

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

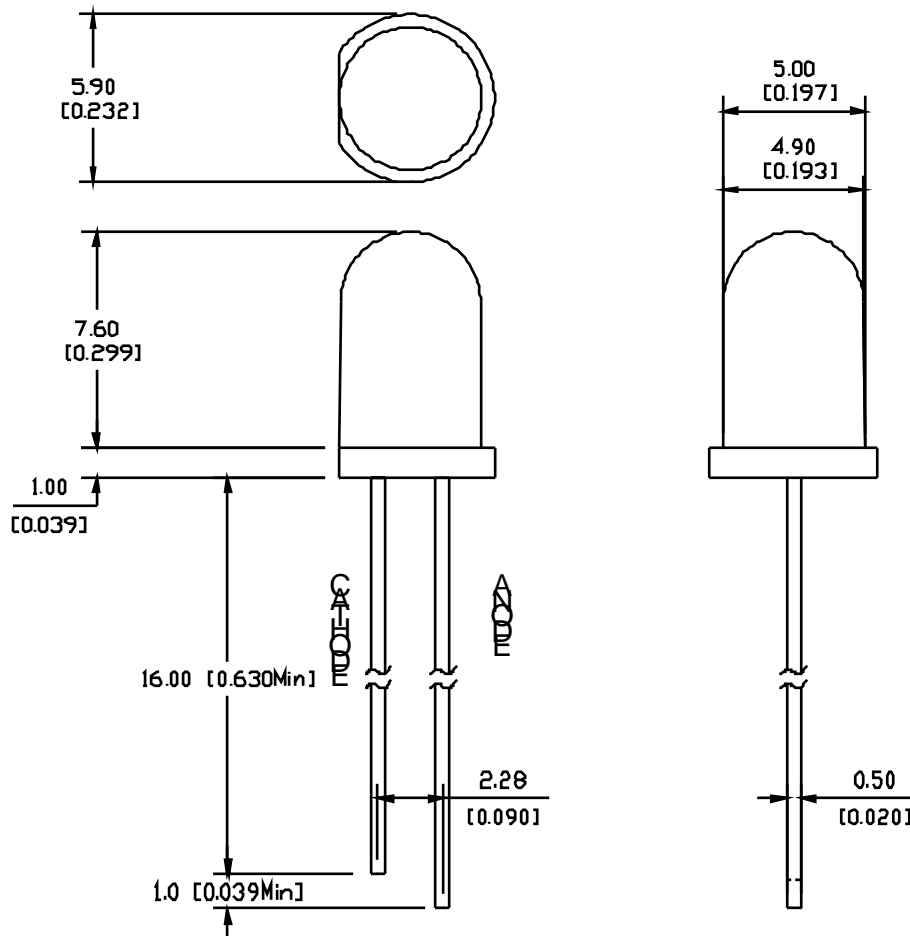
Electronic Optical Characteristics at Ta=25°C

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

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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
- (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) - InGaAlSiC 525nm/Ultra Green



FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



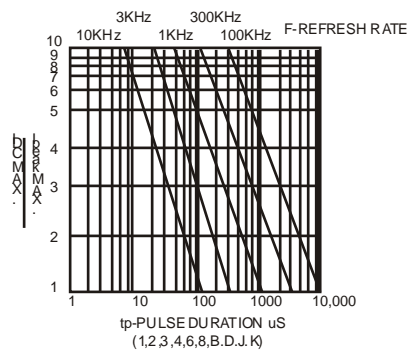
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



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



AMBIENT TEMPERATURE Ta (°C)



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



tp-PULSE DURATION µs
(5)

NOTE:25 free air temperature unless otherwise specified

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Packing and weighting

