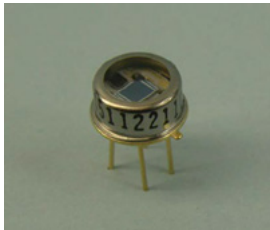




# Advanced Photonix

A Division of OSI Optoelectronics

**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

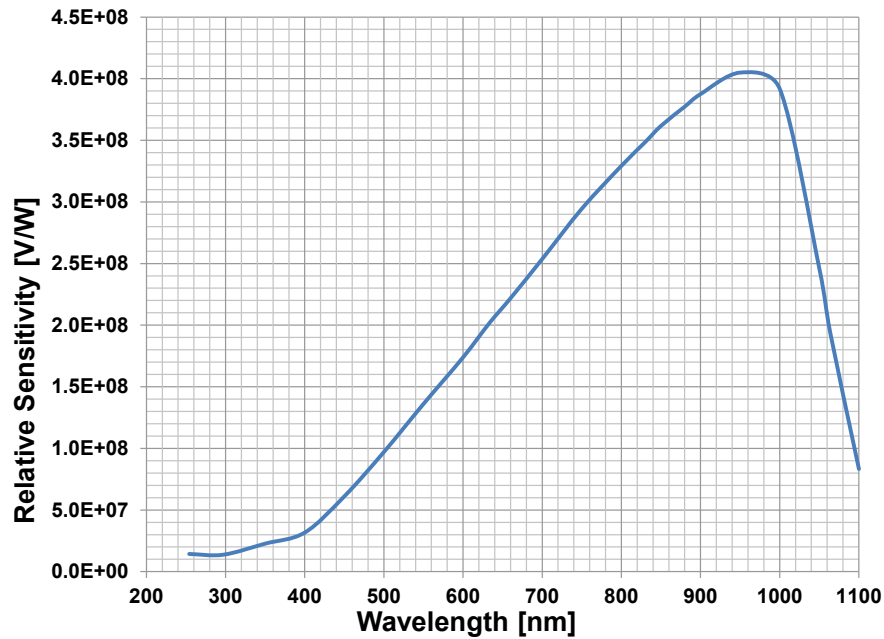
**> Electrical and Optical Characteristics**

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

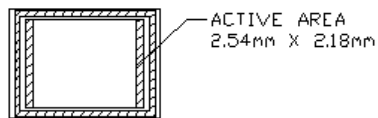
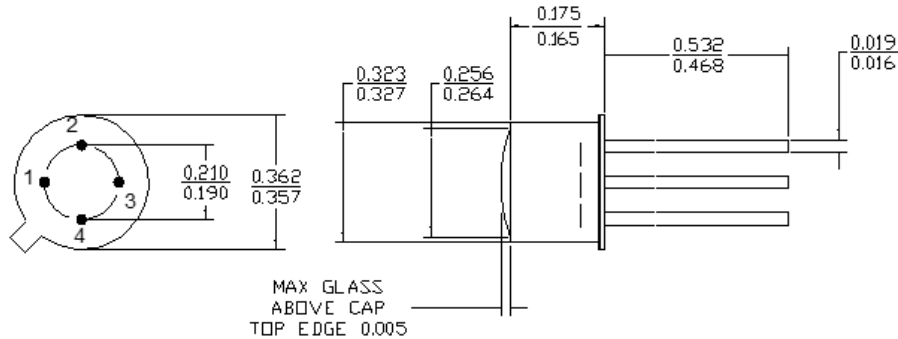
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SD112-45-11-221

> Typical Spectral Response



> Package Dimensions

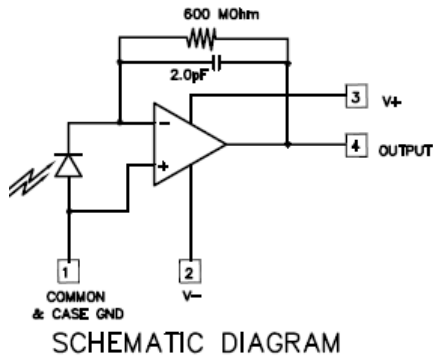


> Soldering Conditions: 260°C 1/16 inch away from case for 3 seconds max.

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SD112-45-11-221

> Schematic



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## MATERIALS SAFETY

This product is free of conflict minerals and meets REACH compliance. Please see website for reports.

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