

DESCRIPTION

The SD 444-42-21-231 is a red enhanced detector/amplifier that combines a silicon photodiode with an opamp without a feedback network, Packaged in a hermetic metal can package.

FEATURES

- Low Noise
- Red Enhanced
- Custom Feedback
- Large Area

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Instrumentation
- Medical
- Industrial



ABSOLUTE MAXIMUM RATINGS

T_a = 23°C UNLESS OTHERWISE NOTED

SYMBOL	MIN	TYPE	MAX	UNITS
Voltage Supplies	±5	±15	±18	V
Input Offset Voltage	-	1	2	mV
Input Voltage Noise @ f=10KHz	-	12	-	nV/√Hz
Input Bias Current	-	15	40	pA
Input Current Noise @ f=10KHz	-	20	30	fA/√Hz
Gain Bandwidth Product	-	18	-	MHz
Supply Current	-	6.5	7	mA
Storage Temperature	-65	-	+125	°C
Operating Temperature	-40	-	-85	°C

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.

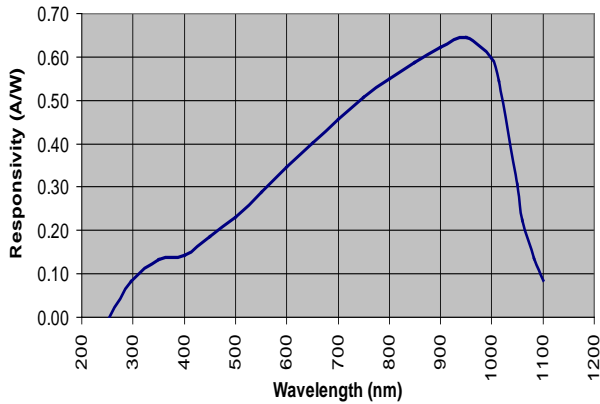
OPTO-ELECTRICAL PARAMETERS

$T_a = 23^\circ\text{C}$ UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	$V_R = 10\text{ V}$	-	-	150	nA
Shunt Resistance	$V_R = 0\text{ V}$	15	-	-	$M\Omega$
Junction Capacitance	$V_R = 0\text{V}; f = 1\text{ MHz}$	-	1700	-	pF
	$V_R = 10\text{V}; f = 1\text{ MHz}$	-	340	-	
Spectral Application Range	Spot Scan	250	-	1100	nm
Responsivity	$\lambda = 940\text{nm}, V_R = 0\text{ V}$	-	.55	-	-

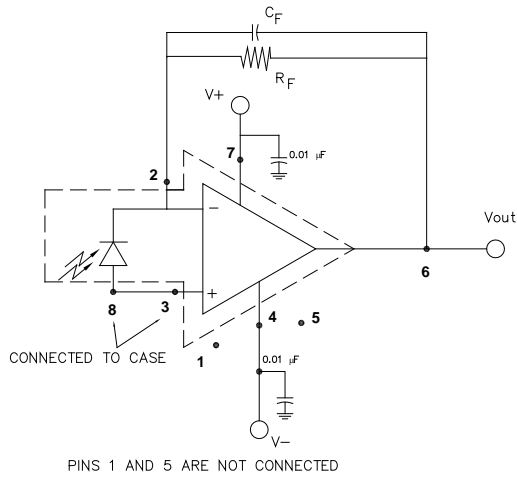
TYPICAL PERFORMANCE

SPECTRAL RESPONSE



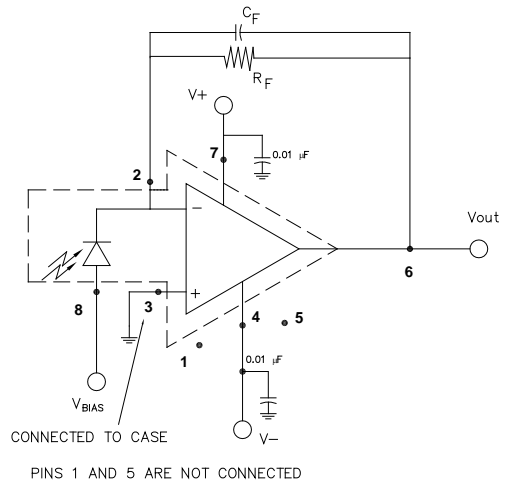
SCHEMATIC AND CONNECTION DIAGRAM

PHOTOVOLTAIC MODE



Note: Components shown outside the dashed area are external to the device, and must be supplied by the user.

PHOTOCONDUCTIVE MODE



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