


**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**

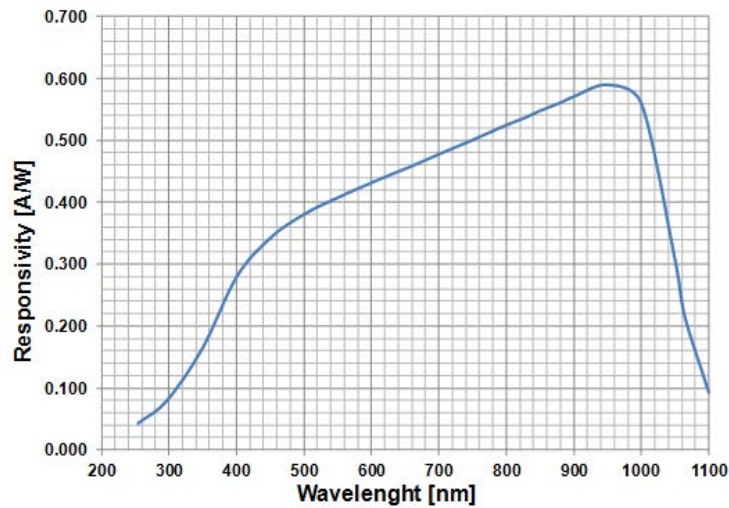
Typical Characteristics (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Dark Current	$V_R = 10\text{ V}$	$I_D$	-	-	10	nA
Shunt Resistance	$V_R = 10\text{ mV}$	$R_{SH}$	300	-	-	MΩ
Capacitance	$V_R = 0\text{V}; f = 1\text{ MHz}$	$C_J$	-	87	-	pF
	$V_R = 10\text{V}; f = 1\text{ MHz}$		-	18	-	
Spectral Range	Spot Scan	$\lambda$	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/√Hz
Input Bias Current	-	$I_B$	-	15	40	pA
Input Current Noise	$f = 10\text{KHz}$	$i_n$	-	20	30	fA/√Hz
Gain Bandwidth Product	-	GBP	-	18	-	MHz

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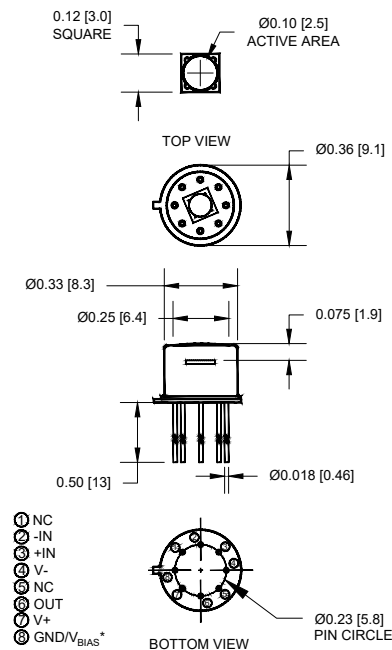
SD100-42-22-231

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> Spectral Response



> Package Dimensions  
inches [mm]

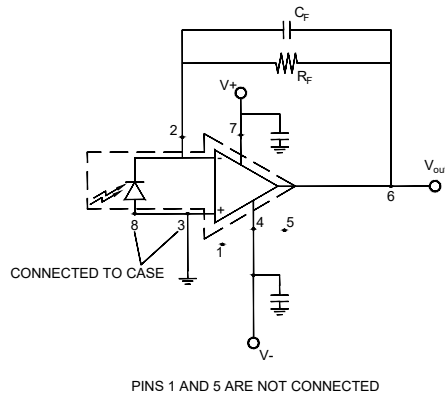


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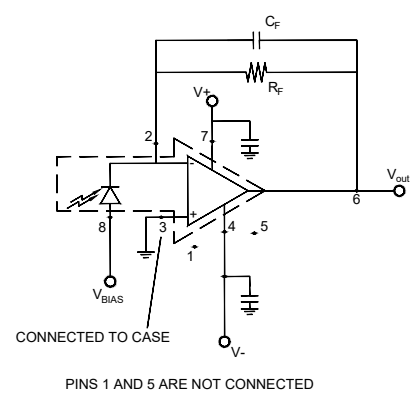
SD100-42-22-231

> Circuit Schematic

PHOTOVOLTAIC MODE



PHOTOCONDUCTIVE MODE



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.

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