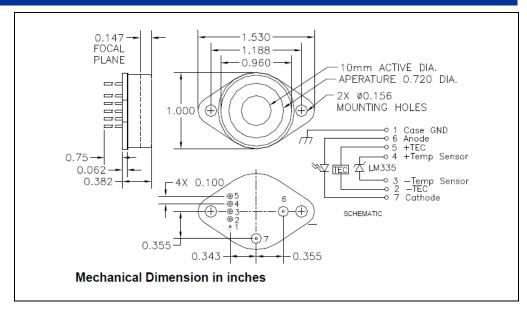


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Precision – Control – Results





DESCRIPTION

The **SD 394-70-74-591** is a cooled large area silicon avalanche photodiode (APD) that provides high gain and low noise, in a hermetic TO-3 package.

FEATURES

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

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Industrial
- Medical
- Military

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN		MAX	UNITS		
Gain	-	-	350	-	T _a = 23°C UNLESS OTHERWISE NOTED	
Storage Temperature	-55	to	+70	°C	-	
Operating Temperature	+1	to	+40	°C	-	
Soldering Temperature*	-	-	+240	°C	-	
TEC Voltage	-	-	4.3	V	-	
TEC Current	-	-	2.0	Α	-	
APD Die Power Diss.	-	-	0.2	W	-	

^{* 1/16} inch from case for 3 seconds max

Page 1/2



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OPTO-ELECTRICAL PARAMETERS

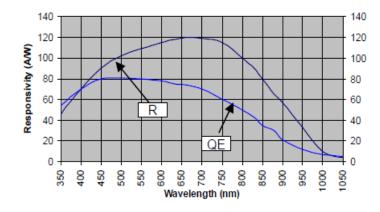
T_a = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	ONDITIONS MIN		MAX	UNITS	
Dark Current	-	-	15	35	nA	
Junction Capacitance	f = 1 MHz	-	50	-	pF	
Noise Current Spectral Density	f = 100 kHz	-	1.5	2.5	pA/√Hz	
Spectral Application Range	Spot Scan	350	-	1050	nm	
Responsivity	$\lambda = 500 \text{ nm}, V_R = 0 \text{ V}$	-	35	-	A/W	
Operating Voltage	-	1700	-	2000	V	
Response Time**	RL = 50Ω , $\lambda = 675$ nm	-	12	18	nS	
TEC Quiescent Current	Case Temp = 35°C	-	0.95	-	А	

^{**}Response time of 10% to 90% is specified at 675nm wavelength light.

TYPICAL PERFORMANCE

DIRECTIONAL SENSITIVITY



All specifications are with the APD internally cooled to 0°C and a gain of 300.