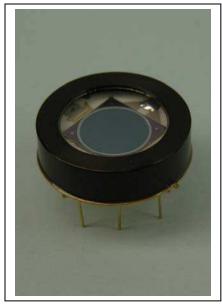
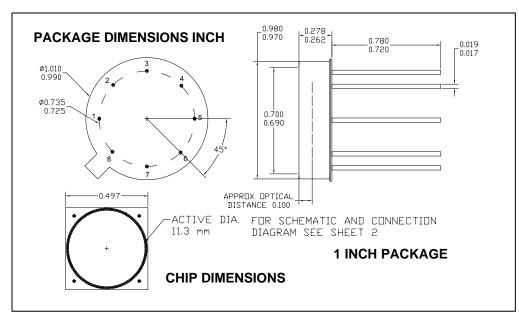


# Detector/Amplifier Hybrids Without Feedback Resistor BLUE ENHANCED SD 444-42-22-261





## **FEATURES**

- · Low noise
- Blue enhanced
- · Custom feedback
- High speed

# **DESCRIPTION**

The **SD 444-42-22-261** is a detector/amplifier hybrid that combines a silicon photodiode with an opamp without the feedback resistor and capacitor, available in a hermetic metal can package.

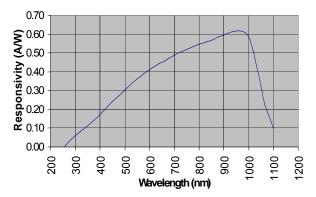
## **APPLICATIONS**

- Instrumentation
- Industrial
- Medical

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

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

## **SPECTRAL RESPONSE**



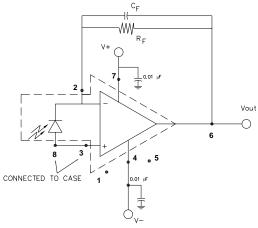
# **DETECTOR SPECIFICATIONS** (TA)= 23°C UNLESS OTHERWISE NOTED

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			$\mathbf{M}\Omega$
СЈ	Junction Capacitance	$V_R = 0 V$ , $f = 1 MHz$		1700		- pF
		$V_R = 10 \text{ V}, \ f = 1 \text{ MHz}$		340		
$\lambda$ range	Spectral Application Range	Spot Scan	250		1100	nm
R	Responsivity	$\lambda$ = 450 nm, $V_R$ = 0 $V$		0.28		

# SD 444-42-22-261

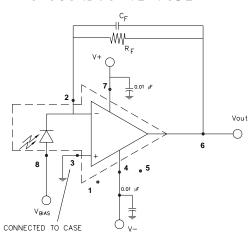
#### **SCHEMATIC AND CONNECTION DIAGRAM**

#### PHOTOVOLTAIC MODE



PINS 1 AND 5 ARE NOT CONNECTED

#### PHOTOCONDUCTIVE MODE



PINS 1 AND 5 ARE NOT CONNECTED

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.