

### Features

- Low capacitance, fast switching time
- Linear response vs irradiance
- IR blocking filter
- Multiple dark current ranges available

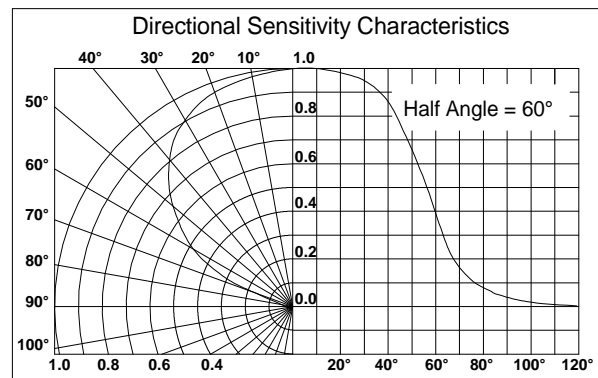
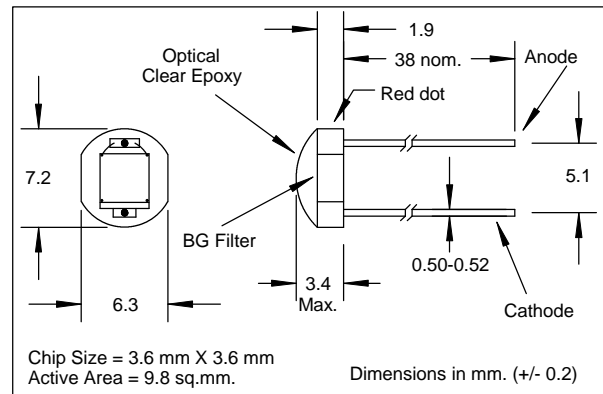
### Description

The planar photodiode is designed to operate in either photoconductive or photovoltaic modes. This diode incorporates a BG filter that rejects infrared wavelengths and approximates the response of the human eye. High sensitivity and low dark current allow use in low irradiance applications. The photodiode measures 3.6 mm X 3.6 mm (0.140" X 0.140") and is supplied on a ceramic base with a clear epoxy dome package.

### Absolute Maximum Ratings

Storage Temperature	-20°C to +85°C
Operating Temperature	-20°C to +85°C
Soldering Temperature (1)	260°C

- Notes: (1) >2 mm from case for < 5 sec.  
 (2) Ee = source @ 2854°K  
 (3) Ee = source @  $\lambda = 580 \text{ nm}$



### 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	40	55		μA	V <sub>R</sub> =0V, Ee=25mW/cm <sup>2</sup> (2)
V <sub>OC</sub>	Open Circuit Voltage		0.40		V	Ee=25mw/cm <sup>2</sup> (2)
I <sub>D</sub>	Reverse Dark Current:					
	SLD-70BG2A			100	nA	V <sub>R</sub> =100mV, Ee=0
	SLD-70BG2B			100	nA	V <sub>R</sub> =5V, Ee=0
	SLD-70BG2C			20	nA	V <sub>R</sub> =5V, Ee=0
	SLD-70BG2D			5	nA	V <sub>R</sub> =5V, Ee=0
	SLD-70BG2E			1	nA	V <sub>R</sub> =5V, Ee=0
C <sub>J</sub>	Junction Capacitance		180		pF	V <sub>R</sub> =0V, Ee=0, f=1MHz
t <sub>R</sub>	Rise Time		4		μs	V <sub>R</sub> =5V, R <sub>L</sub> =1kΩ (3)
t <sub>F</sub>	Fall Time		6		μs	V <sub>R</sub> =5V, R <sub>L</sub> =1kΩ (3)
TC <sub>I</sub>	Temp. Coef., I <sub>SC</sub>		+0.2		%/°C	(2)
V <sub>BR</sub>	Reverse Breakdown Voltage	50			V	I <sub>R</sub> =100μA
λ <sub>P</sub>	Maximum Sensitivity Wavelength		550		nm	
λ <sub>R</sub>	Sensitivity Spectral Range	400		700	nm	
θ <sub>1/2</sub>	Acceptance Half Angle		60		deg	(off center-line)

Specifications subject to change without notice.

103184 REV 0

5200 St. Patrick St., Montreal  
 Que., H4E 4N9, Canada  
 Tel: 514-768-8000  
 Fax: 514-768-8889

The Old Railway, Princes Street  
 Ulverston, Cumbria, LA12 7NQ, UK  
 Tel: 01 229 581 551  
 Fax: 01 229 581 554