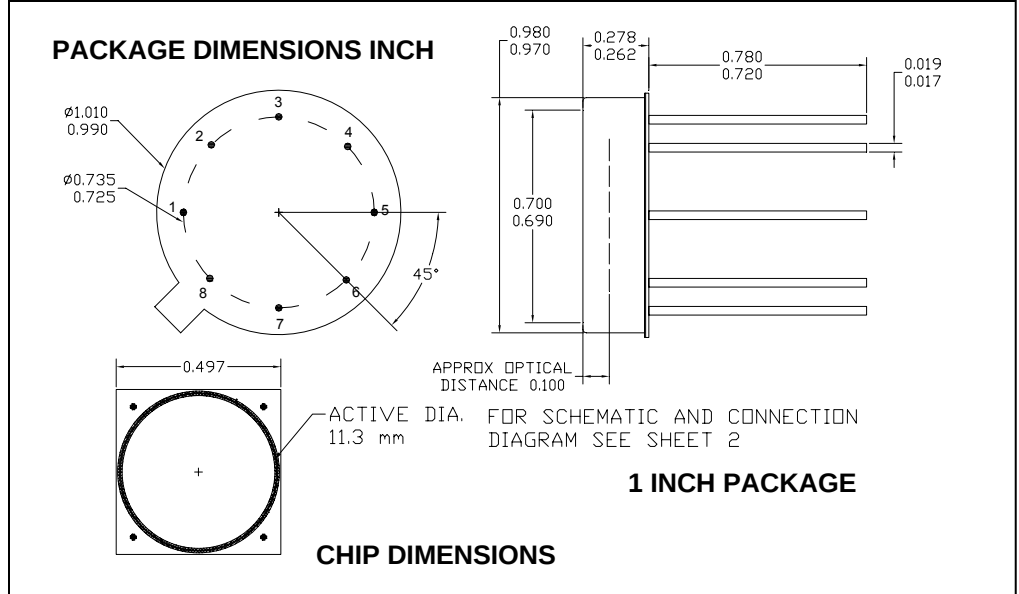
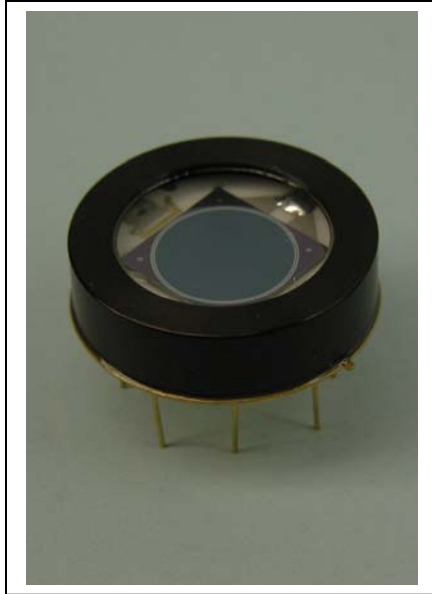




FEATURES

- 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.

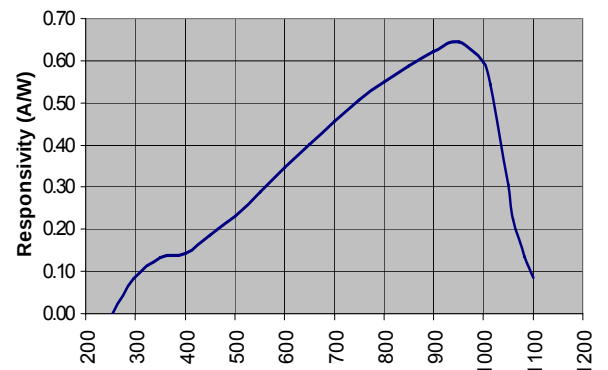
APPLICATIONS

- Instrumentation
- Industrial
- Medical

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_s	Voltage Supplies	± 5	± 15	± 18	V
V_{io}	Input Offset Voltage		1	2	mV
V_n	Input Voltage Noise @ $f = 10\text{KHz}$		12		nV/ $\sqrt{\text{Hz}}$
I_{ib}	Input Bias Current		15	40	pA
I_{io}	Input Offset Current		20	30	pA
I_n	Input Current Noise @ $f = 10\text{KHz}$		20	30	fA/ $\sqrt{\text{Hz}}$
GBP	Gain Bandwidth Product		18		MHz
I_s	Supply Current		6.5	7	mA
T_{STG}	Storage Temperature	-65		+125	°C
T_O	Operating Temperature	-40		+85	°C

SPECTRAL RESPONSE



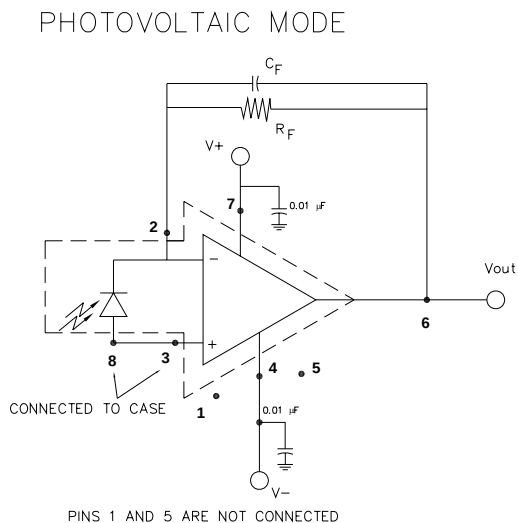
DETECTOR SPECIFICATIONS (TA) = 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_D	Dark Current	$V_R = 10\text{ V}$			150	nA
R_{SH}	Shunt Resistance	$V_R = 0\text{ V}$	15			M Ω
C_J	Junction Capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$		1700		pF
		$V_R = 10\text{ V}, f = 1\text{ MHz}$		340		
λ_{range}	Spectral Application Range	Spot Scan	250		1100	nm
R	Responsivity	$\lambda = 940\text{ nm}, V_R = 0\text{ V}$		0.55		

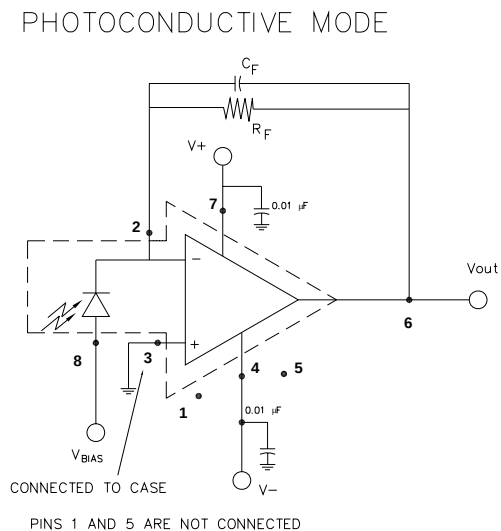
Detector/Amplifier Hybrids Without Feedback Resistor

SD 444-41-21-261

SCHEMATIC 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.