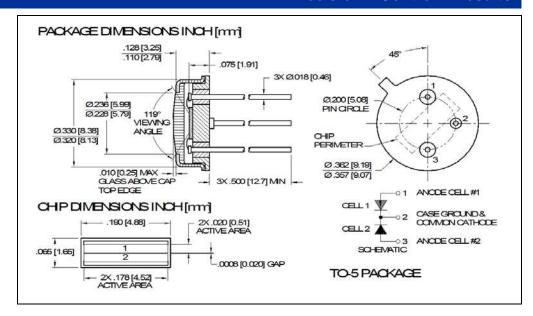


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Precision – Control – Results





DESCRIPTION

The **SD 160-24-21-021** 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.

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

FEATURES

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

APPLICATIONS

- Emitter Alignment
- Position Sensing
- Medical and Industrial



ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN		MAX	UNITS	
Reverse Voltage	-	-	50	V	T _a = 23°C UNLESS OTHERWISE NOTED
Storage Temperature	-55	-	150	°C	-
Operating Temperature	-40	to	+125	°C	-
Soldering Temperature*	-	-	+240	°C	-

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



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OPTO-ELECTRICAL PARAMETERS

T_a = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	ТҮР	MAX	UNITS	
Dark Current	V _R = 5 V	-	0.7	3.5	nA	
Shunt Resistance	V _R = 10 mV	300	-	-	МΩ	
Junction Capacitance	V _R =0V; f = 1 MHz	-	45	-	pF	
	V _R =10V; f = 1 MHz	-	9	-		
Spectral Application Range	Spot Scan	350	-	1100	nm	
Reponsivity	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**	$RL = 50 \Omega, V_R = 0 V$	-	190	-		
	$RL = 50 \Omega, V_R = 10 V$	-	13	-	mS	

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

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

