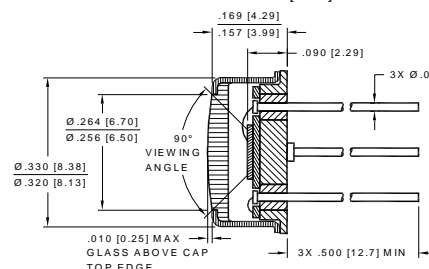
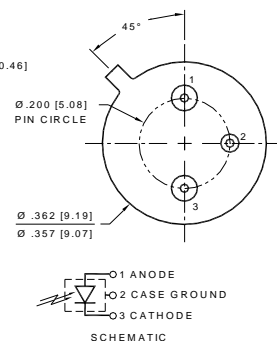
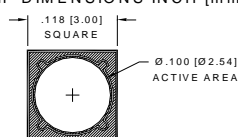




PACKAGE DIMENSIONS INCH [mm]



CHIP DIMENSIONS INCH [mm]



TO-5 PACKAGE

## DESCRIPTION

The **SD 100-13-23-222** is UV enhanced silicon PIN photodiode assembled in a hermetic TO-5 metal package with isolated pins.

## FEATURES

- Low Noise
- High Speed
- High shunt resistance
- High response

## RELIABILITY

This API high-reliability detector is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test. Contact API for recommendations on specific test conditions and procedures.

## APPLICATIONS

- Instrumentation
- Medical
- Industrial

## ABSOLUTE MAXIMUM RATINGS

PARAMETER	MIN	MAX	UNITS
Reverse Voltage	-	50	V
Operating Temperature	-40	+125	°C
Storage Temperature	-55	+150	°C
Soldering Temperature	-	+260	°C

$T_a = 23^\circ\text{C}$   
non condensing

see recommended reflow profile

**OPTO-ELECTRICAL PARAMETERS**

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

CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	$V_R = 5\text{ V}$	-	1	6.5	nA
Shunt Resistance	$V_R = 10\text{ mV}$	200	300	-	$\text{M}\Omega$
Junction Capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$	-	90	-	pF
Junction Capacitance	$V_R = 50\text{ V}, f = 1\text{ MHz}$	-	9	-	pF
Spectral Application Range	Spot Scan	250	-	1100	nm
Responsivity	$\lambda = 365\text{ nm V}, V_R = 0\text{ V}$	0.10	0.18	-	A/W
Breakdown Voltage	$I = 10\text{ }\mu\text{A}$	30	50	-	V
Noise Equivalent Power	$V_R = 0\text{ V} @ I = \text{Peak}$	-	$3 \times 10^{-14}$	-	$\text{W/Hz}^{1/2}$
Response Time	$R_L = 50\text{ }\Omega, V_R = 0\text{ V}$	-	190	-	nS
	$R_L = 50\text{ }\Omega, V_R = 10\text{ V}$	-	13	-	

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**

