

## SD112-45-11-221



### FEATURES

- Low Noise
- Blue Enhanced
- Single Supply Operation
- Feedback Circuit

### DESCRIPTION

The **SD 112-45-11-221** is a detector/amplifier hybrid that combines a silicon photodiode with an opamp with a feedback resistor and capacitor, available in a hermetic TO-5 metal can package.

### APPLICATIONS

- Military
- Industrial
- Medical

#### > Absolute Maximum Ratings

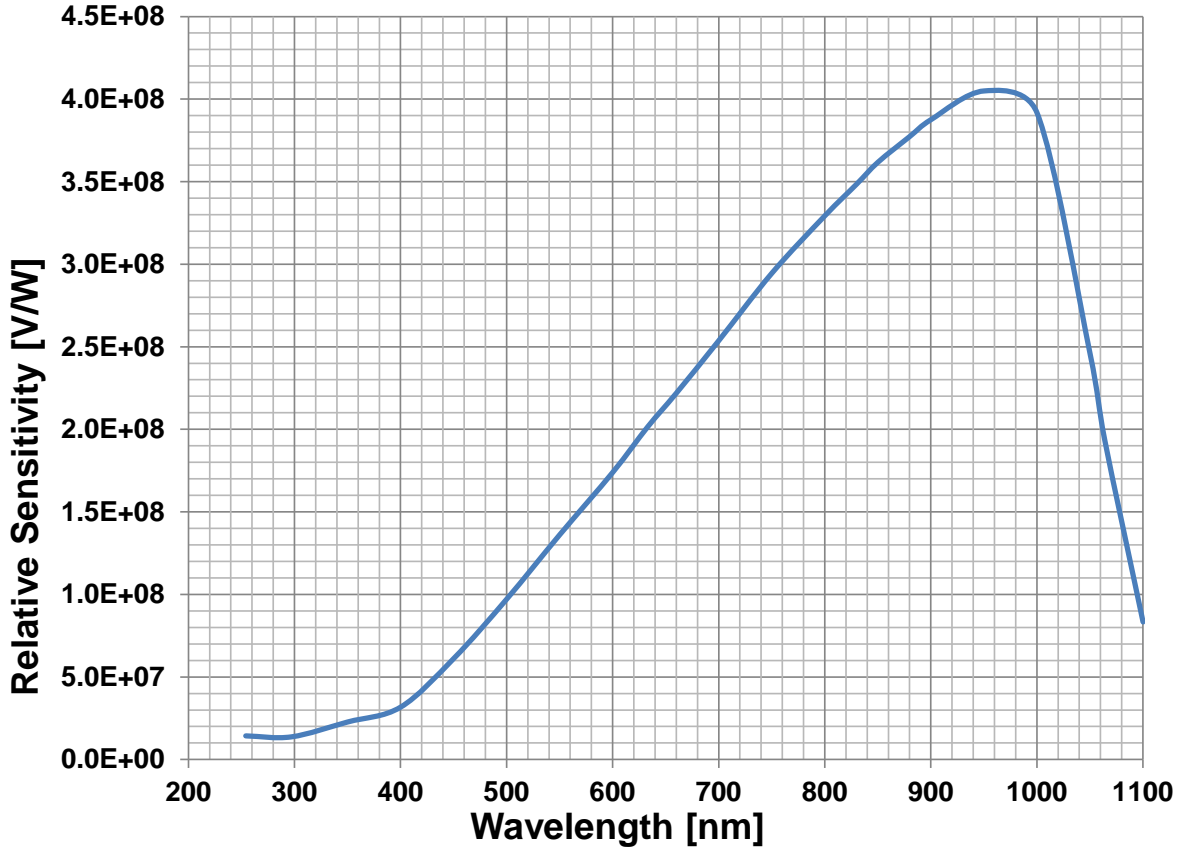
Part No.	Wavelength Range [nm]	Supply Voltage [V]	Operating Temperature [C]	Storage Temperature [C]	Package
SD112-45-11-221	300 to 1100	5 to 15*	-25 to +100	-55 to +125	TO-5

