



**DESCRIPTION**

The **SD 197-70-72-591** is a cooled large area silicon avalanche photodiode (APD) that provides high gain and low noise, in a hermetic TO-66 package.

**FEATURES**

- Low Noise
- Small Size
- High Speed
- Low Cost

**RELIABILITY**

Contact Luna for recommendations on specific test conditions and procedures.

**APPLICATIONS**

- Military
- Medical
- Industrial

**ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN		MAX	UNITS	
Gain	-	-	350	V	$T_a = 23^\circ\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-55	to	+70	°C	-
Operating Temperature	+1	to	+40	°C	-
Soldering Temperature*	-	to	+240	°C	-
TEC voltage	-	-	1.5	V	-
TEC Current	-	to	2.0	A	-
APD Die Power Diss.	-	-	0.2	W	-

\* 1/16 inch from case for 3 seconds max.

**OPTO-ELECTRICAL PARAMETERS**

T<sub>a</sub> = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	-	-	10	25	nA
Junction Capacitance	f=1 MHz	-	25	-	pF
Noise Current Spectral Density	f=1 kHz	-	0.8	1.5	pA/√Hz
Spectral Application Range	Spot Scan	350	-	1050	nm
Responsivity	λ = 500nm, V <sub>R</sub> = 0 V	-	95	-	A/W
Operating Voltage	-	1700	-	2000	V
Response Time**	RL = 50 Ω, λ = 675nm	-	10	15	nS
TEC Quiescent Current	Case Temp = 35° C	-	.85	-	A

\*\*Response time of 10% to 90% is specified at 830nm wavelength light.

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**

