

Features

- Low capacitance
- Fast switching time
- Low leakage current
- Linear response vs irradiance
- Hermetic TO-46 package with high dome lens
- Multiple dark current ranges available

Description

This small area planar, passivated silicon photodetector is designed to operate in either photovoltaic or reverse bias mode. It provides excellent linearity in output signal versus irradiance. This is an ideal detector for fast rise time applications.

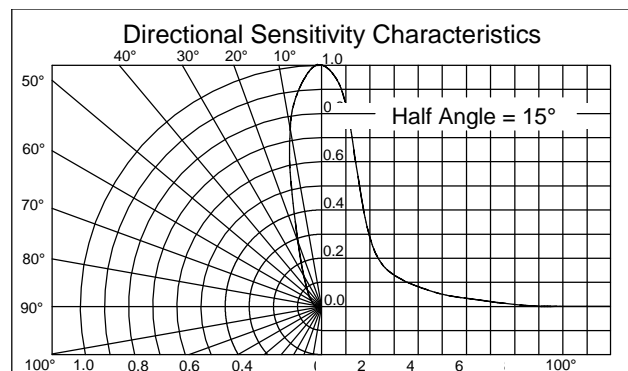
Absolute Maximum Ratings

| | |
|---------------------------|-----------------|
| Storage Temperature | -40°C to +125°C |
| Operating Temperature | -40°C to +125°C |
| Soldering Temperature (1) | 260°C |

Notes: (1) >2 mm from case for <5 sec.

(2) Ee = source @ 2854 °K

(3) Ee = source @ $\lambda = 880 \text{ nm}$



Electrical Characteristics (T_A=25°C unless otherwise noted)

| Symbol | Parameter | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|------------------|--------------------------------|-----|------|------|-------|--|
| I _{SC} | Short Circuit Current | 50 | 70 | | μA | V _R =0V, Ee=5mW/cm ² (2) |
| V _{OC} | Open Circuit Voltage | | 0.40 | | V | Ee=5mW/cm ² (2) |
| I _D | Reverse Dark Current | | | | | |
| | SLD-68HL1A | | | 100 | nA | V _R =100mV, Ee=0 |
| | SLD-68HL1B | | | 100 | nA | V _R =5V, Ee=0 |
| | SLD-68HL1C | | | 10 | nA | V _R =5V, Ee=0 |
| | SLD-68HL1D | | | 1 | nA | V _R =5V, Ee=0 |
| | SLD-68HL1E | | | 250 | pA | V _R =5V, Ee=0 |
| C _J | Junction Capacitance | | 40 | | pF | V _R =0, Ee=0, f=1MHz |
| t _R | Rise Time | | 1.0 | | μs | V _R =10V, R _L =1kΩ (3) |
| t _F | Fall Time | | 1.5 | | μs | V _R =10V, R _L =1kΩ (3) |
| TC _I | Temp. Coef. | | +0.2 | | %/°C | (2) |
| V _{BR} | Reverse Breakdown Voltage | 50 | | | V | I _R =100μA |
| λ _P | Maximum Sensitivity Wavelength | | 930 | | nm | |
| λ _R | Sensitivity Spectral Range | 400 | | 1100 | nm | |
| θ _{1/2} | Acceptance Half Angle | | 15 | | deg | (off center-line) |

Specifications subject to change without notice

101987 REV 2