



FEATURES

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

DESCRIPTION

The **SD225-23-21-040** is a red enhanced quad-cell silicon photodiode used for nulling, centering, or measuring small positional changes packaged in a TO-8 metal package with an opening in the center.

APPLICATIONS

- Emitter Alignment
- Position Sensing
- Medical and Industrial

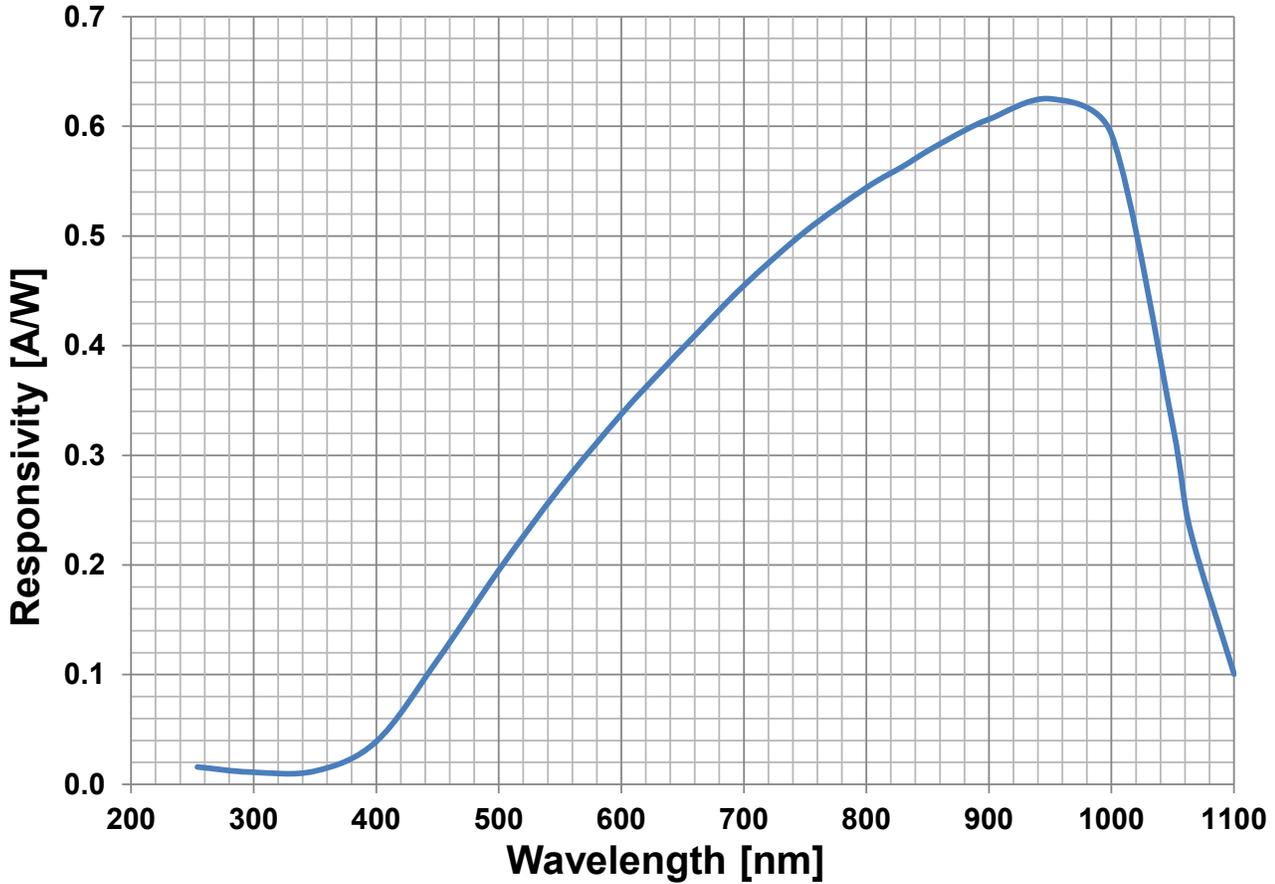
> Absolute Maximum Ratings

Part No.	Wavelength Range [nm]	Reverse Voltage [V]	Operating Temperature [C]	Storage Temperature [C]	Package
SD225-23-21-040	350 to 1100	50	-40 to +125	-55 to +150	TO-8

