

FEATURES

- Low noise
- UV enhanced
- Custom feedback
- High speed

DESCRIPTION

The **SD 444-42-23-262** is a UV enhanced detector/amplifier that combines a silicon photodiode with an opamp without a feedback network, packaged in a hermetic metal can package.

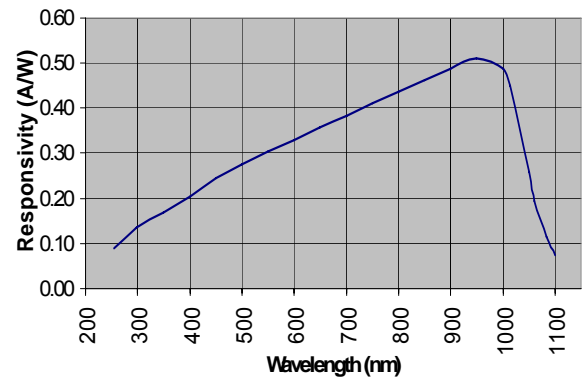
APPLICATIONS

- 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 = 10KHz		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 = 10KHz		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



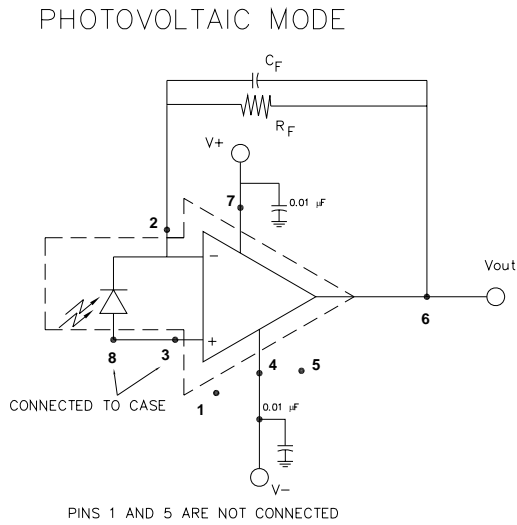
DETECTOR SPECIFICATIONS (TA) = 23°C UNLESS OTHERWISE NOTED

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			$M\Omega$
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	$\lambda = 365 \text{ nm}, V_R = 0 \text{ V}$		0.15		

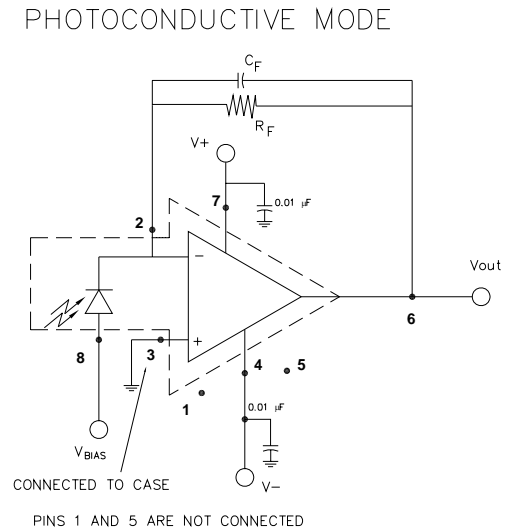
Detector/Amplifier Hybrids Without Feedback Resistor

SD 444-43-23-262

SCHEMATIC 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.

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