

TECHNICAL DATA SHEET

Centronic Silicon Photodetectors

Opto Hybrid Series

CENTRONIC

OSI 100-40K/15M

The OSI 100-40K/15M is the largest opto-hybrid detector we supply as standard. It can be used for applications such as weapon simulation, medical X-ray detection and illuminance monitoring.

Active Area of Diode 100 mm² (circular)

All Measurements at +/- 6 volts and 25° C unless otherwise stated.

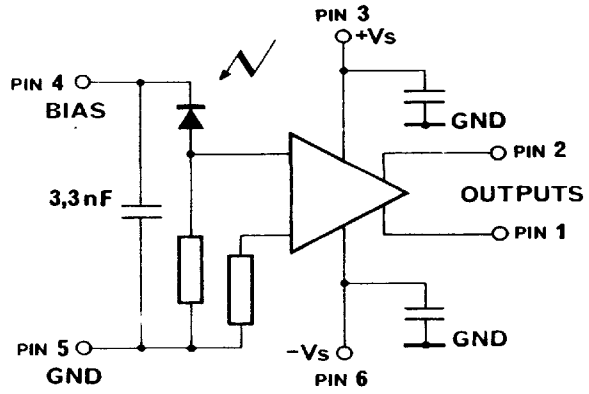
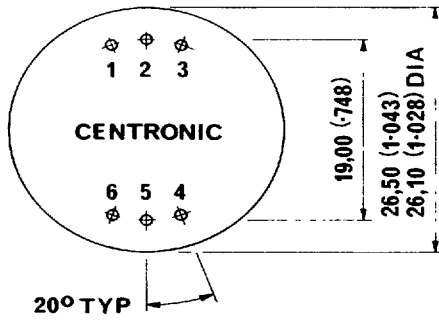
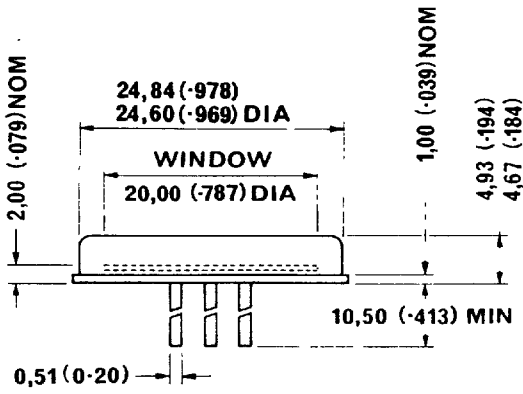
Parameter	Conditions	Min.	Typ.	Max.	Units
O/P Dark Voltage	No load resistor	2.4	2.9	3.4	V
Differential O/P Voltage Swing	Load resistor > 2 kohm	3.0	4.0		V
O/P Resistance			20		ohm
O/P Sink Current		2.5	3.6		mA
O/P Noise Voltage (Note 1)			4	8	mV rms
Responsivity (Note 2) (Note 3)	530 nm OSI 100-V-40K/15M	1.2x10 ⁻²	1.8x10 ⁻²		V/μW
	900 nm OSI 100-IR-40K/15M	2.0x10 ⁻²	3.0x10 ⁻²		
Effective Transimpedance Gain (Note 5)			40K		ohm
Supply Voltage	No load resistor	± 3		± 8	V
Supply Current			18	24	mA
Bias Voltage			30	40	V
Bias Current			0.1	1.0	μA
Supply Voltage Rejection Ratio		50			dB
Bandwidth (Note 4)	Upper 3 dB Point	10	15		MHz
Rise and Fall Times (Note 4)	No load capacitor		20	30	nS

- Notes:
- 1) Noise value given when O/P has 15 MHz low bandpass filter used.
 - 2) Relative response of 1 on the spectral response curve corresponds to 3.0x10⁻² V/μW
 - 3) Responsivities are given for single outputs with respect to 0 volts. For differential output values the values given should be doubled.
 - 4) Values given when Bias voltage = 30 volts.
 - 5) Alternative gain options of 500, 1K, 5K, 10K and 20K are available to special order.