> Electrical and Optical Characteristics

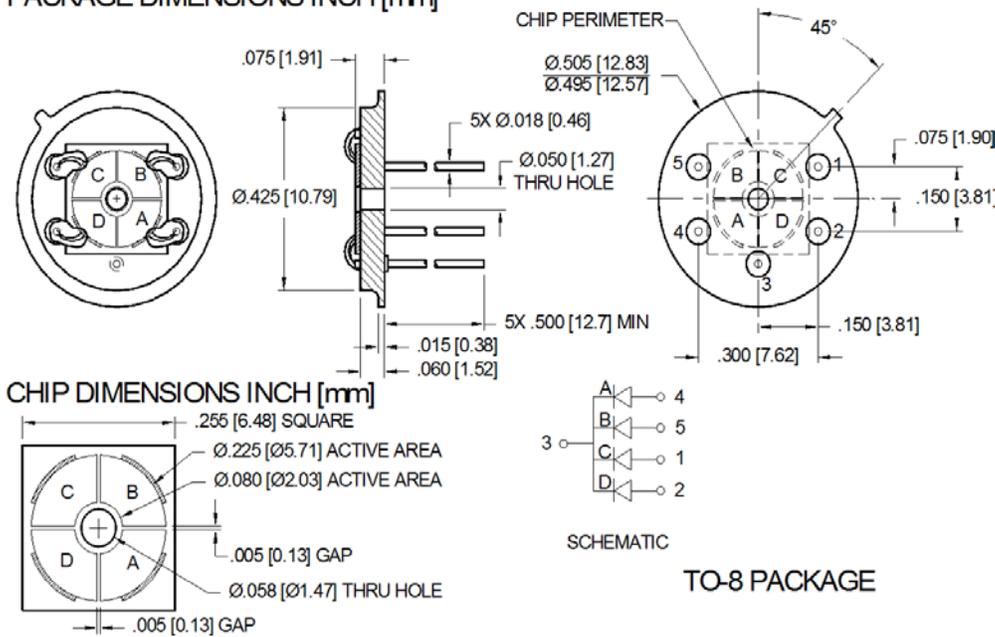
Typical Characteristics per element (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Dark Current	$V_R = 5\text{ V}$	I_D	-	1.2	6.5	nA
Shunt Resistance	$V_R = 10\text{ mV}$	R_{sh}	100	-	-	MΩ
Junction Capacitance	$V_R = 0\text{ V}; f = 1\text{ MHz}$	C_J	-	102	-	pF
	$V_R = 5\text{ V}; f = 1\text{ MHz}$		-	24	-	
Responsivity	$\lambda = 633\text{ nm}, V_R = 0\text{ V}$	R	0.32	0.36	-	A/W
	$\lambda = 900\text{ nm}, V_R = 0\text{ V}$		0.50	0.55	-	
Breakdown Voltage	$I = 10\text{ }\mu\text{A}$	V_{BR}	-	50	-	V
Noise Equivalent Power	$V_R = 0\text{ V} @ \lambda = 950\text{ nm}$	NEP	-	8.5×10^{-14}	-	$\text{W}/\sqrt{\text{Hz}}$
Response Time	$R_L = 50\text{ }\Omega, V_R = 0\text{ V}$	t_r	-	70	-	ns
	$R_L = 50\text{ }\Omega, V_R = 10\text{ V}$		-	5	-	

> Typical Spectral Response



> Package Dimensions

PACKAGE DIMENSIONS INCH [mm]



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MATERIALS SAFETY

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