

Features

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

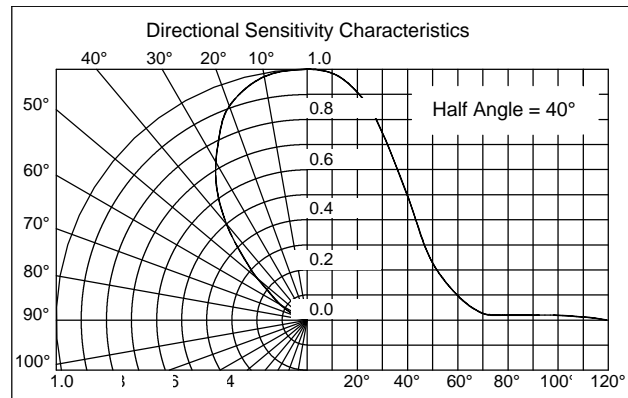
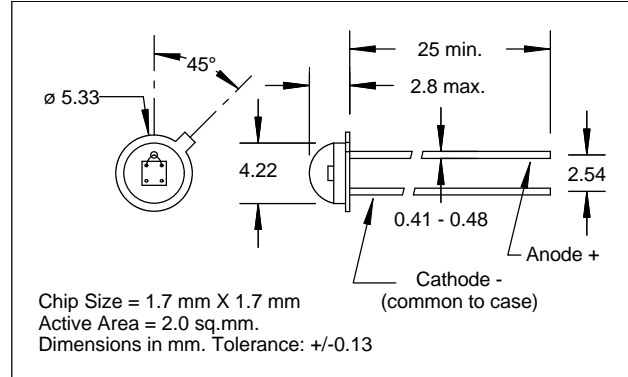
Description

This planar, passivated silicon photodetector is designed to 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. Low dark current and low capacitance make it the ideal detector for fast rise time applications.

Absolute Maximum Ratings

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

- Notes: (1) E_e = light source @ 2854 °K
 (2) E_e = light source @ $\lambda = 880$ nm
 (3) >2 mm from case for <5 sec.



Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	MIN	TYP	MAX	UNITS	TEST CONDITIONS
I_{SC}	Short Circuit Current	150	225		μA	$V_R=0\text{V}$, $E_e=25\text{mW}/\text{cm}^2$ (1)
V_{OC}	Open Circuit Voltage		0.40		V	$E_e=25\text{mW}/\text{cm}^2$ (1)
I_D	Reverse Dark Current:					
	SLD-68E1A			100	nA	$V_R=100\text{mV}$, $E_e=0$
	SLD-68E1B			100	nA	$V_R=5\text{V}$, $E_e=0$
	SLD-68E1C			10	nA	$V_R=5\text{V}$, $E_e=0$
	SLD-68E1D			1	nA	$V_R=5\text{V}$, $E_e=0$
	SLD-68E1E			250	pA	$V_R=5\text{V}$, $E_e=0$
C_J	Junction Capacitance		40		pF	$V_R=0$, $E_e=0$, $f=1\text{MHz}$
t_R	Rise Time		1.0		μs	$V_R=10\text{V}$, $R_L=1\text{k}\Omega$ (2)
t_F	Fall Time		1.5		μs	$V_R=10\text{V}$, $R_L=1\text{k}\Omega$ (2)
TC_I	Temp. Coef., I_{SC}		+0.2		%/°C	(1)
V_{BR}	Reverse Breakdown Voltage	50			V	$I_R=100\mu\text{A}$
λ_P	Maximum Sensitivity Wavelength		930		nm	
λ_R	Sensitivity Spectral Range	400		1100	nm	
$\theta_{1/2}$	Acceptance Half Angle		40		deg	(off center-line)

Specifications subject to change without notice.