



# SLD-68EBG1

## Integral Infrared Rejection Filter Planar Photodiode

### Features

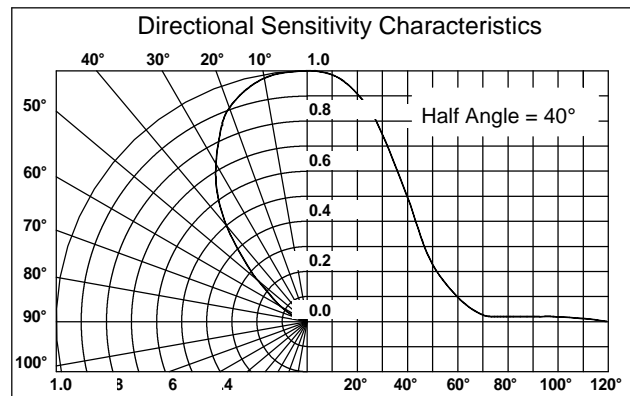
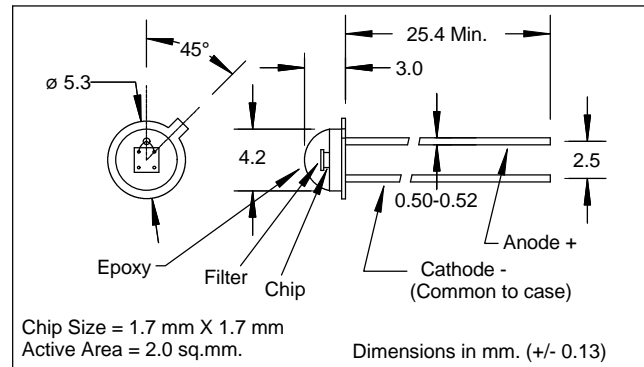
- Planar Photodiode
- Integral IR Rejection Filter
- Low capacitance
- Fast switching time
- Low leakage current
- Linear response vs irradiance
- TO-46 base with epoxy dome lens
- Multiple dark current ranges available

### Description

This planar, passivated silicon photodiode is designed to maximize response in the visible light spectrum of received energy. This diode incorporates a BG filter that rejects infrared wavelengths and approximates the response of the human eye. Photodiodes may operate in either photovoltaic or reverse bias mode to provide low capacitance with fast switching speed. It provides excellent linearity in output signal versus light intensity.

### Absolute Maximum Ratings

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



### 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	7.5	11.0		μA	V <sub>R</sub> =0V, E <sub>e</sub> =25mW/cm <sup>2</sup> (1)
V <sub>OC</sub>	Open Circuit Voltage		0.40		V	E <sub>e</sub> =25mW/cm <sup>2</sup> (1)
I <sub>D</sub>	Reverse Dark Current:					
	SLD-68EBG1A			100	nA	V <sub>R</sub> =100mV, E <sub>e</sub> =0
	SLD-68EBG1B			100	nA	V <sub>R</sub> =5V, E <sub>e</sub> =0
	SLD-68EBG1C			10	nA	V <sub>R</sub> =5V, E <sub>e</sub> =0
	SLD-68EBG1D			1	nA	V <sub>R</sub> =5V, E <sub>e</sub> =0
	SLD-68EBG1E			250	pA	V <sub>R</sub> =5V, E <sub>e</sub> =0
C <sub>J</sub>	Junction Capacitance		40		pF	V <sub>R</sub> =0, E <sub>e</sub> =0, f=1MHz
t <sub>R</sub>	Rise Time		1.0		μs	V <sub>R</sub> =10V, R <sub>L</sub> =1kΩ (2)
t <sub>F</sub>	Fall Time		1.5		μs	V <sub>R</sub> =10V, 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		550		nm	
λ <sub>R</sub>	Sensitivity Spectral Range	400		700	nm	
θ <sub>1/2</sub>	Acceptance Half Angle		40		deg	(off center-line)

Notes: (1) E<sub>e</sub> = light source @ 2854 °K  
(2) E<sub>e</sub> = Light source @ λ = 580 nm  
(3) >2 mm from case for <5 sec.

Specifications subject to change without notice  
102647 REV 2

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