



SD100-41-21-231

Silicon Photodiode

The SD 100-42-21-231 is a 2.54mm diameter (5mm²) active area RED 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

Industrial

Medical

Features

Low Noise

Red Enhanced

High Speed

Custom Feedback

Absolute Maximum Ratings

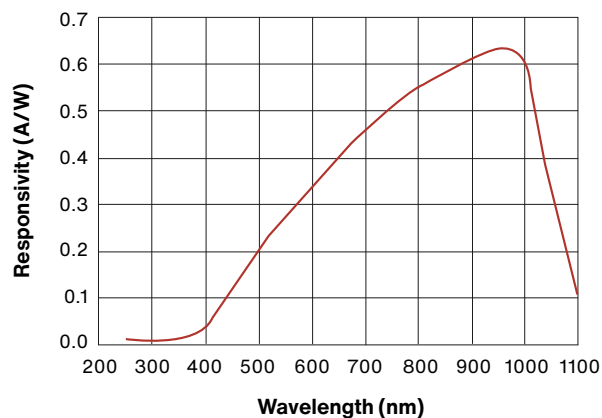
Parameter	Symbol	Min	Typ	Max	Unit
Voltage Supplies	-	±5	±15	±18	V
Input Offset Voltage	-	-	1	2	mV
Input Voltage Noise@ f=10KHz	-	-	12	-	nV/√Hz
Input Bias Current	-	-	15	40	pA
Input Current Noise @ f=10KHz	-	-	20	30	fA/√Hz
Gain Bandwidth product	-	-	18	-	MHz
Supply Current	-	-	6.5	7	mA
Operating Temperature	T _{OP}	-65	-	+125	°C
Storage Temperature	T _{STG}	-40	-	-85	°C

Typical Electro-Optical Specifications at T_A=23 °C

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Dark Current	V _R =10V	I _D	-	-	10	nA
Shunt Resistance	V _R =0mV	R _{SH}	300	-	-	MΩ
Junction Capacitance	V _R =0V; f=1MHz	C _J	-	87	-	pF
	V _R =10V; f=1MHz	C _J	-	18	-	pF
Spectral Application Range	Spot Scan	λ	250	-	1100	nm
Reponsivity	λ=950nm, V _R =0V	R	-	0.64	-	A/W

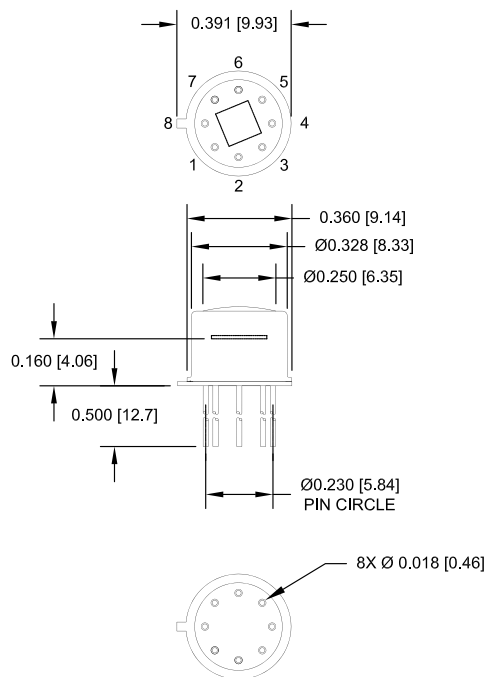
*Response time of 10% to 90% is specified at 660nm wavelength light.

Spectral Response

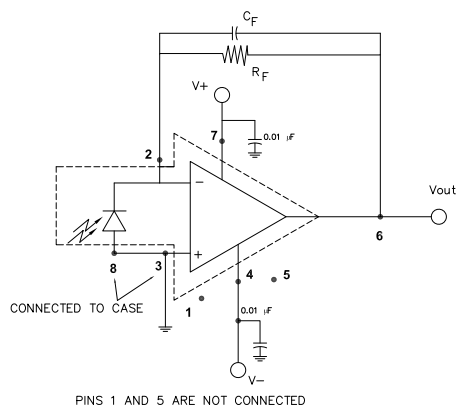


Mechanical Specifications

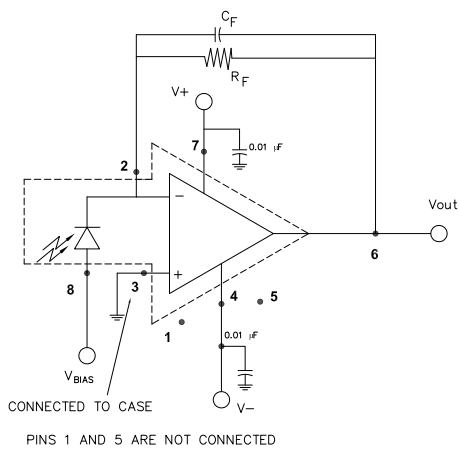
Units are in mm



Photovoltaic Mode



Photoconductive Mode



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