

SD197-23-21-041



FEATURES

- Low Noise
- Red Enhanced
- High Shunt Resistance
- High Response

DESCRIPTION

The **SD 197-23-21-041** is a red enhanced quad-cell silicon photodiode used for nulling, centering, or measuring small positional changes packaged in a hermetic TO-8 metal package.

APPLICATIONS

- Position Sensing
- Emitter Alignment
- Medical
- Industrial

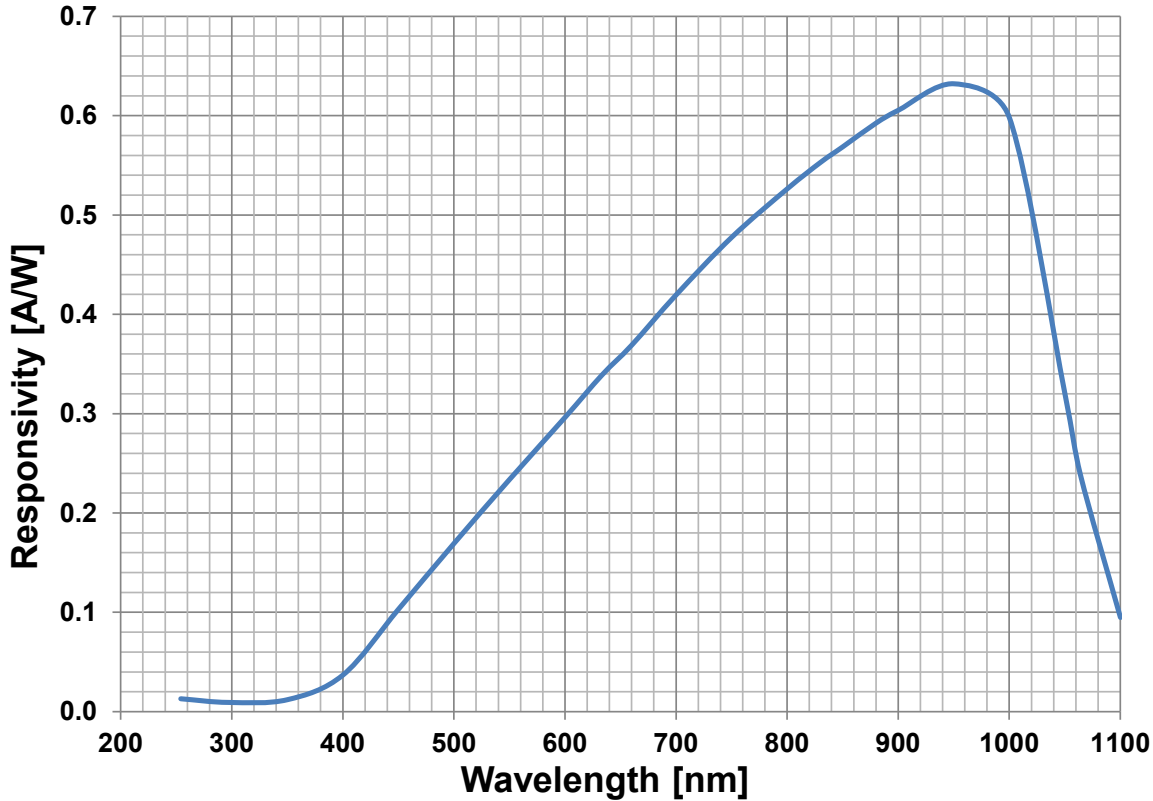
> Absolute Maximum Ratings

Part No.	Wavelength Range [nm]	Reverse Voltage [V]	Operating Temperature [C]	Storage Temperature [C]	Package
SD197-23-21-041	350 to 1100	50	-40 to +125	-55 to +150	TO-8

> Electrical and Optical Characteristics

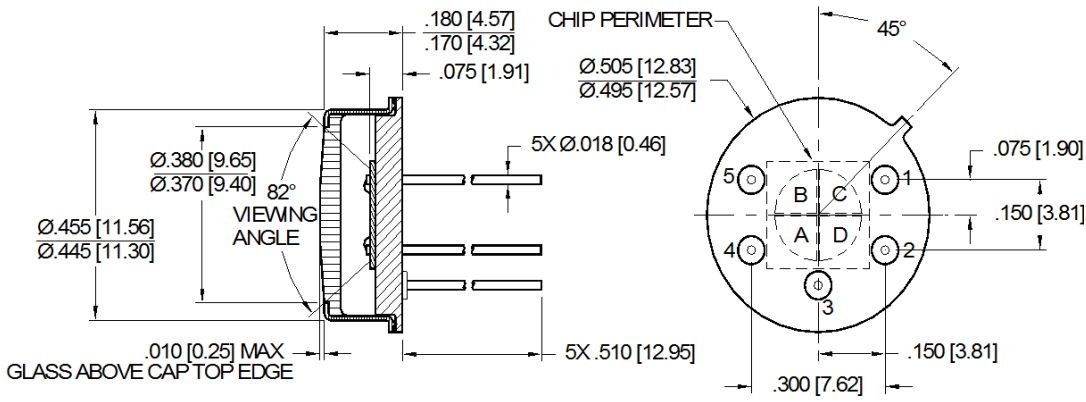
Typical Characteristics (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Dark Current	$V_R=5\text{ V}$	I_D	-	1.4	7.5	nA
Shunt Resistance	$V_R=10\text{ mV}$	R_{SH}	175	-	-	$M\Omega$
Junction Capacitance	$V_R=0\text{V}; f=1\text{ MHz}$	C_J	-	100	-	pF
	$V_R=10\text{V}; f=1\text{ MHz}$		-	20	-	
Responsivity	$\lambda=633\text{nm}, V_R=0\text{ V}$	R	.32	.36	-	A/W
	$\lambda=900\text{nm}, V_R=0\text{ V}$.50	.55	-	
Breakdown Voltage	$I=10\ \mu\text{A}$	VBD	-	50	-	V
Noise Equivalent Power	$V_R=0\text{V} @ \lambda=950\text{nm}$	NEP	-	9×10^{-14}	-	$\text{W}/\sqrt{\text{Hz}}$
Response Time	$R_L=50\ \Omega, V_R=0\text{ V}$	TR	-	320	-	nS
	$R_L=50\ \Omega, V_R=10\text{ V}$		-	10	-	

> Typical Spectral Response

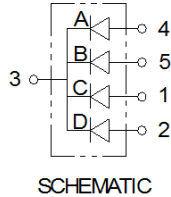
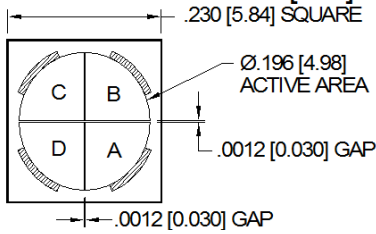


> Package Drawing

PACKAGE DIMENSIONS INCH [mm]



CHIP DIMENSIONS INCH [mm]



TO-8 PACKAGE

>Soldering Conditions: 260°C 1/16 inch away from case for 3 seconds max.

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MATERIALS SAFETY

This product is free of conflict minerals and meets REACH compliance. Please see website for reports.