

# SD100-43-23-232

## 2.54mm Diameter UV Enhanced Detector Amplifier Hybrid - Open Loop

The SD100-43-23-232 is a 2.54mm diameter active area UV enhanced detector/amplifier that combines a silicon photodiode with an op-amp without a feedback network, packaged in a hermetic TO-5 metal can package.

### Applications

Instrumentation

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Industrial

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Medical

### Features

Low Noise

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High Speed

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Custom Feedback

## Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	$T_{OP}$	-65	-	+125	°C
Storage Temperature	$T_{STG}$	-40	-	-85	°C
Voltage Supplies	-	±5	±15	±18	V

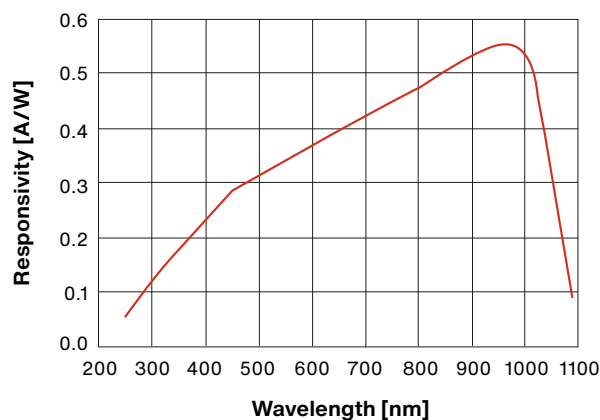
## Operational Amplifier Specification

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Input Offset Voltage	-	-	1	2	mV	mV
Input Voltage Noise@ f=10KHz	-	-	12	-	nV/√Hz	nV/√Hz
Input Bias Current	-	-	15	40	pA	pA
Input Current Noise @ f=10KHz	-	-	20	30	fA/√Hz	fA/√Hz
Gain Bandwidth product	-	-	18	-	MHz	MHz
Supply Current	-	-	6.5	7	mA	mA

## Typical Electro-Optical Specifications at $T_A=23\text{ °C}$

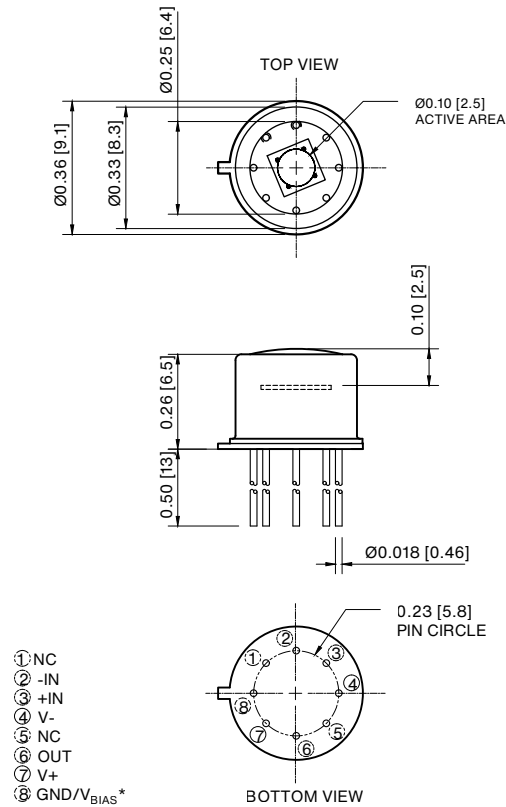
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Active Area Diameter	-	$A.A_{\phi}$	-	2.54	-	mm
Spectral Range	Spot Scan	$\Delta\lambda$	200	-	1100	nm
Reponsivity	$\lambda=254\text{nm}, V_R=0\text{V}$	$R_{\lambda}$	-	0.07	-	A/W
Capacitance	$V_R=0\text{V}; f=1\text{MHz}$	$C_J$	-	87	-	pF
	$V_R=10\text{V}; f=1\text{MHz}$	$C_J$	-	18	-	pF
Dark Current	$V_R=10\text{V}$	$I_D$	-	-	10	nA
Shunt Resistance	$V_R=0\text{mV}$	$R_{SH}$	300	-	-	MΩ

## Typical Spectral Response

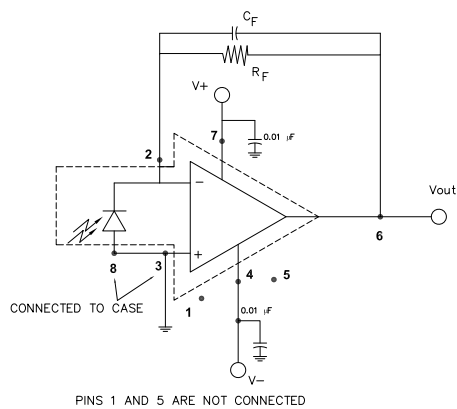


## Mechanical Specifications

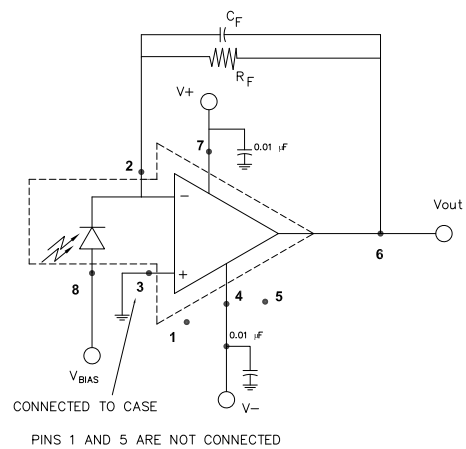
Units are in mm



## Photovoltaic Mode



## Photoconductive Mode



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