



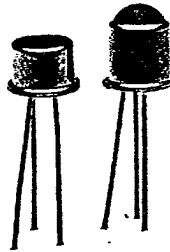
OPTO TECHNOLOGY

PHOTO IC SENSOR

TYPE OT 150/OT 160

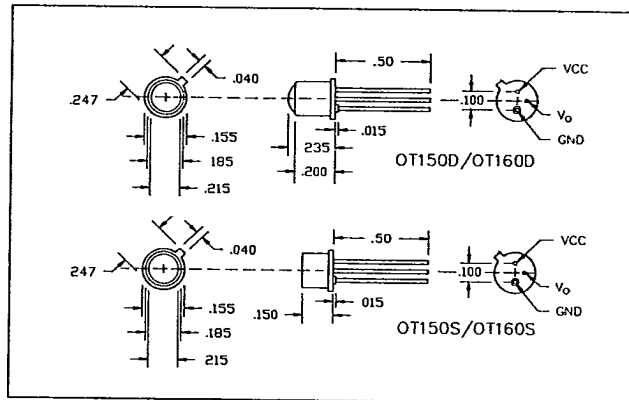
Features

- Matched sensitivity
- Hermetically sealed package
- Rad hard sensor⁽⁶⁾



Description

Matched sensitivity to ± 18 percent is attained with Optec's OT 150/OT 160 Photo IC Sensors. Each sensor consists of a photodiode with low level amplifier, Schmitt trigger, voltage regulator and open collector driver output in a hermetic package. The OT 150 output transistor switches "OFF" when the sensor sees light. The OT 160 output transistor switches "ON" when the sensor sees light. An IR transmitting filter to minimize the effects of ambient light is also available.



Absolute Maximum Ratings⁽²⁾

Supply Voltage	15 V
Output Voltage	15 V
Output Current	25 mA
Storage Temperature Range	-55°C to +150°C
Operating Temperature Range	-40°C to +70°C ⁽³⁾
Lead Soldering Temperature (1/16 inch [1.6 mm] from case for 5 sec. with soldering iron)	260°C ⁽¹⁾

Notes:

- (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when wave soldering.
- (2) $T_A = 25^\circ\text{C}$ unless otherwise noted.
- (3) P suffix on part number designates 100°C maximum operating temperature.
- (4) F suffix on part number designates IR transmissive filter epoxy.
- (5) Based on irradiance from an 880 nm light source.
- (6) Passes $1 \times 10^{13} \text{ n/cm}^2$ in neutron fluence level testing.

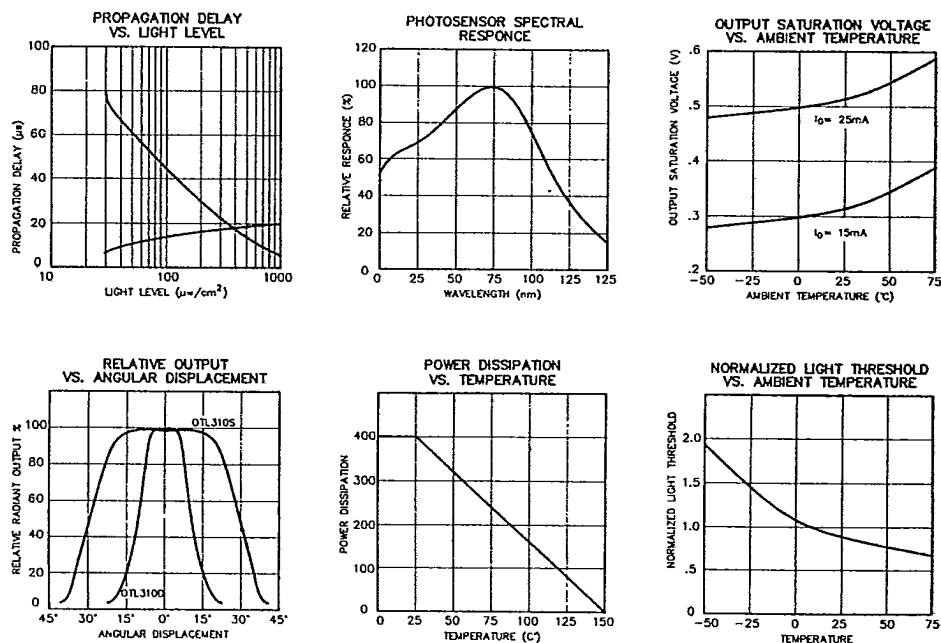
TYPE OT 150/OT 160

T-41-69

Electrical Characteristics: (25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS
Supply Voltage	V_{CC}	4.0	5.0	15.0	V
Supply Current	I_{CC}		4.0	8.0	mA
Collector Emitter Saturation Voltage ($I_{OL} = 15mA$) ($I_{OL} = 25mA$)	$V_{CE(SAT)}$		.3 .5	.5 .8	V V
Output Off Current	I_{OUT}			1.0	μA
Output On Current	I_{OUT}			25	mA
Light Level Threshold ⁽⁵⁾ OT 150D/OT 160D OT 150S/OT 160S	E_{ON}	7.5 45	9.2 55	10.8 65	$\mu W/cm^2$ $\mu W/cm^2$
Hysteresis	ΔE		12		%
Output Rise Time	t_r		200	500	nS
Output Fall Time	t_f		200	500	nS
Propagation Delay $E = 300\mu W/cm^2$	t_p		15		μs

PHOTO IC
SENSORS

TYPICAL PERFORMANCE CURVES


Opto Technology reserves the right to make changes at any time to improve product design and reliability.