

Features

- Planar Photodiode
- Low capacitance
- Fast switching time
- Low leakage current
- Linear response vs irradiance
- Multiple dark current ranges available

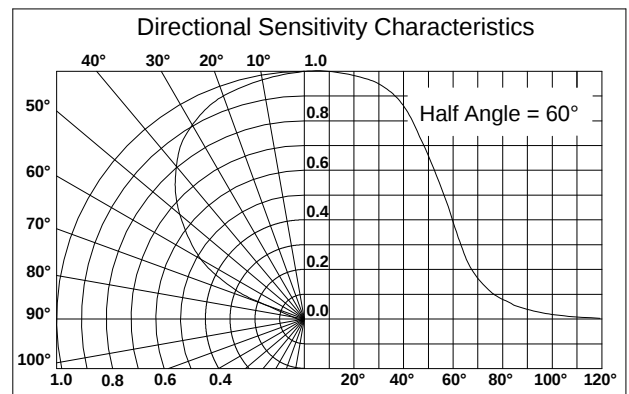
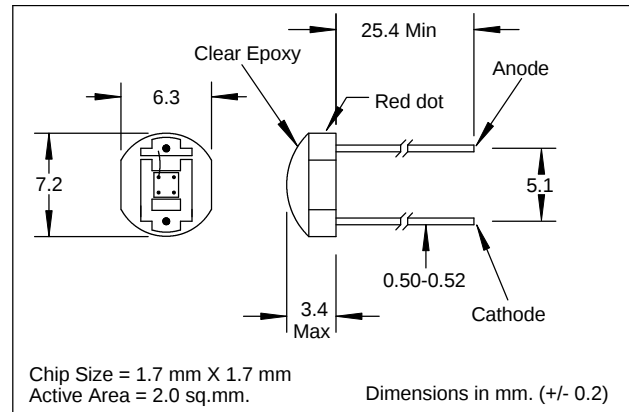
Description

The Silonex SLD-70C1 planar photodiode is designed to operate in either photoconductive or photovoltaic modes. High sensitivity and low dark current allow use in even low irradiance applications. The photodiode is supplied on a ceramic base with a clear epoxy dome package.

Absolute Maximum Ratings

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

Notes: (1) Ee = source @ 2854°K.
 (2) Ee = 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	120	180		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-70C1A			100	nA	$V_R=100\text{mV}$, $E_e=0$
	SLD-70C1B			100	nA	$V_R=5\text{V}$, $E_e=0$
	SLD-70C1C			10	nA	$V_R=5\text{V}$, $E_e=0$
	SLD-70C1D			1	nA	$V_R=5\text{V}$, $E_e=0$
	SLD-70C1E			250	pA	$V_R=5\text{V}$, $E_e=0$
C_J	Junction Capacitance		50		pF	$V_R=0$, $E_e=0$, $f=1\text{MHz}$
t_R	Rise Time		1.0		μs	$V_R=5\text{V}$, $R_L=1\text{k}\Omega$ (2)
t_F	Fall Time		1.5		μs	$V_R=5\text{V}$, $R_L=1\text{k}\Omega$ (2)
TC_I	Temp. Coef., I_{SC}		+0.2		%/ $^\circ\text{C}$	(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		60		deg	(off center-line)

Specifications subject to change without notice.

101421 REV 3