

### 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.

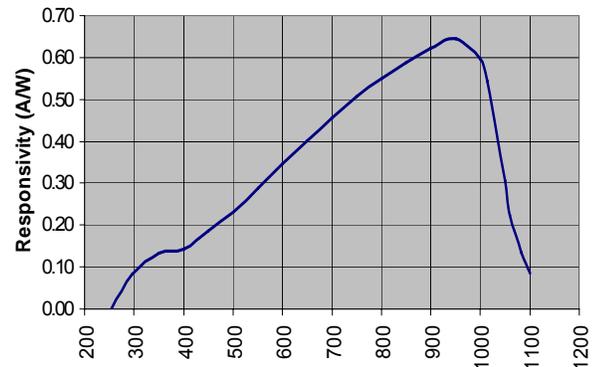
### APPLICATIONS

- 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



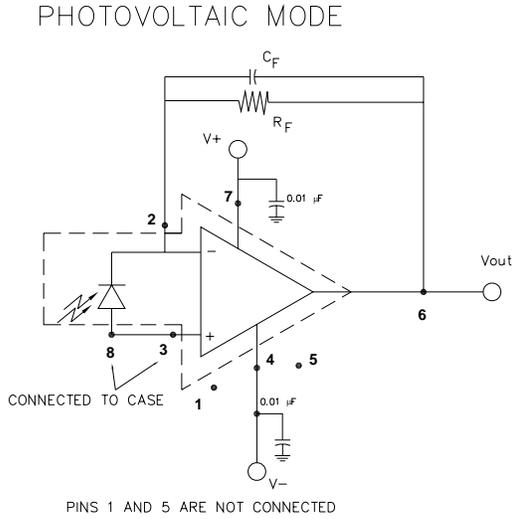
### DETECTOR SPECIFICATIONS (TA)= 23°C UNLESS OTHERWISE NOTED

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		

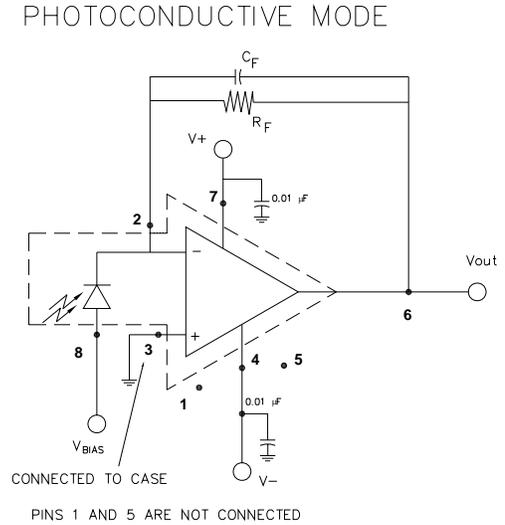
# Detector/Amplifier Hybrids Without Feedback Resistor

## 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.



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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.