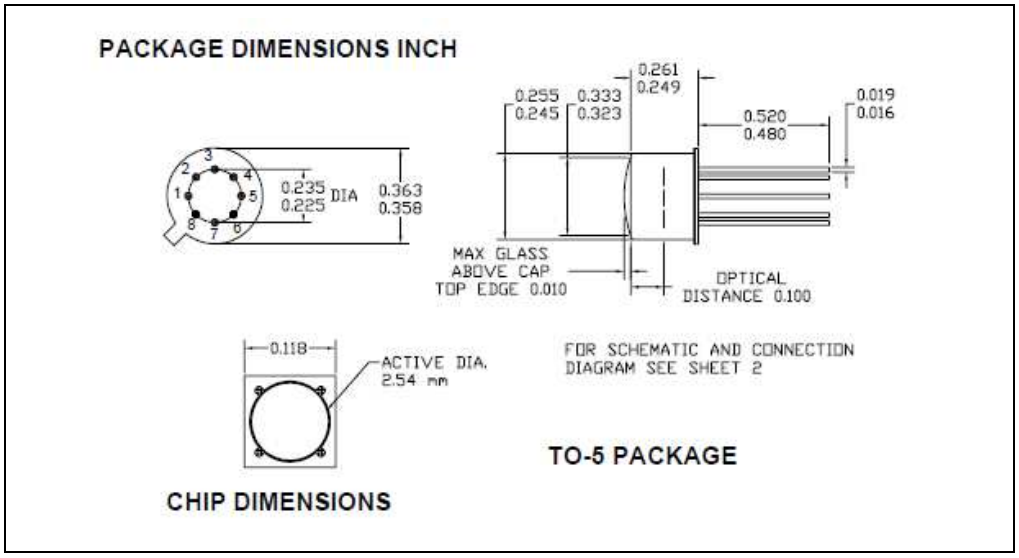
Detector/Amplifier Hybrids Without Feedback Resistor
BLUE ENHANCED
SD 100-42-22-231

WWW.LUNAINC.COM **Precision – Control – Results**



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.

FEATURES

- Low Noise
- Red Enhanced
- Custom Feedback
- High Speed

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Instrumentation
- Industrial
- Medical

RoHS

ABSOLUTE MAXIMUM RATINGS

T_a = 23°C UNLESS OTHERWISE NOTED

SYMBOL	MIN	TYPE	MAX	UNITS
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
Storage Temperature	-65	-	+125	°C
Operating Temperature	-40	-	-85	°C

REV 01-04-16

Luna Optoelectronics, 1240 Avenida Acaso, Camarillo CA 93012 • Phone (805) 987-0146 • Fax (805) 484-9935

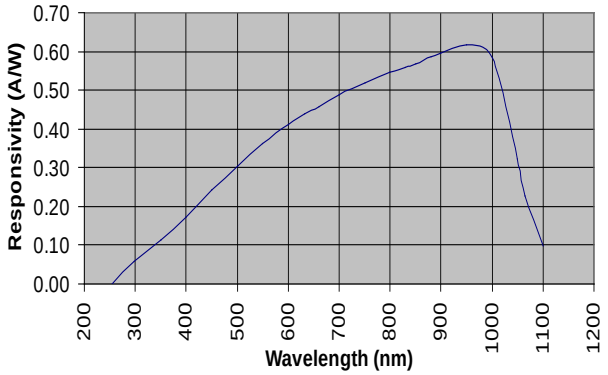
OPTO-ELECTRICAL PARAMETERS

T_a = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V_R = 10 V	-	-	10	nA
Shunt Resistance	V_R = 0 mV	300	-	-	MΩ
Junction Capacitance	V_R =0V; f = 1 MHz	-	87	-	pF
	V_R =10V; f = 1 MHz	-	18	-	
Spectral Application Range	Spot Scan	250	-	1100	nm
Responsivity	λ= 450nm, V_R = 0 V	-	.20	-	A/W

TYPICAL PERFORMANCE

SPECTRAL RESPONSE



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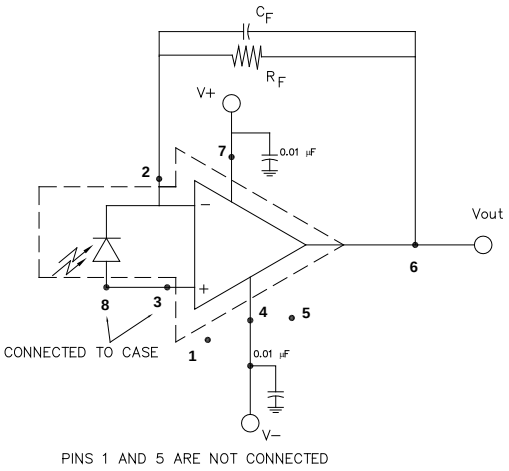
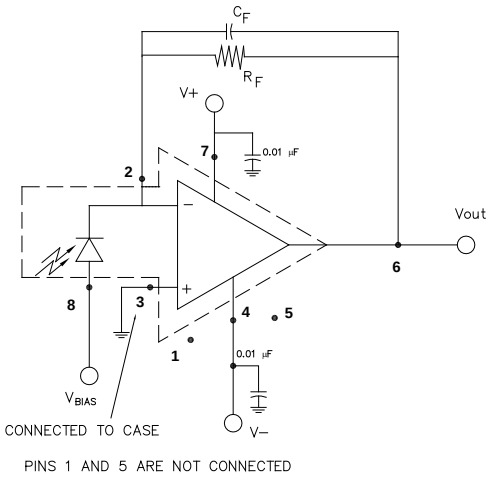
SCHEMATIC AND CONNECTION DIAGRAM

PHOTOVOLTAIC MODE



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

PHOTOCONDUCTIVE MODE



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