

SLD-70BG2

Eye Response Silicon Photodiode

The SLD-70BG2 planar photodiode incorporates a BG filter that rejects infrared wavelengths and approximates the human eye's response. It can operate in either photoconductive or photovoltaic modes. High sensitivity and low dark current allow the use of this device in low irradiance applications. The photodiode active area is 9.8mm² and is mounted on a ceramic base with a clear epoxy dome package.

This device is available with four different dark currents.

Applications

Photometry

Medical Instrumentation

Analytical Chemistry

Features

Low Capacitance

Fast Switching Time

Linear Response VS Irradiance

IR Blocking Filter

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Reverse Voltage	V_R	-	50	V
Wavelength Range	-	400	700	nm
Operating Temperature	T_{OP}	-20	+85	°C
Storage Temperature	T_{STG}	-20	+85	°C
Package	2-pin ceramic with epoxy glob top			

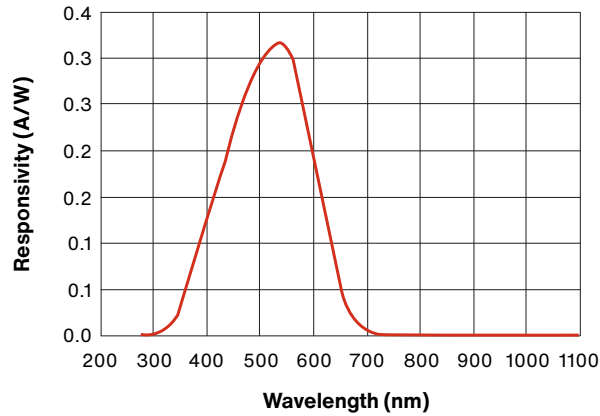
Typical Electro-Optical Specifications at $T_A=23\text{ °C}$

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Short Circuit Current ¹	$V_R=0V, E_e=25mW/cm^2$	I_{SC}	40	55	-	μA
Open Circuit Voltage	$E_e=25mw/cm^2$	V_{OC}	-	0.40	-	V
Junction Capacitance	$V_R=5V, E_e=0, f=1MHz$	C_J	-	180	-	pF
Rise Time ²	$V_R=5V, RL=1K\Omega$	T_R	-	4	-	μs
Fall Time ²	$V_R=5V, RL=1K\Omega$	T_F	-	6	-	μs
Temperature Coefficient	-	α	-	+0.2	-	%/°C
Reverse Breakdown Voltage	$I_R=100\mu A$	V_{BD}	50	-	-	V
Maximum Sensitivity Wavelength	-	λ_{MAX}	-	550	-	nm
Sensitivity Spectral Range	-	λ	400	-	700	nm
Acceptance Half Angle	(off center-line)	$\lambda_{1/2}$	-	60	-	°C
DARK CURRENT						
SLD-70BG2A	$V_R=100mV, E_e=0$	I_D	-	100	-	nA
SLD-70BG2B	$V_R=5V, E_e=0$	I_D	-	100	-	nA
SLD-70BG2C	$V_R=5V, E_e=0$	I_D	-	20	-	nA
SLD-70BG2D	$V_R=5V, E_e=0$	I_D	-	5	-	nA
SLD-70BG2E	$V_R=5V, E_e=0$	I_D	-	1	-	nA

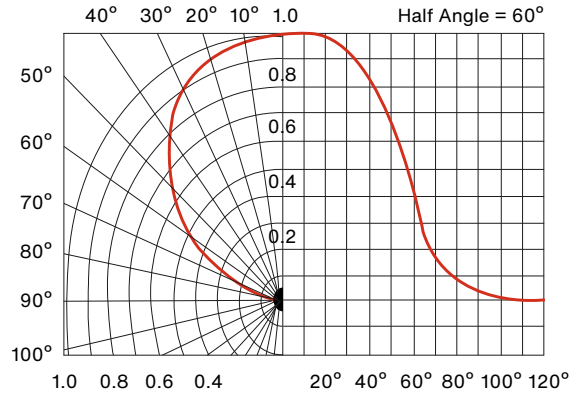
¹ E_e =source @ 2854K

² E_e = source @ $\lambda=580nm$

Spectral Response



Directional Sensitive Characteristics



Mechanical Specifications

Units are in inches [mm]