\*Single supply

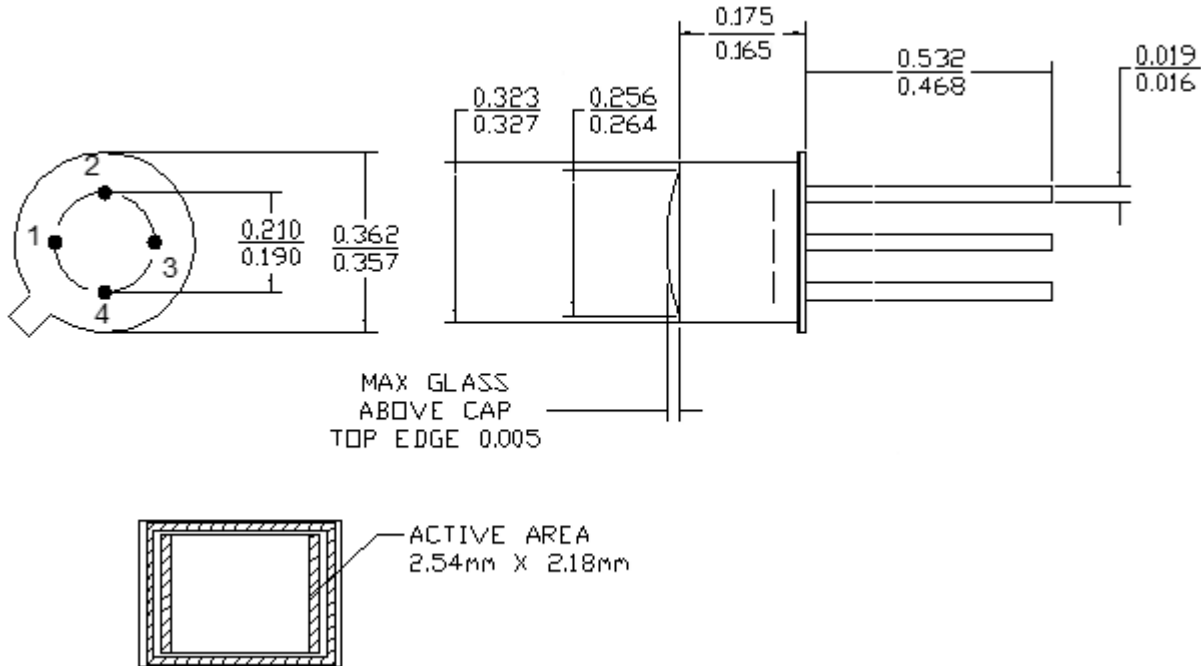
#### > Electrical and Optical Characteristics

Typical Characteristics per elements (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Cutoff Frequency	-	f <sub>3db</sub>	-	0.13	-	KHz
Transimpedance Gain	-	Gain	-	600	-	MΩ
Sensitivity	λ= 633 nm	S	2.4x10 <sup>8</sup>	2.8x10 <sup>8</sup>	-	V/W
Output Offset Voltage	-	V <sub>os</sub>	-	0.08	1	mV
Broadband Noise	f= 0.01Hz to 135 Hz	V <sub>n</sub>	-	-	52	uV <sub>rms</sub>
Noise Equivalent Power	f= 0.01Hz to 135 Hz	NEP	-	3.5x10 <sup>-14</sup>	-	W/√Hz
Supply Current	-	I <sub>s</sub>	-	850	950	uA
Output Voltage Swing	-	V <sub>osw</sub>	0 to 4.7	-	0 to 14.7	V

> Typical Spectral Response

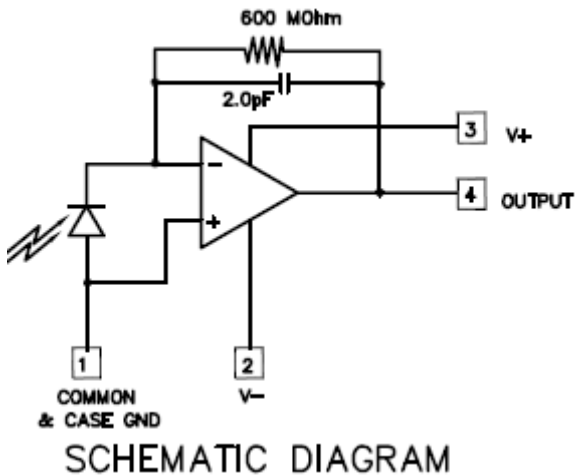


> Package Dimensions



> Soldering Conditions: 260°C 1/16 inch away from case for 3 seconds max.

## &gt; Schematic

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**MATERIALS SAFETY**

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