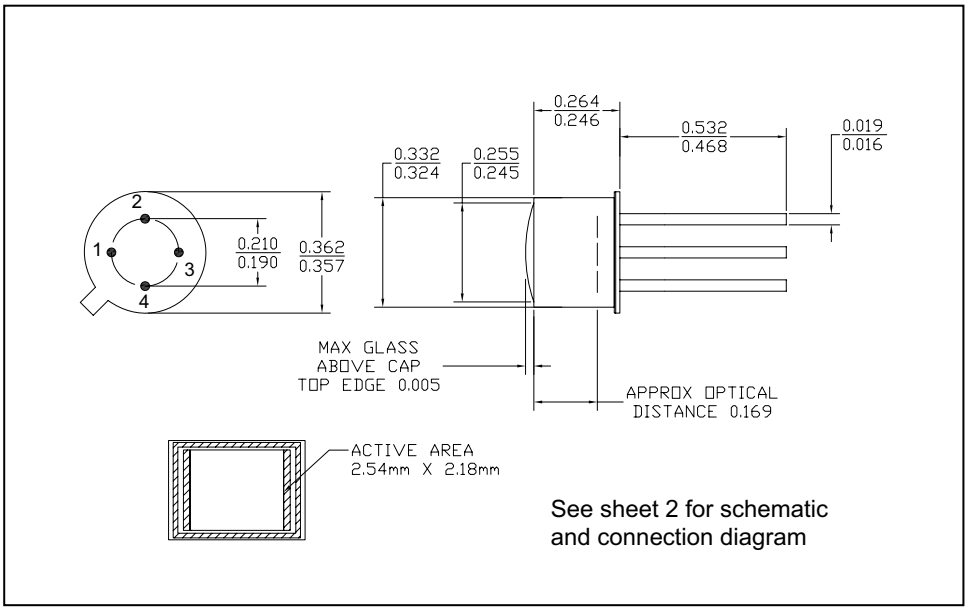
Detector/Amplifier Hybrids With Feedback Resistor

SD 112-42-11-221



See sheet 2 for schematic and connection diagram

FEATURES

- Low noise
- Red enhanced
- Feedback circuit
- High speed

DESCRIPTION

The **SD 112-42-11-221** 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

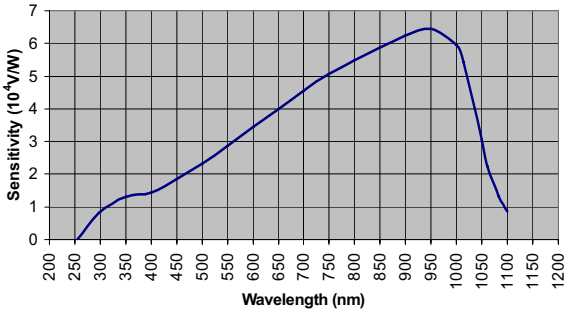
- Instrumentation
- Industrial
- Medical

ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_s	Voltage Supplies	± 5		± 15	V
P	Power Dissipation		360		mW
T_{STG}	Storage Temperature	-25		+100	°C
T_S	Soldering Temperature*		+240		°C

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

SPECTRAL SENSITIVITY



ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C. V_s = ± 12V UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
f_{3db}	Cutoff Frequency		500	750		KHz
Gain	Transimpedance Gain			0.1		MΩ
S	Sensitivity	λ= 940 nm		$6.3x10^4$		V/W
V_{os}	Output Offset Voltage				± 1	mV
I_s	Power Supply Current			6.2	7	mA
V_n	Broadband Noise	f= 10Hz to cutoff			60	uV_{rms}

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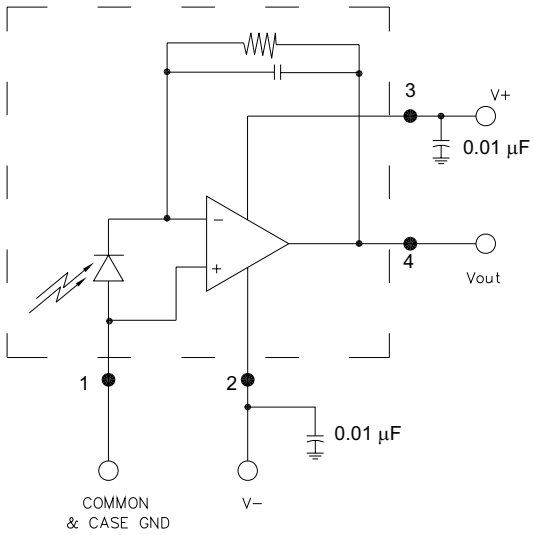
REV 8/22/06

SCHEMATIC AND CONNECTION DIAGRAM



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