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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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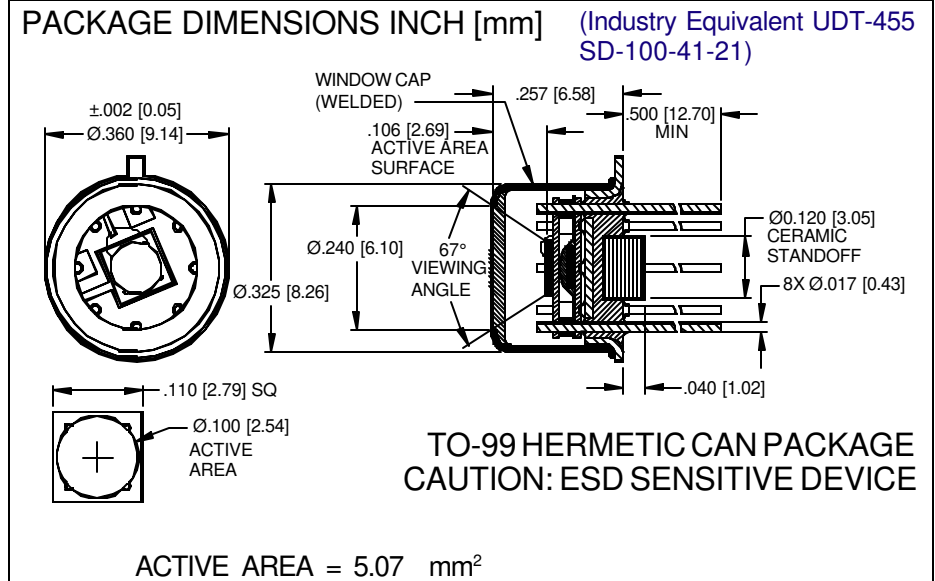
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PHOTONIC DETECTORS INC.

Detector Amplifier Hybrid, Blue Enhanced Type PDB-706



FEATURES

- Low input bias current
- Low offset voltage
- 1 MHz bandwidth

DESCRIPTION

The **PDB-706** is a low noise, medium speed, blue enhanced silicon photodiode integrated with a low noise JFET monolithic trans-impedance op-amp. The feedback capacitor & resistor circuit are externally connected.

APPLICATIONS

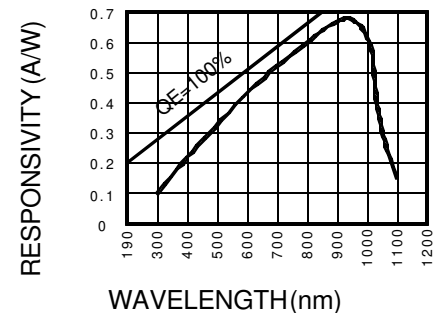
- Medical diagnostic
- Low signal level applications
- Spectroscopy

ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V _{BR}	Reverse Voltage		15	V
T _{STG}	Storage Temperature	-55	+125	°C
T _O	Operating Temperature Range	0	+70	°C
T _S	Soldering Temperature*		+240	°C
I _L	Light Current		500	mA

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE



PHOTODIODE ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	45	65		μA
I _D	Dark Current	H = 0, V _R = 10 V		1.0	5.0	nA
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV	.5	2		GΩ
TC R _{SH}	RSH Temp. Coefficient	H = 0, V _R = 10 mV		-8		% / °C
C _J	Junction Capacitance	H = 0, V _R = 10 V**		15		pF
λ _{range}	Spectral Application Range	Spot Scan	350		1100	nm
λ _p	Spectral Response - Peak	Spot Scan		950		nm
V _{BR}	Breakdown Voltage	I = 10 μA	100	125		V
NEP	Noise Equivalent Power	V _R = 10 V @ Peak		2.5x10 ⁻¹⁴		W/√Hz
t _r	Response Time	R _L = 1 KΩ V _R = 10 V		15		nS

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. ** f = 1 MHz

AMPLIFIER SPECIFICATION TA=25°C and VS=±15Vdc UNLESS OTHERWISE NOTED

CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
FEEDBACK NETWORK EXTERNAL		-	-	-	Ω
V _{IO} INPUT OFFSET VOLTAGE	INITIAL OFFSET FULL RANGE		0.6	3.9	mV
	LONG TERM OFFSET STABILITY		.04		μV/MONTH
I _{IB} INPUT BIAS CURRENT	OFFSET CURRENT, V _{CM} =0		4		pA
R _i INPUT RESISTANCE	DIFFERENTIAL		1 X 10 ¹²		Ω
	COMMONMODE		1 X 10 ¹²		
V _{ICR} INPUT VOLTAGE RANGE	COMMONMODE	-12	+16		V
	COMMONMODE REJECTION V _{CM} ±10V	72	90		
V _{N(PP)} INPUT VOLTAGE NOISE	VOLTAGE 0, f=1 KHz		2		μV _{PP}
	VOLTAGE 0, f=10 KHz		40		nV ² /Hz
I _N INPUT CURRENT NOISE	f=1 KHz		1		fA / √Hz
B _{OM} FREQUENCY RESPONSE	UNITY GAIN, SMALL SIGNAL R _L = 10 KΩ C _L = 100 pF		2		MHz
	SLEW RATE, UNITY GAIN	2.6	3.4		V/μs
A _{VD} OPEN LOOP GAIN	v _o = ±10 V, R _L =10 KΩ	20	230		V/mV
V _{OM±} OUTPUT CHARACTERISTICS	VOLTAGE @ R _L =10 KΩ	±13.2	±13.7		V
	VOLTAGE @ R _L = 600 Ω	±12.5	±13		V
V _{CC±} POWER SUPPLY	OPERATING RANGE	±3.5	±15	±18	V

AMPLIFIER ABSOLUTE MAXIMUM RATING (TA=25°C UNLESS OTHERWISE NOTED)

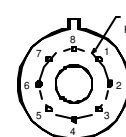
PARAMETER	MIN	MAX	UNITS
SUPPLY VOLTAGE	±4.5	±18	V
INTERNAL POWER DISSIPATION		500	mW
STORAGE TEMPERATURE	-55	+150	°C
OPERATING TEMPERATURE	0	+70	°C

WARNING: ESD SENSITIVE DEVICE

PIN CONNECTIONS

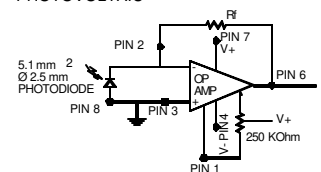
- 1- OFFSET ADJUSTMENT
- 2- INVERTING INPUT/ CATHODE OF PHOTODIODE
- 3- NON-INVERTING INPUT/ CASE GROUND
- 4- NEGATIVE SUPPLY VOLTAGE
- 5- OFFSET ADJUSTMENT
- 6- OUTPUT
- 7- POSITIVE SUPPLY VOLTAGE
- 8- ANODE OF PHOTODIODE

POWER SUPPLY RATED @ ±15 V
RANGE ±3.5 V - ±18 V
QUIESCENT CURRENT 200 μA MAX



BOTTOM VIEW

PHOTOVOLTAIC



PHOTOCONDUCTIVE

