

## SILICON PHOTO DIODES

BL-L4802PD

### Features:

- ∅ 5\*3.8\*6.5mm SILICON PHOTO DIODES
- ∅ Choice of various viewing angles.
- ∅ Diffused and Water clear lens are available.
- ∅ Fast response time.
- ∅ High photo sensitivity.
- ∅ Small junction capacitance.
- ∅ The epoxy package itself is an IR filter, spectrally matched to GaAs or GaAlAs IR emitter.



### Applications:

- ∅ High speed photo detector
- ∅ Camera
- ∅ 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

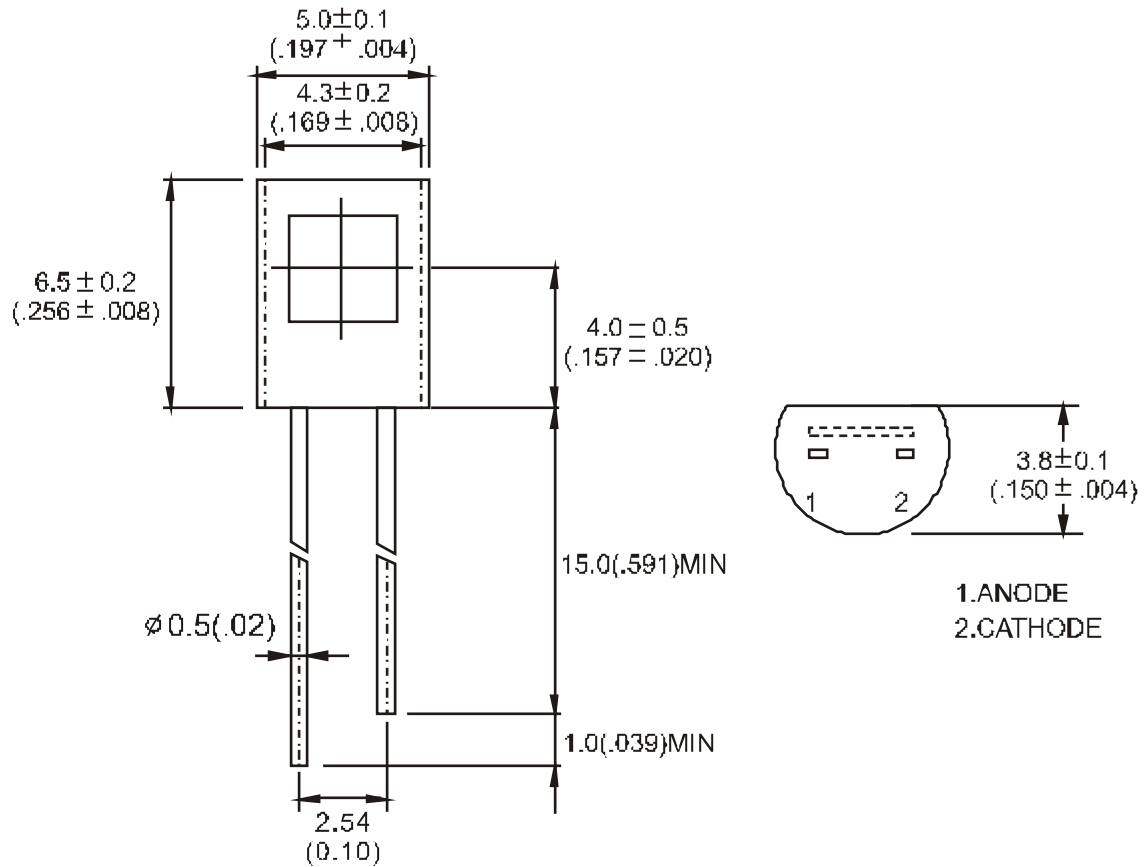
### Electronic Optical Characteristics at Ta=25°C

Items	Symbol	Min.	Typ.	Max.	Unit	Condition
Wavelength of Peak Sensitivity	$\lambda_p$	-	940	-	nm	-
Open Circuit Voltage	$V_{OC}$	-	0.35	-	V	H=5mW/cm <sup>2</sup>
Short Circuit Current	$I_{SC}$	50	75	-	uA	$\lambda_p=940nm$
Reverse Current Light	$I_L$	60	120	-	uA	H=5mW/cm <sup>2</sup> $\lambda_p=940nm$ $V_R=5V$
Reverse Current Dark	$I_D$	-	5	30	nA	H=0mW/cm <sup>2</sup> $V_R=10V$
Reverse Break down Voltage	$V_{BR}$	35	170	-	V	H=0mW/cm <sup>2</sup> $I_R=100uA$
Viewing angle	$2\theta/2$	-	140	-	Deg	
Rise/Fall Time	$T_r/T_f$	-	50/50	-	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.

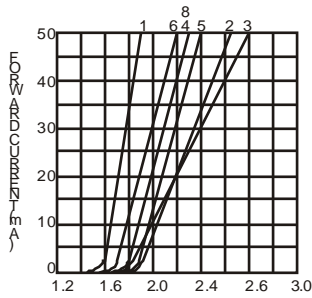
# SILICON PHOTO DIODES

**BL-L4802PD**

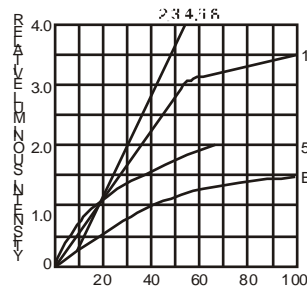
## Typical electrical-optical characteristics curves:



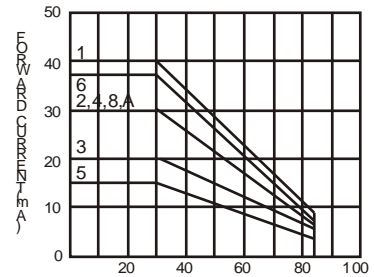
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) - 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



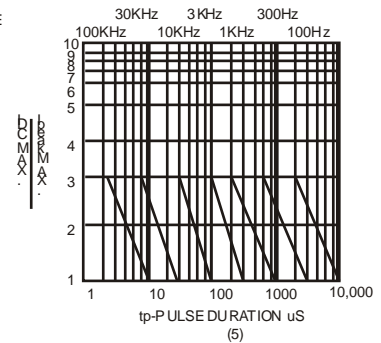
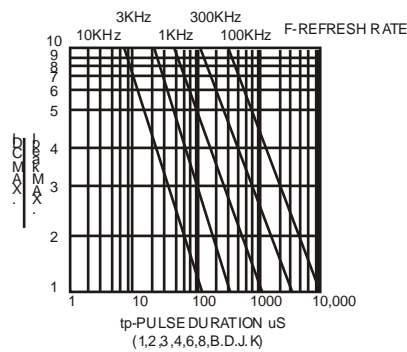
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



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



AMBIENT TEMPERATURE Ta ( °C )



NOTE: 25 free air temperature unless otherwise specified

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Packing and weighting

