

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.

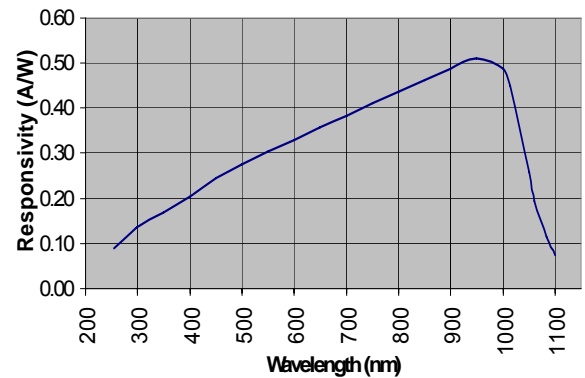
APPLICATIONS

- 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/√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/√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



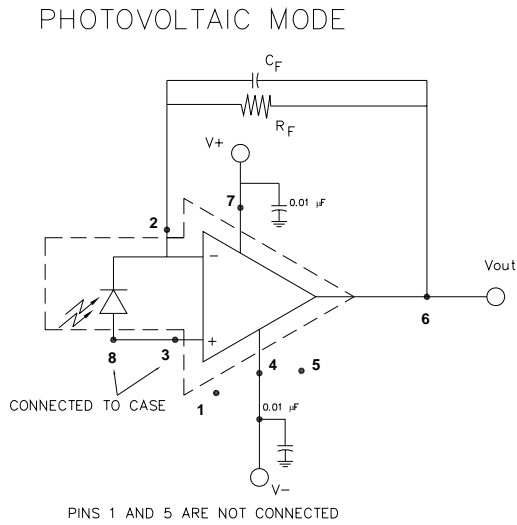
DETECTOR SPECIFICATIONS (TA)= 23°C UNLESS OTHERWISE NOTED

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|-----------------|----------------------------|----------------------------------|-----|------|------|-------|
| I _D | Dark Current | V _R = 10 V | | | 150 | nA |
| R _{SH} | Shunt Resistance | V _R = 0 V | 15 | | | MΩ |
| C _J | Junction Capacitance | V _R = 0 V, f = 1 MHz | | 1700 | | pF |
| | | V _R = 10 V, f = 1 MHz | | 340 | | |
| λ range | Spectral Application Range | Spot Scan | 250 | | 1100 | nm |
| R | Responsivity | λ = 365 nm, V _R = 0 V | | 0.15 | | |

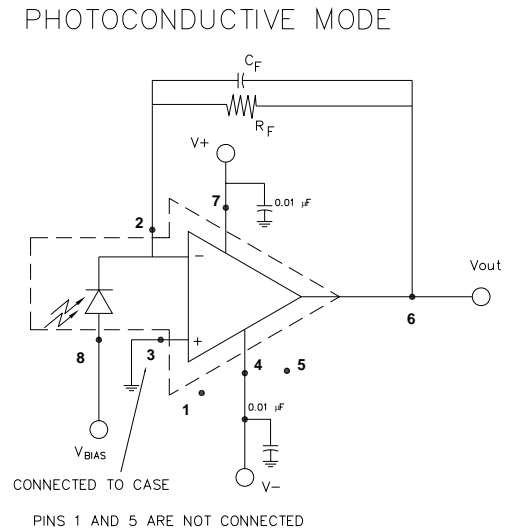
Detector/Amplifier Hybrids Without Feedback Resistor

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.



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.

Advanced Photonix Inc. 1240 Avenida Acaso, Camarillo CA 93012 • Phone (805) 987-0146 • Fax (805) 484-9935 • www.advancedphotonix.com