



DESCRIPTION

The SD004-151-001 is a high sensitivity, low noise, 0.079 mm² diameter active area InGaAs photodiode sensitive to wavelengths over a standard InGaAs (800-1700nm) spectral range and used for imaging and sensing applications. The photodetector is assembled in a 1206 package.

FEATURES

- Low Noise
- Low Dark Current and Capacitance
- High Sensitivity
- Detection in LWIR

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

- Industrial Sensing
- Security and Defense
- Communication
- Medical

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN	MAX	UNITS		
Reverse Voltage	-	-	40	V	$T_a = 23^\circ\text{C}$ UNLESS NOTED OTHERWISE
Operating Temperature	40	to	+125	$^\circ\text{C}$	-
Storage Temperature	-55	to	+100	$^\circ\text{C}$	-
Soldering Temperature	-	-	+260	$^\circ\text{C}$	-
Wavelength Range	800	to	1700	nm	-

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.

OPTO-ELECTRICAL PARAMETERS

T_a = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Breakdown Voltage	I _{bias} = 1 μA	-	50	-	V
Responsivity	λ = 1310 nm, V _r = 5V	0.9	1.0	-	A/W
Shunt Resistance	V _{bias} = 10 mV	0.2	1.0	-	GΩ
Dark Current	V _{bias} = 5V	-	-	1.0	nA
Capacitance	V _{bias} = 5V; f = 1.0 MHz	-	.75	1.0	pF
Rise Time (50Ω load)	V _{bias} = 5V; λ = 1310 nm	-	1.2	-	ns
Spectral Range		800	-	1700	nm
Noise Equivalent Power	V _r = 5V @ λ = 1310	-	4.0x10 ⁻¹⁵	-	W/Hz ^{1/2}

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

