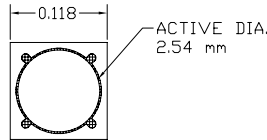
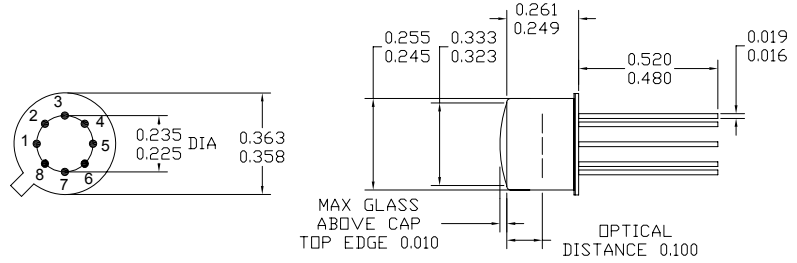




PACKAGE DIMENSIONS INCH



FOR SCHEMATIC AND CONNECTION DIAGRAM SEE SHEET 2

TO-5 PACKAGE

CHIP DIMENSIONS

FEATURES

- Low noise
- Red enhanced
- Custom feedback
- High speed

DESCRIPTION

The **SD 100-42-21-231** is a red enhanced detector/amplifier that combines a silicon photodiode with an opamp without a feedback network, Packaged in a hermetic TO-5 metal can package.

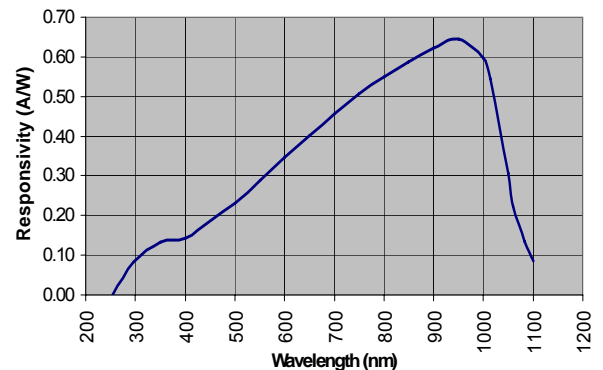
APPLICATIONS

- Instrumentation
- Industrial
- Medical

AMPLIFIER SPECIFICATIONS (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V _s	Voltage Supplies	± 5	± 15	± 18	V
V _{io}	Input Offset Voltage		1	2	mV
V _n	Input Voltage Noise @ f = 10KHz		12		nV/√Hz
I _{ib}	Input Bias Current		15	40	pA
I _n	Input Current Noise @ f = 10KHz		20	30	fA/√Hz
GBP	Gain Bandwidth Product		18		MHz
I _s	Supply Current		6.5	7	mA
T _{STG}	Storage Temperature	-65		+125	°C
T _O	Operating Temperature	-40		+85	°C

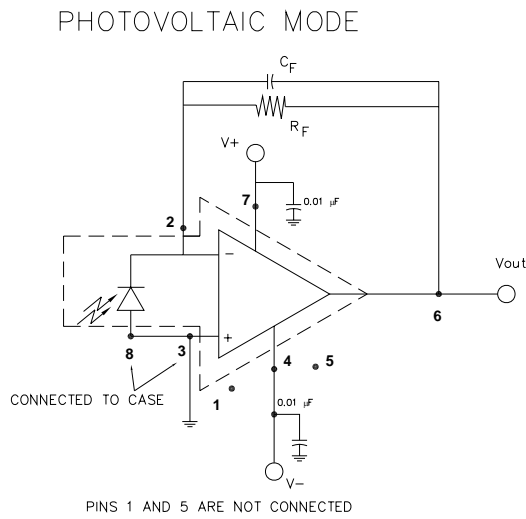
DETECTOR SPECTRAL RESPONSE



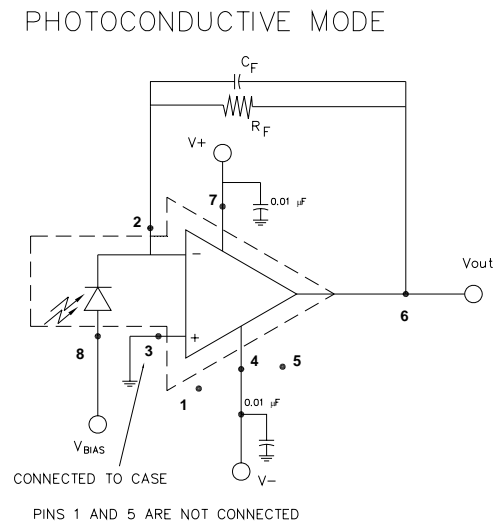
DETECTOR SPECIFICATIONS (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _D	Dark Current	V _R = 10 V			10	nA
R _{SH}	Shunt Resistance	V _R = 0 V	300			MΩ
C _J	Junction Capacitance	V _R = 0 V, f = 1 MHz		87		pF
		V _R = 10 V, f = 1 MHz		18		
λ range	Spectral Application Range	Spot Scan	250		1100	nm
R	Responsivity	λ = 950 nm, V _R = 0 V		0.64		A/W

SCHEMATIC AND CONNECTION DIAGRAM



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



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