SILICON PHOTO DIODES

BL-L512PD

Features:

- Ø 5.1*3.0*7.4mm SILICON PHOTO DIODES
- Ø Choice of various viewing angles.
- Ø Diffused and Water clear lens are available.
- Ø Fast response time.
- Ø High photo sensitivity.
- Ø Small junction capacitance.The epoxy package itself is an IR filter, spectrally matched to GaAs or GaAlAs IR emitter.

Applications:

- Ø High speed photo detector
- Ø Camera
- Ø Infrared remote controller for TVs VCR, audio equipment, air conditioner, etc.

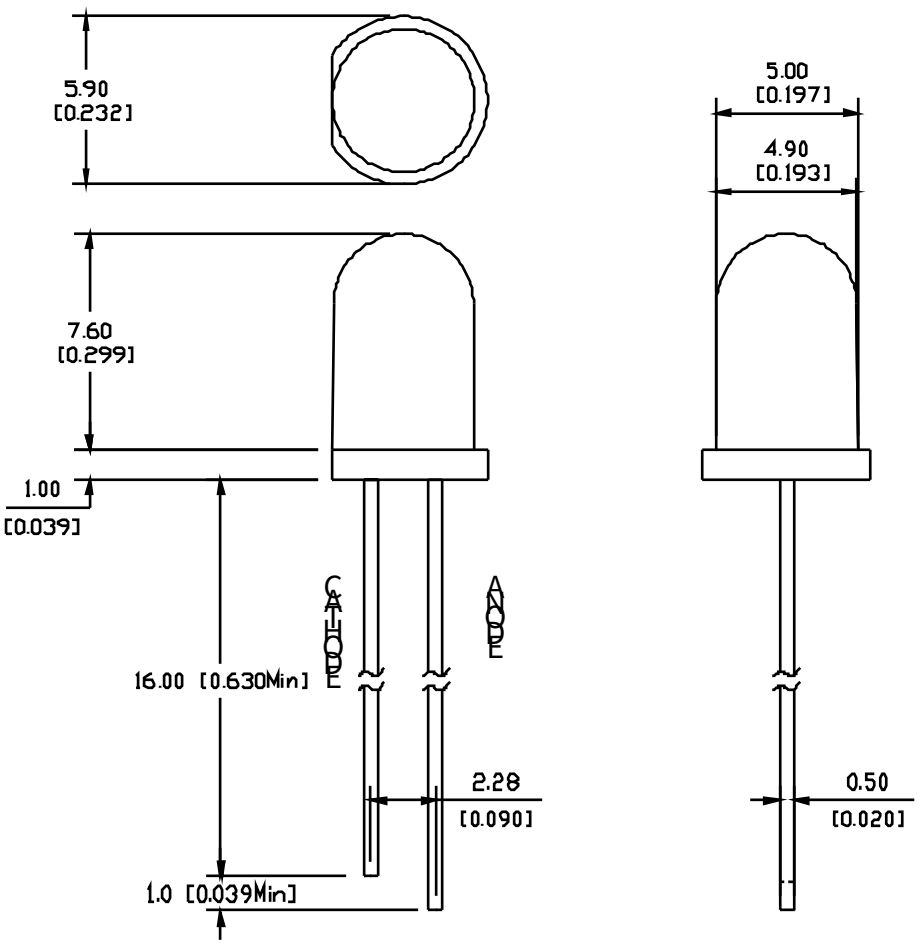
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	P_d	150	mW
Reverse Voltage	V_R	35	V
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

