

### Features

- Planar Photodiode
- Low capacitance
- Fast switching time
- Low leakage current
- Linear response vs irradiance
- IR Pass Filter
- Multiple dark current ranges available

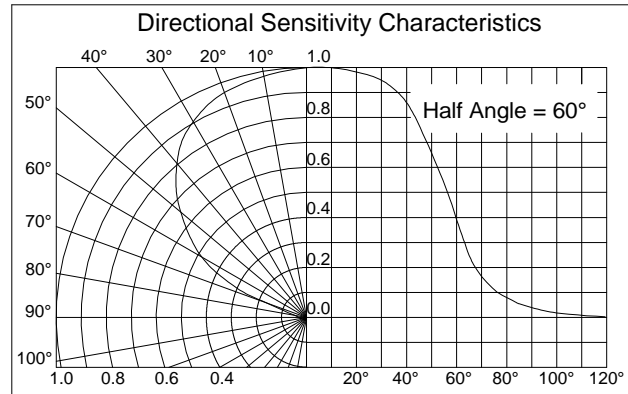
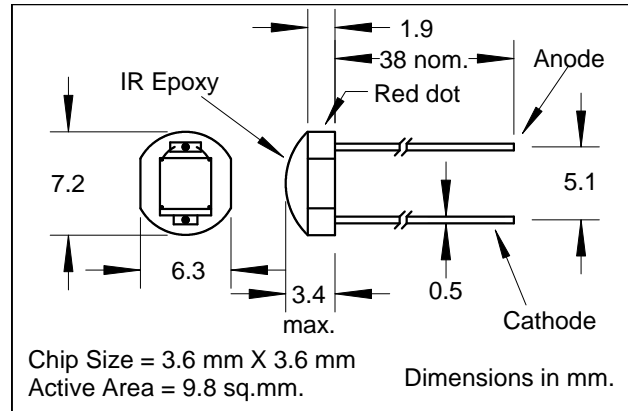
### Description

The planar photodiode is designed to maximize response in the infrared spectrum of received energy. The photodiode is supplied on a ceramic base with an IR transmissive epoxy dome package that rejects visible light wavelengths. Photodiodes may operate in either photovoltaic or reverse bias mode to provide low capacitance with fast switching speed. High sensitivity and low dark current allow use in even low irradiance applications.

### Absolute Maximum Ratings

Storage Temperature	-20°C to +75°C
Operating Temperature	-20°C to +75°C
Soldering Temperature (3)	260°C

- Notes: (1) Ee = source @ 2854°K.  
 (2) Ee = source @  $\lambda = 880 \text{ nm}$   
 (3) >2 mm from case for < 5 sec.



### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	MIN	TYP	MAX	UNITS	TEST CONDITIONS
I <sub>SC</sub>	Short Circuit Current	400	650		μA	V <sub>R</sub> =0V, Ee=25mW/cm <sup>2</sup> (1)
V <sub>OC</sub>	Open Circuit Voltage		0.40		V	Ee=25mw/cm <sup>2</sup> (1)
I <sub>D</sub>	Reverse Dark Current:					
	SLD-70IR2A			100	nA	V <sub>R</sub> =100mV, Ee=0
	SLD-70IR2B			100	nA	V <sub>R</sub> =5V, Ee=0
	SLD-70IR2C			20	nA	V <sub>R</sub> =5V, Ee=0
	SLD-70IR2D			5	nA	V <sub>R</sub> =5V, Ee=0
	SLD-70IR2E			1	nA	V <sub>R</sub> =5V, Ee=0
C <sub>J</sub>	Junction Capacitance		180		pF	V <sub>R</sub> =0, Ee=0, f=1MHz
t <sub>R</sub>	Rise Time		4		μs	V <sub>R</sub> =5V, R <sub>L</sub> =1kΩ (2)
t <sub>F</sub>	Fall Time		6		μs	V <sub>R</sub> =5V, R <sub>L</sub> =1kΩ (2)
TC <sub>I</sub>	Temp. Coef., I <sub>SC</sub>		+0.2		%/°C	(1)
V <sub>BR</sub>	Reverse Breakdown Voltage		50		V	I <sub>R</sub> =100μA
λ <sub>P</sub>	Maximum Sensitivity Wavelength		990		nm	
λ <sub>R</sub>	Sensitivity Spectral Range	700		1100	nm	
θ <sub>1/2</sub>	Acceptance Half Angle		60		deg	(off center-line)

Specifications subject to change without notice.