

Detector/Amplifier Hybrids Without Feedback Resistor **BLUE ENHANCED** SD 100-42-22-231



PACKAGE DIMENSIONS INCH INCH 0.261 0.249 0.255 0.333 0.245 0.323 0.333 0.019 0.520 0.480 0.235 DIA 0.225 DIA 0.363 0.358 MAX GLASS ABOVE CAP OPTICAL TOP EDGE 0.010 DISTANCE 0.100 FOR SCHEMATIC AND CONNECTION DIAGRAM SEE SHEET 2 -0.118-ACTI∨E DIA. 2.54 mm **TO-5 PACKAGE CHIP DIMENSIONS INCH**

FEATURES Low noise

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- DESCRIPTION
- The SD 100-42-22-231 is a blue enhanced
- Blue enhanced
- Custom feedback
- High speed
- detector/amplifier that combines a silicon photodiode
- with an opamp without a feedback network,
- Packaged in a hermetic TO-5 metal can package.

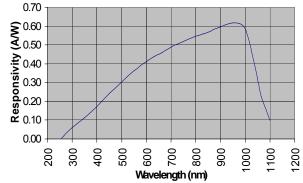
AMPLIFIER SPECIFICATIONS (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
Vs	Voltage Supplies	± 5	± 15	± 18	V
V _{io}	Input Offset Voltage		1	2	mV
V _n	Input Voltage Noise @ f = 10KHz		12		nV/√Hz
l _{ib}	Input Bias Current		15	40	pА
l _{io}	Input Offset Current		20	30	pА
l _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
To	Operating Temperature	-40		+85	°C

APPLICATIONS

- Instrumentation
- Industrial
- Medical

SPECTRAL RESPONSE

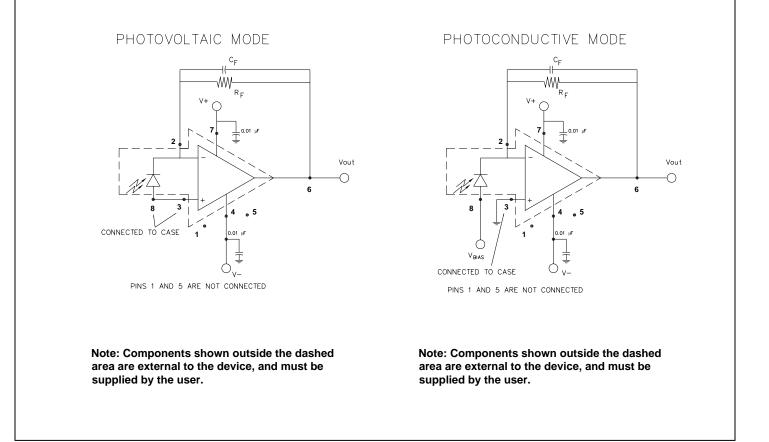


DETECTOR SPECIFICATIONS (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Ι _D	Dark Current	V _R = 10 V			10	nA
R _{SH}	Shunt Resistance	V _R = 0 V	300			$\mathbf{M}\Omega$
CJ	Junction Capacitance	$V_{R} = 0 V, f = 1 MHz$		87		рF
		$V_{R} = 10 V, f = 1 MHz$		18		
λ range	Spectral Application Range	Spot Scan	250		1100	nm
R	Responsivity	λ = 450 nm, V _R = 0 V		0.20		A/W



SCHEMATIC AND CONNECTION DIAGRAM



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