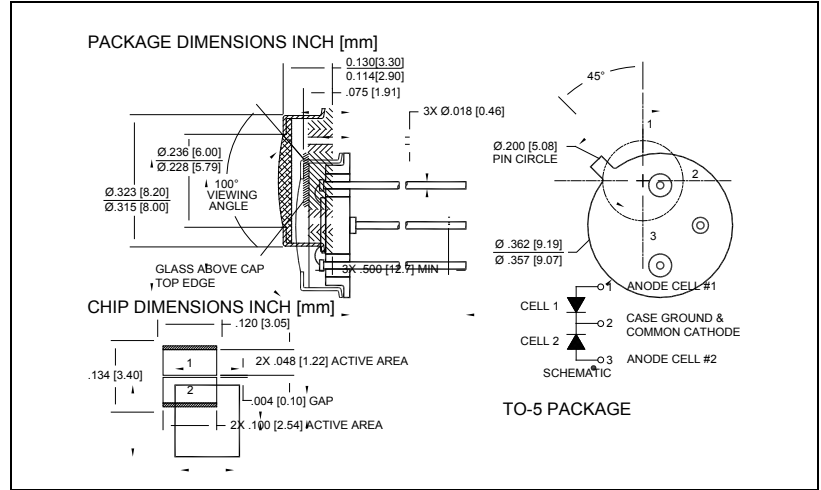


Red Enhanced Bi-Cell Silicon Photodiode
SD 113-24-21-021

Precision – Control – Results



DESCRIPTION

The SD 113-24-21-021 is a red enhanced Bi-Cell silicon photodiode used for nulling, centering, or measuring small positional changes packaged in a hermetic TO-5 metal package.

FEATURES

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

RELIABILITY

This Luna high-reliability device is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test. Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Emitter Alignment
- Position Sensing
- Medical and Industrial

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN	MAX	UNITS	
Reverse Voltage	-	50	V	$T_a = 23^{\circ}\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-50	150	$^{\circ}\text{C}$	-
Operating Temperature	-40	+125	$^{\circ}\text{C}$	-
Soldering Temperature*	-	+240	$^{\circ}\text{C}$	-

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

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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Red Enhanced Bi-Cell Silicon Photodiode
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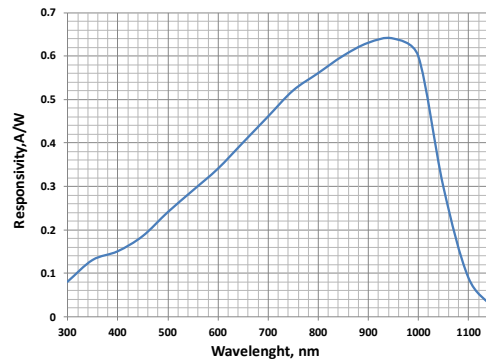
T_a = 23°C UNLESS NOTED OTHERWISE

OPTO-ELECTRICAL PARAMETERS

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V _R = 5 V	-	0.9	5.0	nA
Shunt Resistance	V _R = 10 mV	250	-	-	MΩ
Junction Capacitance	V _R = 0V; f = 1 MHz	-	60	-	pF
	V _R = 10V; f = 1 MHz	-	13	-	
Spectral Application Range	Spot Scan	350	-	1100	nm
Responsivity	λ = 633nm, V _R = 0 V	.32	.36	-	A/W
	λ = 900nm, V _R = 0 V	.50	.55	-	
Breakdown Voltage	I = 10 μA	-	50	-	V
Noise Equivalent Power	V _R = 0V @ I = 950nm	-	2.5x10 ⁻¹⁴	-	W/√Hz
Response Time**	RL = 50 Ω, V _R = 0 V	-	190	-	nS
	RL = 50 Ω, V _R = 10 V	-	13	-	

TYPICAL PERFORMANCE

SPECTRAL RESPONSE



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