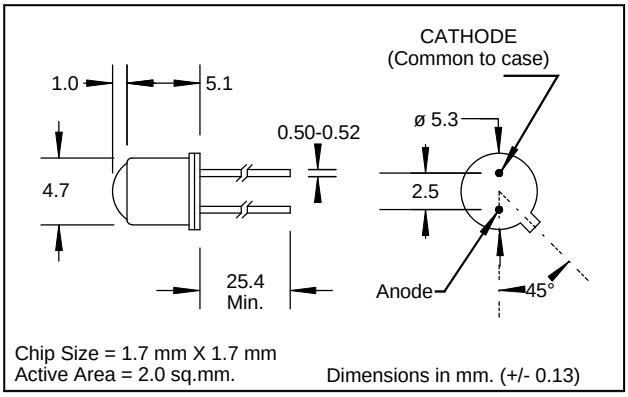
SLD-68HL1

Planar Photodiode

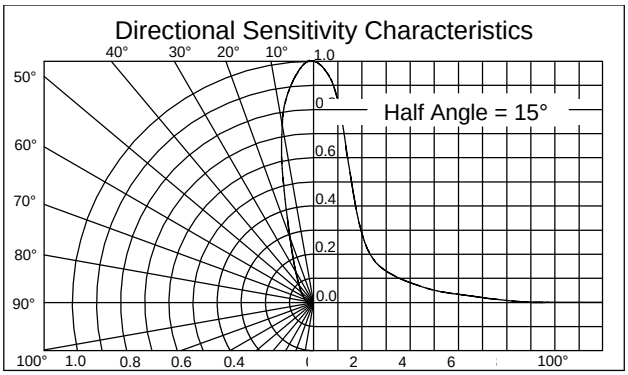
Features

- 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 @ λ = 880 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	
$\theta_{1/2}$	Acceptance Half Angle		15		deg	(off center-line)

Specifications subject to change without notice