Electronic Optical Characteristics at Ta=25°C

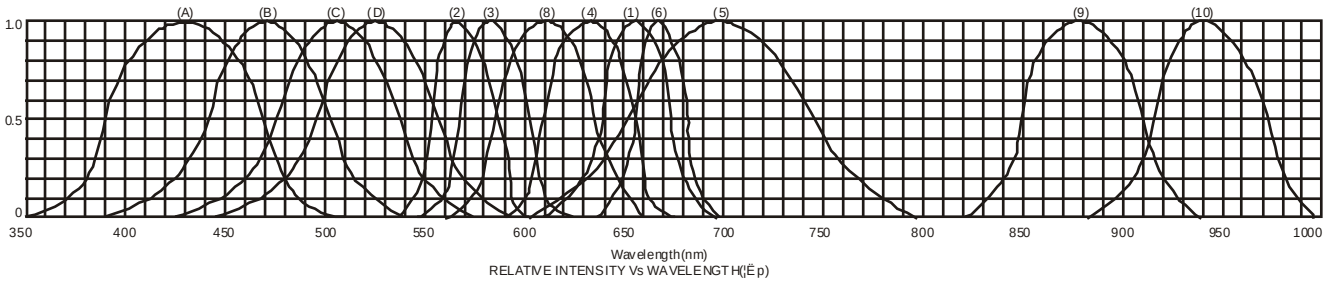
Items	Symbol	Min.	Typ.	Max.	Unit	Condition
Wavelength of Peak Sensitivity	¦Ë	-	940	-	nm	-
Open Circuit Voltage	V_{OC}	-	0.40	-	V	H=5mW/cm^2
Short Circuit Current	I_{SC}	-	2	-	uA	¦Ë=940nm
Reverse Light Current	I_L	-	3.5	-	uA	H=5mW/cm^2 ¦Ë=940nm V_R=5V
Reverse Dark Current	ID	-	-	10	nA	H=0mW/cm2 V_R=10V
Reverse Break down Voltage	V_{BR}	35	170	-	V	H=0mW/cm2 I_R=100uA
Viewing angle	2¦È1/2	-	35	-	Deg	
Rise/Fall Time	T_r/T_f	-	6/6	-	nS	R_L=1000¦¸, V_R=10V

Package configuration & Internal circuit diagram



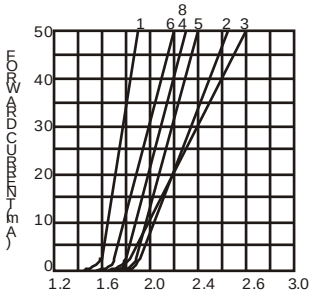
Notes:
1. All dimensions are in millimeters (inches)
2. Tolerance is ±0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

Typical electrical-optical characteristics curves:

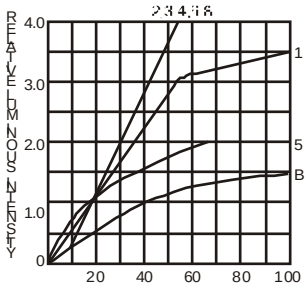


RELATIVE INTENSITY Vs WAVELENGTH(λp)

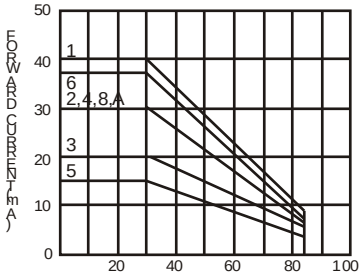
(1) - GaAsP/GaAs 655nm/Red
(2) - GaP 570nm/Yellow Green
(3) - GaAsP/GaP 585nm/Yellow
(4) - GaAsp/GaP 635nm/Orange & Hi-Eff Red
(5) - GaP 700nm/Bright Red
(6) - GaAlAs/GaAs 660nm/Super Red
(8) - GaAsP/GaP 610nm/Super Red
(9) - GaAlAs 880nm
(10) - GaAs/GaAs & GaAlAs/GaAs 940nm
(A) - GaN/SiC 430nm/Blue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



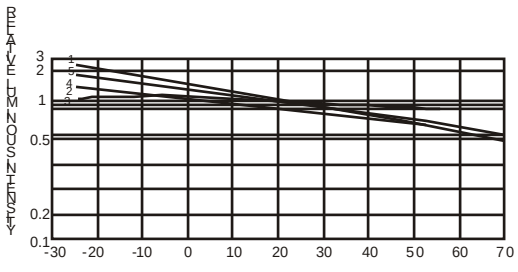
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



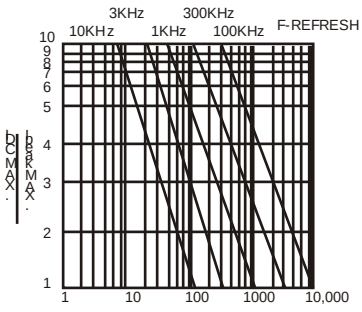
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



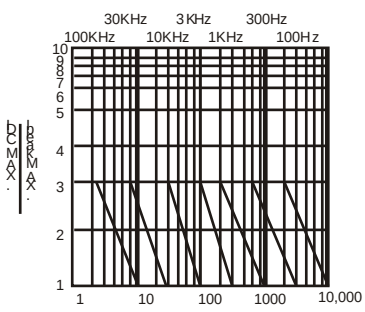
AMBIENT TEMPERATURE Ta(°C)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



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

Packing and weighting