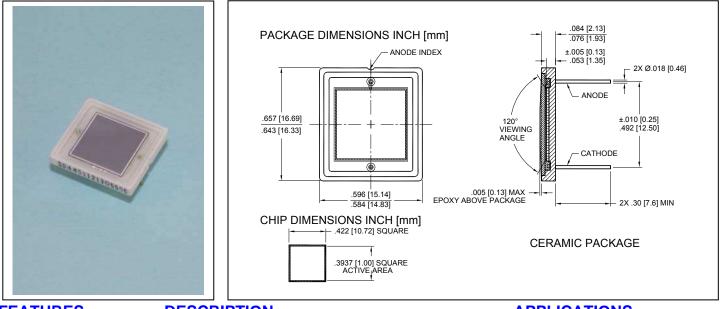


# Red Enhanced Silicon Photodiode SD 445-11-21-305



#### **FEATURES**

- Low noise
- Red enhanced
- · High shunt resistance
- · High response

### **DESCRIPTION**

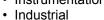
The **SD 445-11-21-305** is a general purpose silicon PIN photodiode, red enhanced, packaged in a leaded hermetic ceramic package.

## **APPLICATIONS**

SPECTRAL RESPONSE

Wavelength (nm)

Instrumentation



Medical

0.70 0.60

**Gamma Construction Gamma Co** 

0.10

250 300 350 400 450 550



600 650 770 8850 9950 000 050 050 1100

### **ABSOLUTE MAXIMUM RATING** (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS	
V <sub>BR</sub>	Reverse Voltage		75	V	
T <sub>STG</sub>	Storage Temperature	-55	+150	°C	
To	Operating Temperature	-20	+75	°C	
Ts	Soldering Temperature*		+240	°C	

\* 1/16 inch from case for 3 seconds max.

## ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	ТҮР	MAX	UNITS
I <sub>D</sub>	Dark Current	$V_R = 5V$		30.0	120.0	nA
R <sub>SH</sub>	Shunt Resistance	V <sub>R</sub> = 10 mV	15			$\mathbf{M}\Omega$
CJ	Junction Capacitance	$V_R = 0V, f = 1 MHz$		1700		рF
		$V_{R} = 10V, f = 1 MHz$		350		
$\lambda$ range	Spectral Application Range	Spot Scan	350		1100	nm
R	Responsivity	$\lambda$ = 633nm, V <sub>R</sub> = 0 V	0.32	0.36		A/W
		$\lambda$ = 900nm, V <sub>R</sub> = 0 V	0.50	0.55		
$V_{BR}$	Breakdown Voltage	I = 10 μA		50		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 5V @ $\lambda$ = 950nm		15 X10 <sup>-14</sup>		W/ $\sqrt{_{\rm Hz}}$
tr	Response Time**	RL = 50 Ω,V <sub>R</sub> = 0 V		190		- nS
		RL = 50 Ω,V <sub>R</sub> = 10 V		13		

\*\*Response time of 10% to 90% is specified at 660nm wavelength light.

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.

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