

### FEATURES

- Low noise
- High gain
- High Speed

### DESCRIPTION

The **SD 630-70-72-500** is a non-cooled large area red enhanced silicon avalanche photodiode (APD) with high gain and low noise in a SHV package.

### APPLICATIONS

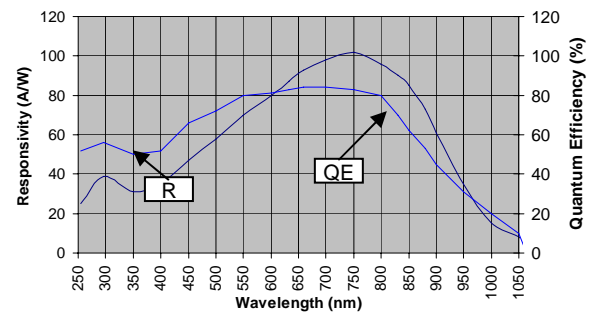
- Instrumentation
- Medical

### ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
M	Gain		250	
T <sub>STG</sub>	Storage Temperature	-55	+70	°C
T <sub>O</sub>	Operating Temperature	-55	+40	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C

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

### SPECTRAL RESPONSE M = 200



### ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C and Gain of 200 UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>D</sub>	Dark Current			280	600	nA
C <sub>J</sub>	Junction Capacitance	f = 1 MHz		130		pF
I <sub>N</sub>	Noise Current Spectral Density	f = 100 kHz		2.5	5.5	pA/√Hz
λ range	Spectral Application Range	Spot Scan	300		1000	nm
R	Responsivity	λ = 750 nm, V <sub>R</sub> = 0 V		100		A/W
V <sub>op</sub>	Operating voltage		1700		2000	V
T <sub>VBR</sub>	Temp. Coeff. Breakdown voltage	Constant Gain = 200		2		V
t <sub>r</sub>	Response Time*	RL = 50 Ω, λ = 675nm		15	22	nS

\*Response time of 10% to 90% is specified at 675nm wavelength light.  
Each part is supplied with gain bias voltages and dark current data.

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