trans.	50	10	1.70	2.00	50	
<b>BL-L513IRCY</b>	GaAlAs	850	Yellow Trans.	50	10	1.70	2.00	50	

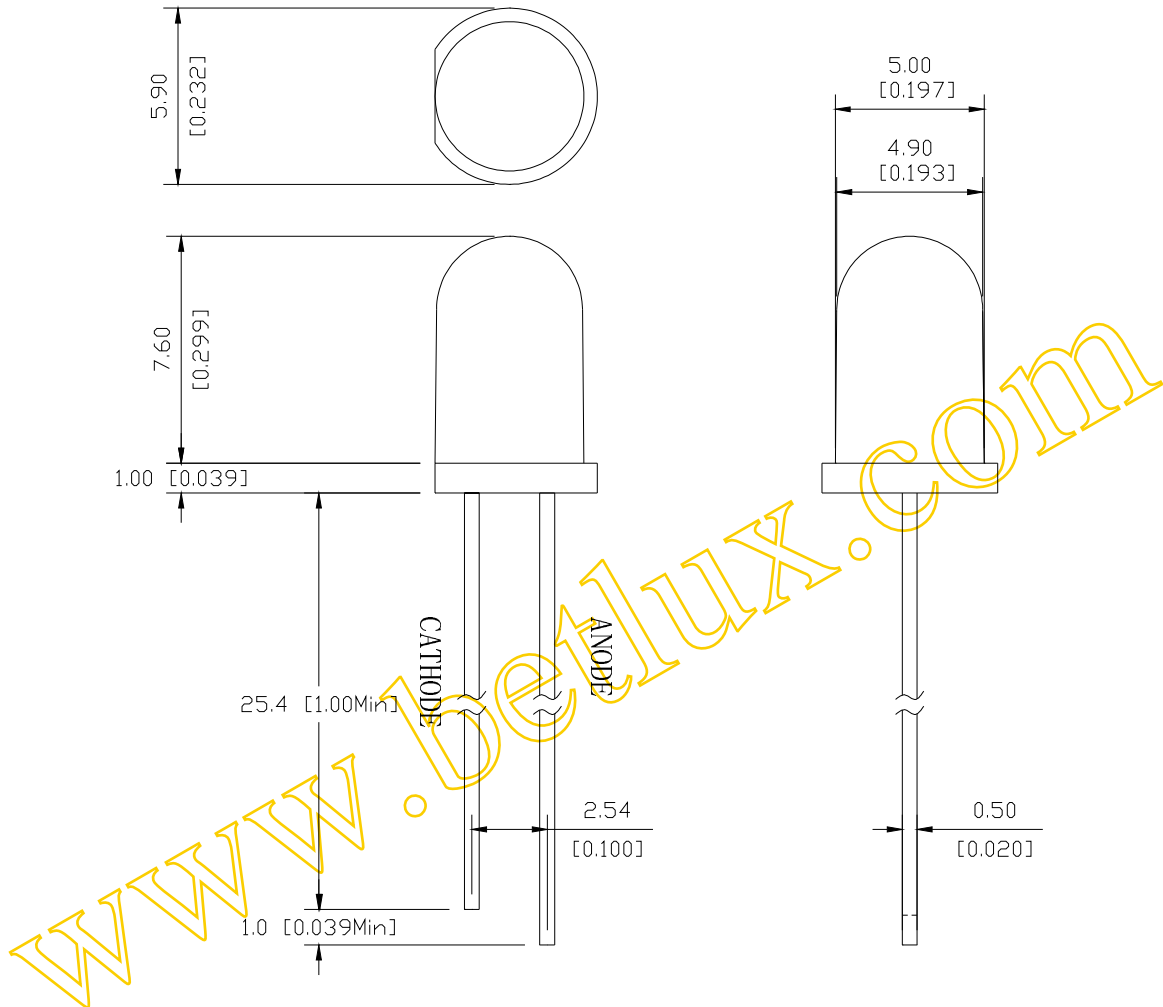
**■ Absolute maximum ratings (Ta=25°C)**

