

SD100-42-22-231

Blue Enhanced Silicon Amplifier Hybrid



FEATURES

- Low Noise
- Blue Enhanced
- High Speed
- Custom Feedback

DESCRIPTION

The **SD 100-42-22-231** is a blue enhanced detector/amplifier that combines a silicon photodiode with an op-amp without a feedback network. The device is available in a hermetic TO-5 metal can package.

APPLICATIONS

- Instrumentation
- Industrial
- Medical

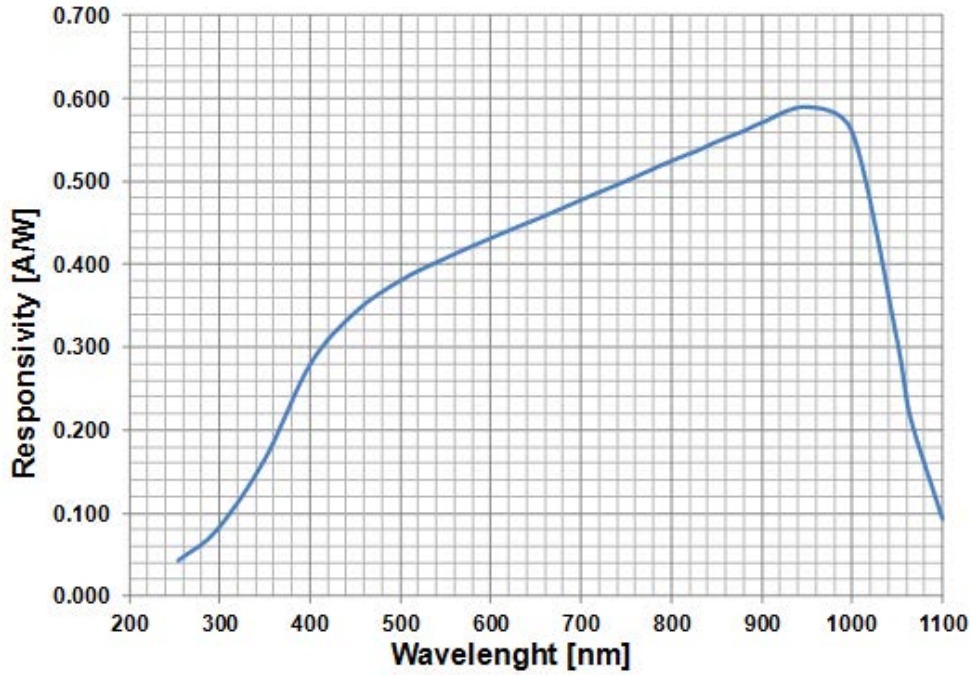
> Absolute Maximum Ratings

Part No.	Voltage Supply [V]	Supply Current [mA]	Operating Temperature [C]	Storage Temperature [C]	Package
SD100-42-22-231	±5 to ±18	7	-40 to +85	-65 to +125	TO-5

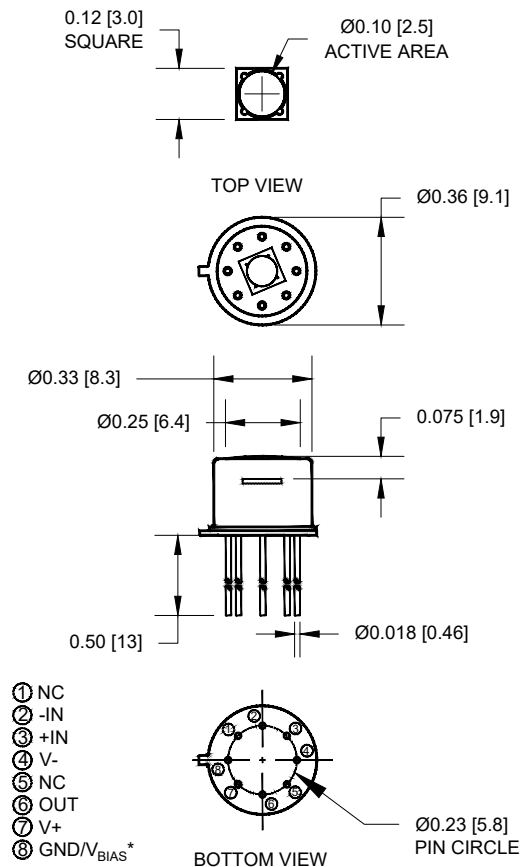
> Electrical and Optical Characteristics

