

### FEATURES

- Low noise
- Red enhanced
- Custom feedback
- Large area

### 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.

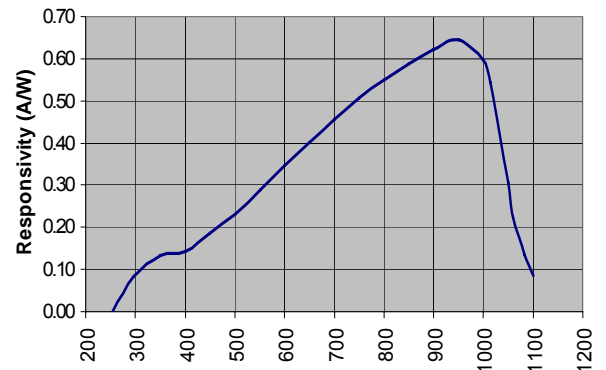
### APPLICATIONS

- Instrumentation
- Industrial
- Medical

### AMPLIFIER SPECIFICATIONS (TA) = 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V <sub>s</sub>	Voltage Supplies	± 5	± 15	± 18	V
V <sub>io</sub>	Input Offset Voltage		1	2	mV
V <sub>n</sub>	Input Voltage Noise @ f = 10KHz		12		nV/√Hz
I <sub>ib</sub>	Input Bias Current		15	40	pA
I <sub>io</sub>	Input Offset Current		20	30	pA
I <sub>n</sub>	Input Current Noise @ f = 10KHz		20	30	fA/√Hz
GBP	Gain Bandwidth Product		18		MHz
I <sub>s</sub>	Supply Current		6.5	7	mA
T <sub>STG</sub>	Storage Temperature	-65		+125	°C
T <sub>O</sub>	Operating Temperature	-40		+85	°C

### SPECTRAL RESPONSE



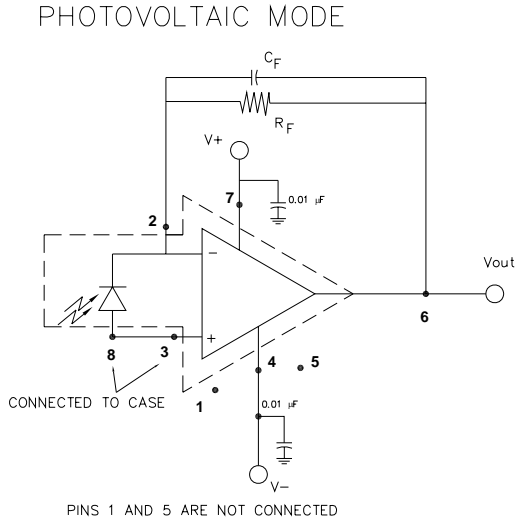
### DETECTOR SPECIFICATIONS (TA) = 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>D</sub>	Dark Current	V <sub>R</sub> = 10 V			150	nA
R <sub>SH</sub>	Shunt Resistance	V <sub>R</sub> = 0 V	15			MΩ
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0 V, f = 1 MHz		1700		pF
		V <sub>R</sub> = 10 V, f = 1 MHz		340		
λ <sub>range</sub>	Spectral Application Range	Spot Scan	250		1100	nm
R	Responsivity	λ = 940 nm, V <sub>R</sub> = 0 V		0.55		

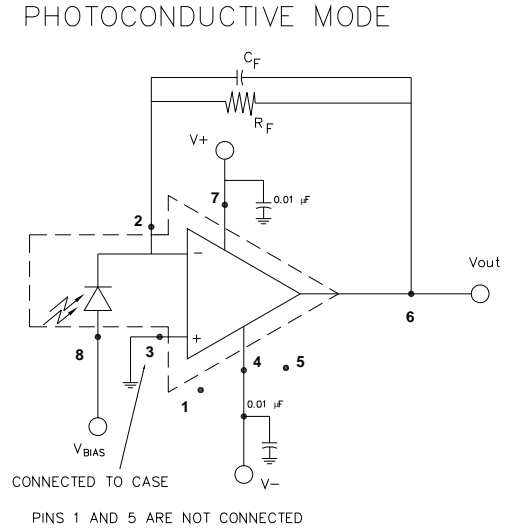
# Detector/Amplifier Hybrids Without Feedback Resistor

## SD 444-41-21-261

### SCHMATIC AND CONNECTION DIAGRAM



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



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

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.