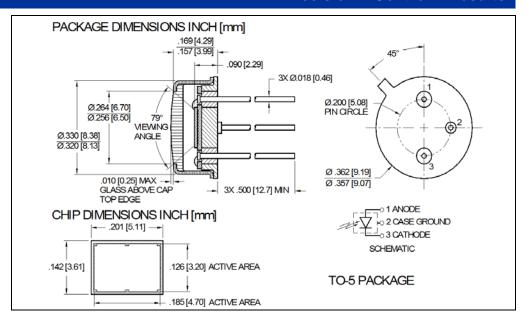


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Precision – Control – Results





DESCRIPTION

The **SD 172-11-21-221** is a general purpose silicon PIN photodiode, red enhanced, packaged in a leaded hermetic TO-8 metal package.

FEATURES

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

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Instrumentation
- Industrial
- Medical



ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN		MAX	UNITS	
Reverse Voltage	-	-	75	V	T _a = 23°C unless noted
Storage Temperature	-55	to	+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	$V_R = 5V$	-	5.0	-20.0	nA	
Shunt Resistance	V _R = 10 mV	100	-	-	MΩ	
Junction Capacitance	$V_R = 0V, f = 1 \text{ MHz}$	-	255	-	pF	
	V _R = 10V, <i>f</i> = 1 MHz	-	53	-		
Spectral Application Range	Spot Scan	350	-	1100	nm	
Responsivity	λ = 633 nm, V_R =0V	0.32	0.36	-	A/W	
	λ= 900nm, V _R =0V	0.50	0.55	-		
Breakdown Voltage	Ι = 10 μΑ	-	50	-	V	
Noise Equivalent Power	V _R = 5V@ λ=950nm	-	7.0x10 ⁻¹⁴	-	W/√ _{Hz}	
Response Time**	$RL = 50\Omega, V_R = 0V$	-	190	-	nC	
	$RL = 50\Omega$, $V_R = 10V$	-	13	-	nS nS	

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

TYPICAL PERFORMANCE

NOISE CURRENT vs. REVERSE BIAS