Typical Characteristics (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Dark Current	$V_R = 10\text{ V}$	I_D	-	-	10	nA
Shunt Resistance	$V_R = 10\text{ mV}$	R_{SH}	300	-	-	MΩ
Capacitance	$V_R = 0\text{V}; f = 1\text{ MHz}$	C_J	-	87	-	pF
	$V_R = 10\text{V}; f = 1\text{ MHz}$		-	18	-	
Spectral Range	Spot Scan	λ	250	-	1100	nm
Reponsivity	$\lambda = 450\text{nm}, V_R = 0\text{ V}$	R	-	.20	-	A/W
Input Offset Voltage	-	V_{OS}	-	1	2	mV
Input Voltage Noise	$f = 10\text{KHz}$	$e_{n\text{ p-p}}$	-	12	-	nV/ $\sqrt{\text{Hz}}$
Input Bias Current	-	I_B	-	15	40	pA
Input Current Noise	$f = 10\text{KHz}$	i_n	-	20	30	fA/ $\sqrt{\text{Hz}}$
Gain Bandwidth Product	-	GBP	-	18	-	MHz

> Spectral Response

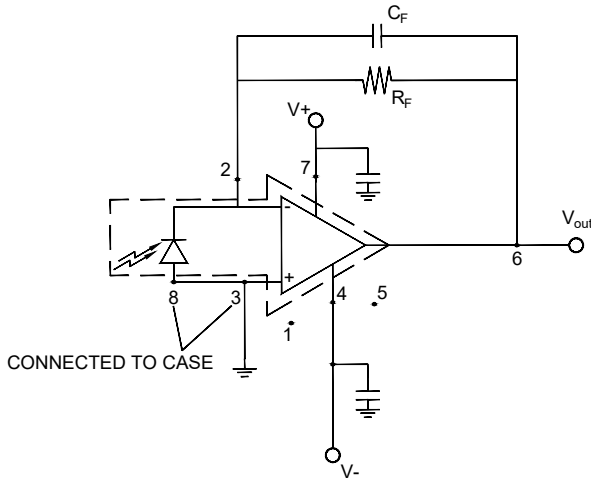


> Package Dimensions
inches [mm]



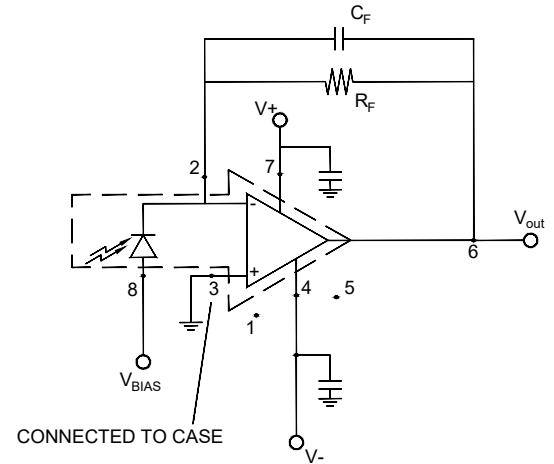
> Circuit Schematic

PHOTOVOLTAIC MODE



PINS 1 AND 5 ARE NOT CONNECTED

PHOTOCONDUCTIVE MODE



PINS 1 AND 5 ARE NOT CONNECTED

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

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MATERIALS SAFETY

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