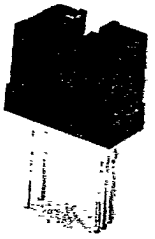
T-41-73

OPTO TECHNOLOGY

PHOTO IC SWITCH

TYPE OTS 265/OTS 275

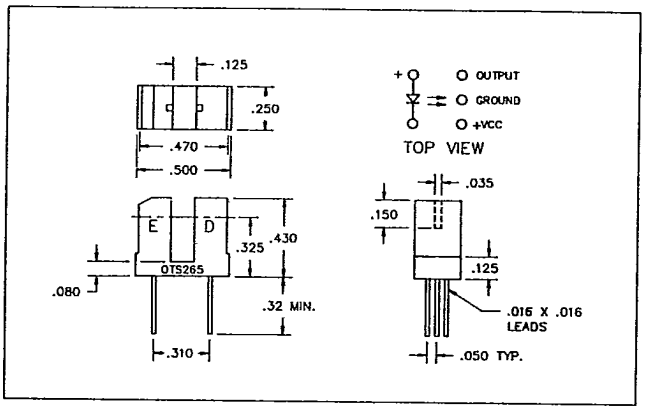


Features

- .035 aperture
- Photo IC sensor
- Low cost

Description

Opto Technology's OTS 265/275 Interrupters combines an infrared emitting diode with a photo IC sensor in a molded plastic housing. The photo IC sensor consists of a photodiode with low level amplifier, Schmitt trigger, regulator and an open collector output. The emitter is a gallium arsenide infrared emitting diode. The housing features a .125" interrupter gap with a .035" aperture slot over both the sensor and emitter. The OTS 265 open collector output switches "ON" when the device is interrupted with an opaque material. The OTS 275 open collector output switches "OFF" when the device is interrupted with an opaque material.



Absolute Maximum Ratings[4]

Storage Temperature Range	−55°C to +110°C
Operating Temperature Range	−40°C to +85°C
Lead Soldering Temperature (1/16 inch (1.6 mm) from case for 5 sec. with soldering iron)	260°C[1]

Input Diode

Reverse Voltage	6 V
Continuous Forward Current	60 mA
Peak Forward Current (1 μs pulse width, 300 pps)	3 A
Power Dissipation	100 mW[2]

Photo IC Sensor

Supply Voltage	15 V
Output Voltage	15 V
Output Current	25 mA

Notes:

(1) RMA flux is recommended. Duration can be extended to 10 sec. max. when wave soldering.
(2) Derate 1.33 mW/°C above 25°C ambient.
(3) Methanol or isopropyl alcohols are recommended as cleaning agents.
(4) T_A = 25°C unless otherwise noted.

OPTO TECHNOLOGY INC
562 CHADDICK DRIVE, WHEELING, IL 60090
TEL: (708) 537-4277 FAX: (708) 537-4785

T-41-73

TYPE OTS 265/OTS 275

Electrical Characteristics: (25°C)

INFRARED EMITTING DIODE	SYMBOL	MIN.	TYP.	MAX.	UNITS
Forward Voltage $I_F = 20$ mA	V_F			1.7	V
Reverse Current $V_R = 5V$	I_R			100	nA
Wavelength at Peak Emission $I_F = 20$ mA	λ_P		940		nM

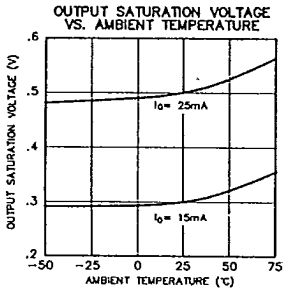
PHOTO I.C.	SYMBOL	MIN.	TYP.	MAX.	UNITS
Supply Voltage	V_{CC}	4.0	5.0	15.0	V
Supply Current	I_{CC}		4.0	10.0	mA
Collector Emitter Saturation Voltage ($I_C = 15$mA) ($I_C = 25$mA)	$V_{CE(SAT)}$		 .3 .5	 .5 .8	 V V
Low Level Output Current	I_C			50	mA
Hysteresis			12		%

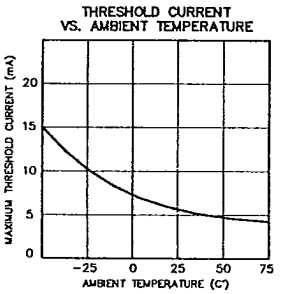
PHOTO IC SWITCHES

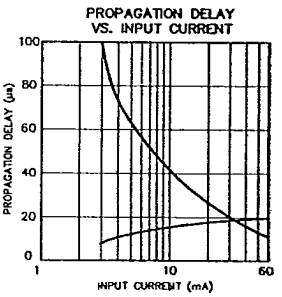
Coupled Electrical Characteristics @ TA = 25°C

	SYMBOL	MIN.	TYP.	MAX.	UNITS
LED Forward Current (turn on)	I_F			7	mA
LED Forward Voltage ($I_F = 60$mA)	V_F			1.7	V
Rise Time	t_{on}		200	500	ns
Fall Time	t_{off}		200	500	ns
Propagation Delay ($I_F = 20$mA)	t_P		15		µs

TYPICAL PERFORMANCE CURVES







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

OPTO TECHNOLOGY INC.
562 CHADDICK DRIVE, WHEELING, IL 60090
TEL: (708) 537-4277 FAX: (708) 537-4785