



**DESCRIPTION**

The **SD 100-13-23-022** is UV enhanced silicon PIN photodiode assembled in a hermetic TO-5 metal package with the Cathode connected to the case.

**FEATURES**

- Low Noise
- High Speed
- High Shunt Resistance
- High Response

**RELIABILITY**

This Luna 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 Luna for recommendations on specific test conditions and procedures.

**APPLICATIONS**

- Instrumentation
- Industrial
- Medical

**ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN	MAX	UNITS	T <sub>a</sub> = 23°C UNLESS OTHERWISE NOTED	
Reverse Voltage	-	50	V	NON CONDENSING	
Operating Temperature	-40	+125	°C	-	
Storage Temperature	-55	+150	°C	-	
Soldering Temperature*	-	+260	°C	SEE RECOMMENDED REFLOW PROFILE	

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<sub>a</sub> = 23°C unless noted otherwise

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V <sub>R</sub> = 5V	-	1	6.5	nA
Shunt Resistance	V <sub>R</sub> = 10 mV	35	-	-	MΩ
Junction Capacitance	V <sub>R</sub> = 0V, f = 1 MHz	-	90	-	pF
	V <sub>R</sub> = 50V, f = 1 MHz	-	9	-	
Spectral Application Range	Spot Scan	250	-	1100	nm
Responsivity	λ = 365nm V, V <sub>R</sub> = 0V	0.10	0.18	-	A/W
Breakdown Voltage	I = 10 μA	30	50	-	V
Noise Equivalent Power	V <sub>R</sub> = 0V @ λ = Peak	-	3x10 <sup>-14</sup>	-	W/√Hz <sup>1/2</sup>
Response Time	RL = 50Ω, V <sub>R</sub> = 0V	-	190	-	nS
	RL = 50Ω, V <sub>R</sub> = 10V	-	13	-	

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**

