



DESCRIPTION

The **SD 057-11-21-011** is a general purpose silicon PIN photodiode, red enhanced, packaged in a leaded hermetic TO-46 metal package.

FEATURES

- Low Noise
- Red enhanced
- High shunt resistance
- High response

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 Switching
- Medical
- Military

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN	MAX	UNITS	
Reverse Voltage	-	75	V	T _a = 23°C unless noted otherwise
Storage Temperature	-	+150	°C	-
Operating Temperature	-40	+125	°C	-
Soldering Temperature*	-	+240	°C	-

* 1/16 inch from case for 3 seconds max

OPTO-ELECTRICAL PARAMETERS

T_a = 23°C unless noted otherwise

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V _R = 5V	-	0.5	2.0	nA
Shunt Resistance	V _R = 10 mV	800	-	-	MΩ
Junction Capacitance	V _R = 0V, f = 1 MHz	-	28	-	pF
Junction Capacitance	V _R = 10V, f = 1 MHz	-	6	-	pF
Spectral Application Range	Spot Scan	350	-	1100	nm
Responsivity	λ = 633nm, V _R = 0 V	0.32	0.36	-	A/W
Responsivity	λ = 900nm, V _R = 0 V	0.50	0.55	-	A/W
Breakdown Voltage	I = 10 μA	-	50	-	V
Noise Equivalent Power	V _R = 5V @ λ = 950nm	-	2.8x10 ⁻¹⁴	-	W/√Hz
Rise Time (50Ω load)	V _{bias} = 5V; λ = 1310 nm	-	1.2	-	ns
Response Time	RL = 50 Ω, V _R = 0 V	-	190	-	nsec
Response Time**	RL = 50 Ω, V _R = 0 V	-	13	-	nsec

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

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

