



DESCRIPTION

The **SD 172-14-21-021** is a high performance silicon PIN photodiode, red enhanced, packaged in a leaded hermetic TO-5 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	$T_a = 23^{\circ}\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-55	to	+150	$^{\circ}\text{C}$	-
Operating Temperature	-40	to	+125	$^{\circ}\text{C}$	-
Soldering Temperature*	-	-	+240	$^{\circ}\text{C}$	-

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

OPTO-ELECTRICAL PARAMETERS

T_a = 23°C UNLESS OTHERWISE NOTED

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V _R = 5V	-	1.0	5.0	nA
Shunt Resistance	V _R = 10 mV	200	-	-	MΩ
Junction Capacitance	V _R = 0V, f = 1 MHz	-	255	-	pF
	V _R = 5V, f = 1 MHz	-	76	-	
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	I = 10 μA	-	50	-	V
Noise Equivalent Power	V _R = 5V @ λ = 950nm	-	3.0x10 ⁻¹⁴	-	W/√Hz
Response Time**	RL = 50Ω, V _R = 0V	-	190	-	nS
	RL = 50Ω, V _R = 10V	-	13	-	

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

TYPICAL PERFORMANCE

NOISE CURRENT vs. REVERSE BIAS

