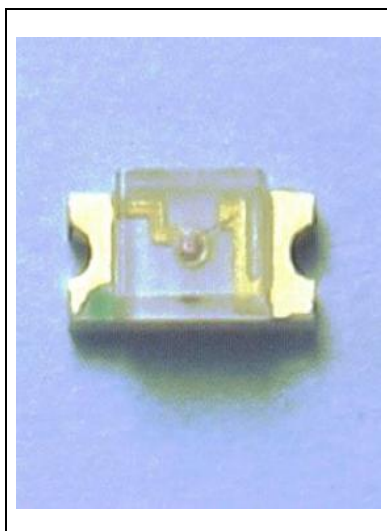
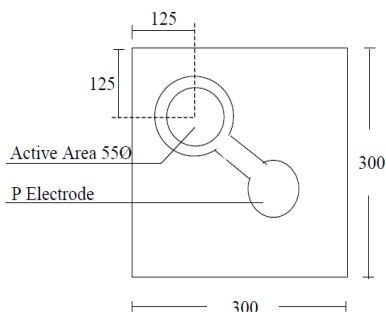
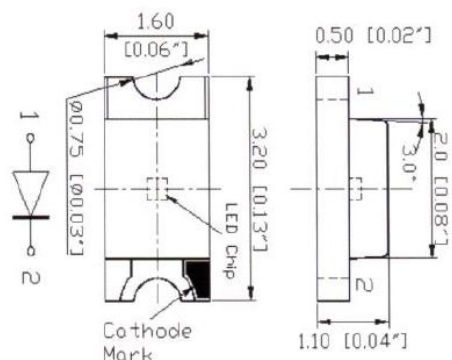




CHIP DIMENSIONS, μm



1206 PACKAGE DIMENSIONS, mm[inch]



DESCRIPTION

The SD002-151-001 is a high sensitivity, low noise, 0.05 mm 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

Contact API for recommendations on specific test conditions and procedures.

APPLICATIONS

- Industrial Sensing
- Security
- Communication
- Medical

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN	MAX	UNITS
Reverse Voltage	-	40	V
Operating Temperature	-40	+125	°C
Storage Temperature	-55	+100	°C
Soldering Temperature	-	+260	°C
Wavelength Range	800	1700	nm

$T_a = 23^\circ\text{C}$ unless noted otherwise

ABSOLUTE MAXIMUM RATINGS

$T_a = 23^\circ\text{C}$ unless noted otherwise

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Breakdown Voltage	$I_{\text{bias}} = 1 \mu\text{A}$	-	50	-	V
Responsivity	$\lambda = 1310 \text{ nm}$, $V_r = 5\text{V}$	0.80	1.0	-	A/W
Shunt Resistance	$V_{\text{bias}} = 10 \text{ mV}$	0.2	1.0	-	$\text{G}\Omega$
Dark Current	$V_{\text{bias}} = 5\text{V}$	-	0.75	1.0	nA
Capacitance	$V_{\text{bias}} = 5\text{V}$; $f = 1.0 \text{ MHz}$	-	10	-	pF
Rise Time (50 Ω load)	$V_{\text{bias}} = 5\text{V}$; $\lambda = 1310 \text{ nm}$	-	1.2	-	ns
Spectral Range	-	800	-	1700	nm
Noise Equivalent Power	$V_r = 5\text{V}$ @ $\lambda = 1310$	-	4.0×10^{-15}	-	$\text{W}/\text{Hz}^{1/2}$

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