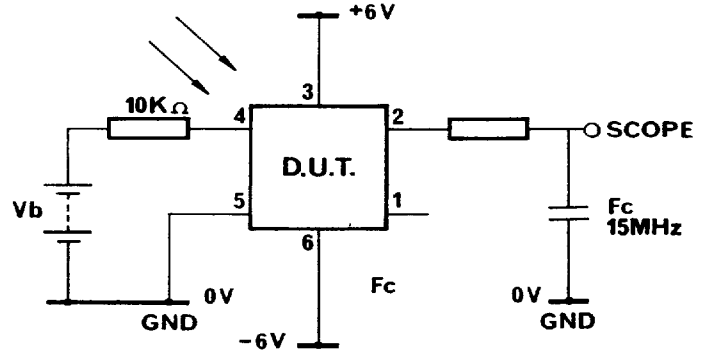
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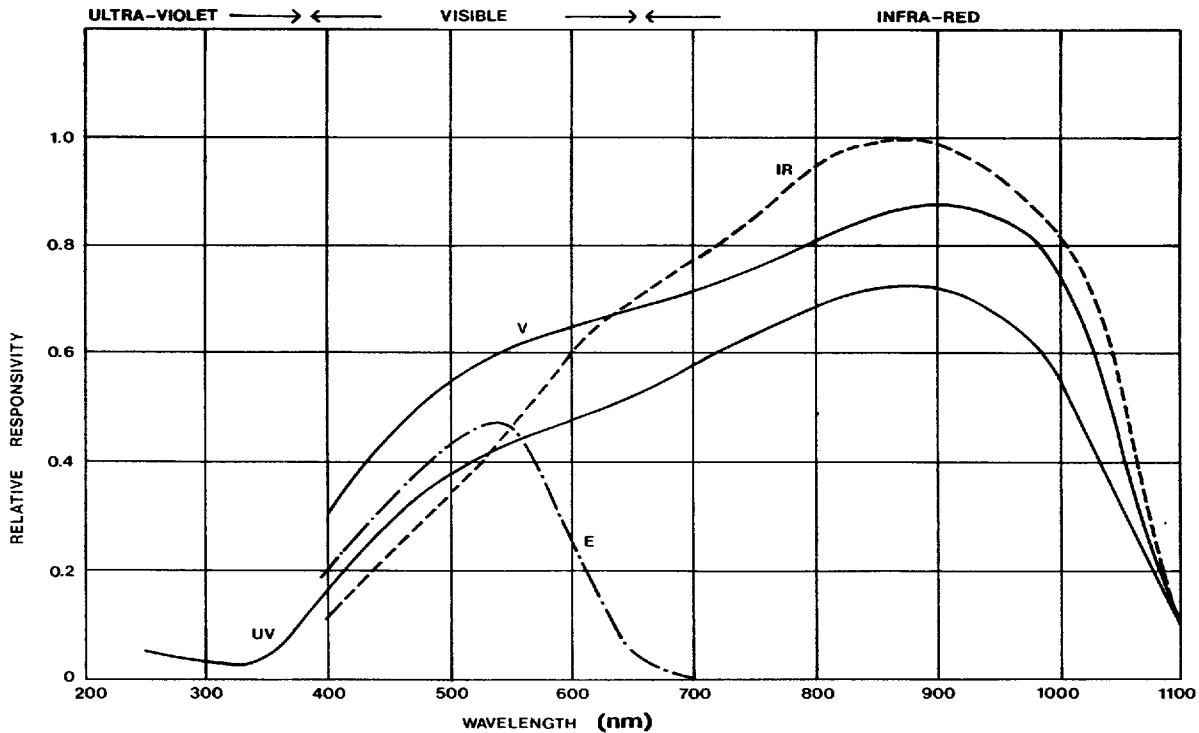


Internal Circuit



Package Diagram

Test Circuit



Relative Spectral Response Curves