



# SLD-70BG2

## Infrared Rejection Filter Planar Photodiode

### Features

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

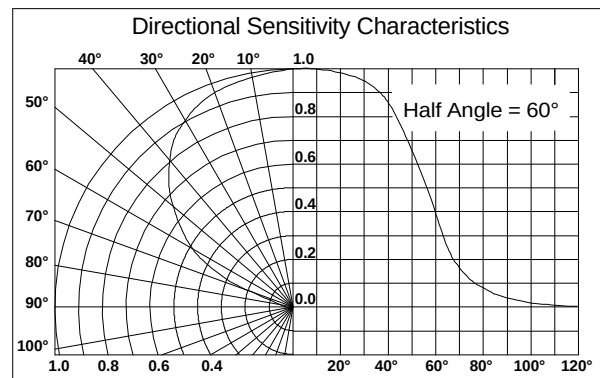
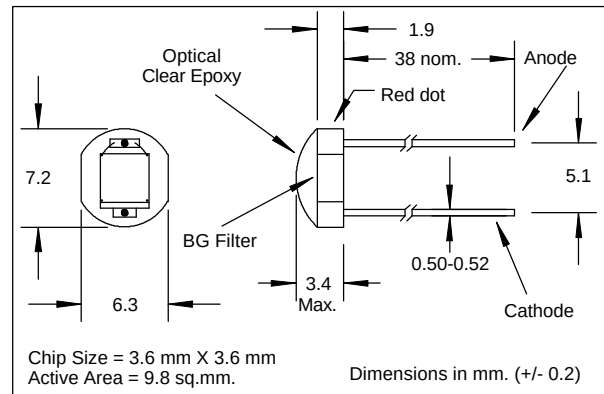
### Description

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 @  $\lambda = 580$  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.

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