

**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.

**FEATURES**

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

**RELIABILITY**

Contact Luna for recommendations on specific test conditions and procedures.

**APPLICATIONS**

- Instrumentation
- Industrial
- Medical



**ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN	TYP	MAX	UNITS	
Volage V+ to V-	5	-	15	V	T <sub>a</sub> = 23°C UNLESS OTHERWISE NOTED
Power Dissipation	-	360	-	mW	-
Storage Temperature	-25	-	+100	°C	-
Soldering Temperature*	-	-	+240	°C	-

\* 1/16 inch from case for 3 seconds max.

**OPTO-ELECTRICAL PARAMETERS**

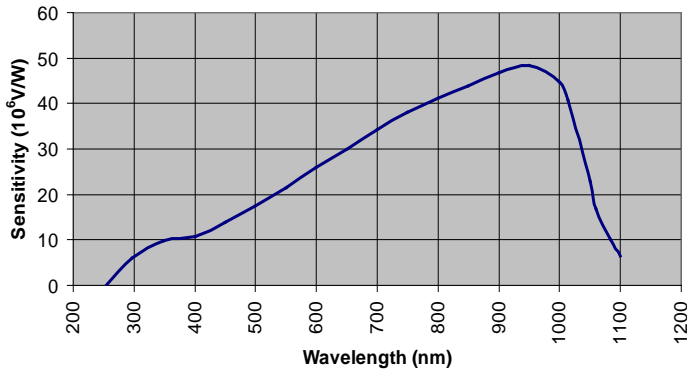
T<sub>a</sub> = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Cutoff Frequency	-	-	.13	-	KHZ
Transimpedance Gain	-	-	600	-	MΩ
Sensitivity	λ = 633 nm	2.4x10 <sup>8</sup>	2.8x10 <sup>8</sup>	-	V/W
Output Offset Voltage	-	-	.08	±1	mV
Broadband Noise	f = 0.01Hz to 135 Hz	-	-	52	uV <sub>rms</sub>
Noise Equivalent Power	f = 0.01Hz to 135 Hz	-	3.5x10 <sup>-14</sup>	-	W/√Hz
Supply Current	-	-	850	950	μA
Output Voltage Swing	-	-	0 to 4.7	0 to 4.7	V

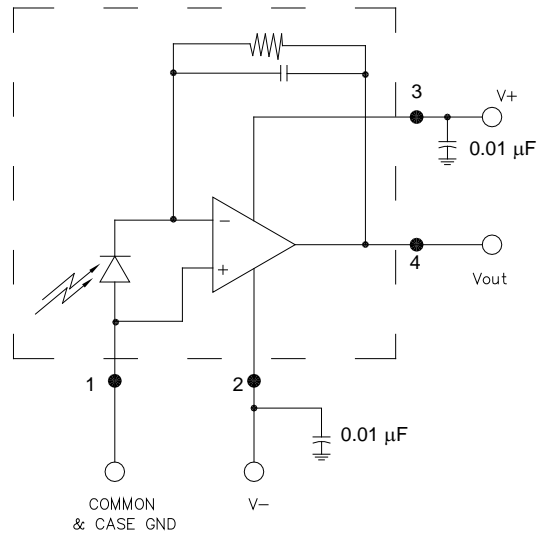
\*\*Response time of 10% to 90% is specified at 830nm wavelength light.

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**



**SCHEMATIC AND CONNECTION DIAGRAM**



**Note: Components shown outside the dashed area are external to the device, and must be supplied by the user.**