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



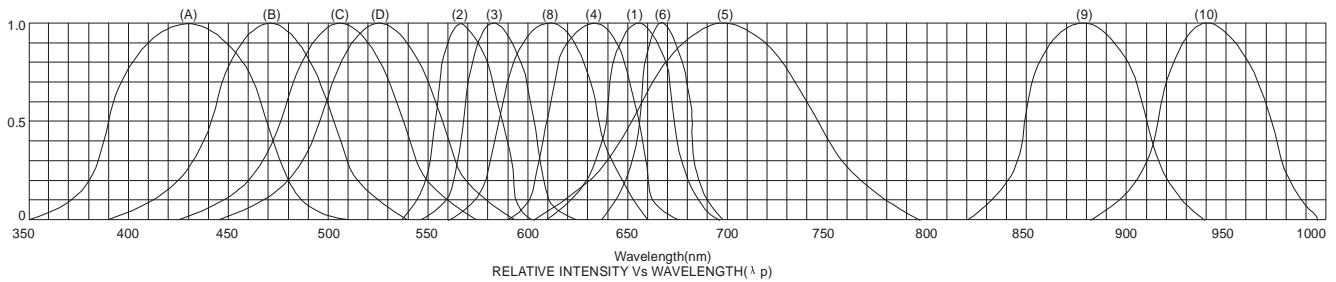
#### Notes:

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

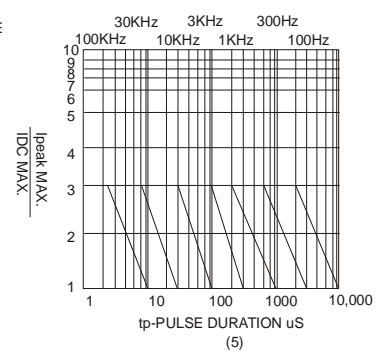
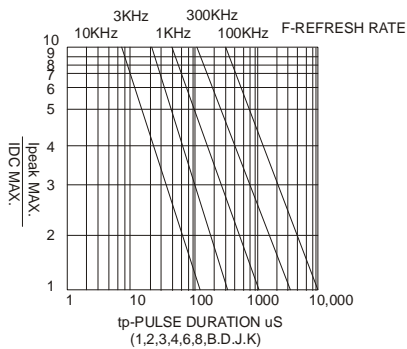
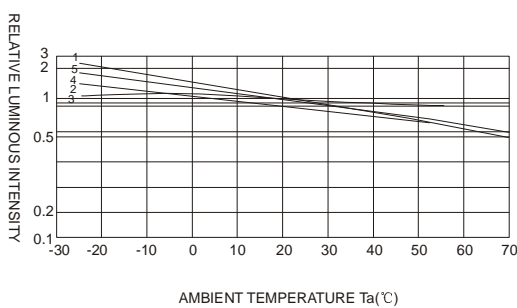
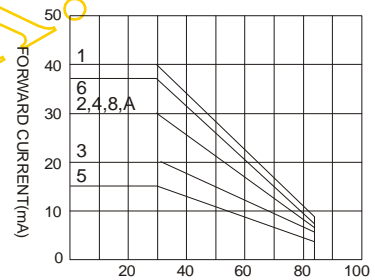
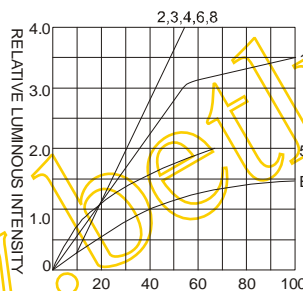
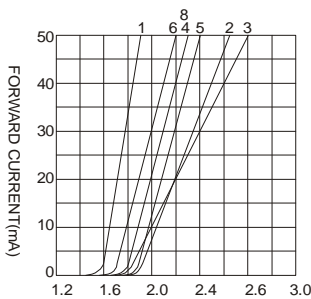
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### Typical electrical-optical characteristics curves:



- |   |                                      |
|---|--------------------------------------|
| (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) - InGaN/SiC 525nm/Ultra Green    |
| (8) - GaAsP/GaP 610nm/Super Red           |                                      |



NOTE:25°C free air temperature unless otherwise specified