

**OPTO TECHNOLOGY**

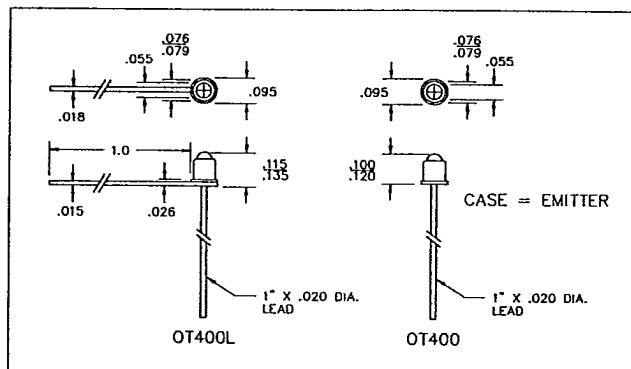
T-41-61

NPN SILICON PHOTOTRANSISTOR**TYPE OT 400****Features**

- Miniature phototransistor
- Hermetically sealed package
- High sensitivity

Description

Opto Technology's OT 400 sensors feature an NPN silicon phototransistor mounted in a miniature hermetic package. The lensing effect allows an acceptance half angle of 12 degrees measured from the optical axis to the half power point. Sensors can be mounted into a housing or soldered directly into a printed circuit board. For special screening of these devices, consult the factory.

**Absolute Maximum Ratings⁽⁴⁾**

Collector-Emitter Voltage	35 V
Emitter-Collector Voltage	6 V
Power Dissipation	100 mW ⁽¹⁾
Storage Temperature Range	-65°C to +150°C
Operating Temperature Range	-55°C to +125°C
Lead Soldering Temperature (for 5 sec. with soldering iron)	240°C ⁽²⁾

Notes:

(1) Derate .9 mW/°C above 25°C.

(2) RMA flux is recommended. Duration can be extended to 10 sec. max. when wave soldering.

(3) Light source is unfiltered tungsten bulb operating at CT = 2870°K.

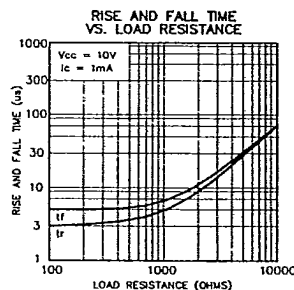
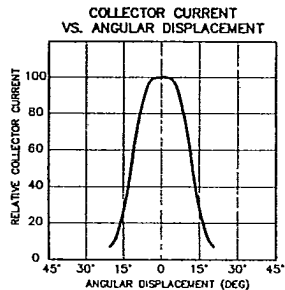
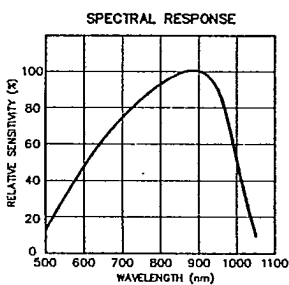
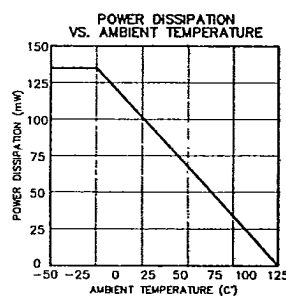
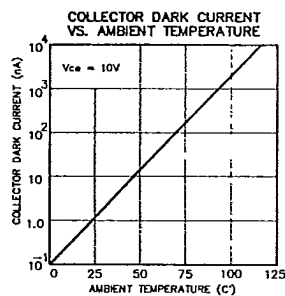
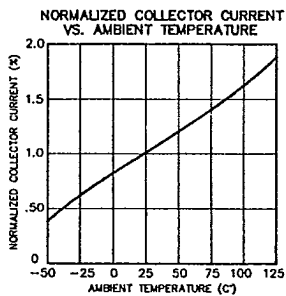
(4) T_A = 25°C unless otherwise noted.

Electrical Characteristics: (25°C)

PHOTOTRANSISTOR		SYMBOL	MIN.	TYP.	MAX.	UNITS
Light Current $H = 1 \text{ mW/cm}^2$	OT 400-1	$I_{C(ON)}$	1			mA
	OT 400-2		2		6	
	OT 400-3		4			
Dark Current $V_{CE} = 10\text{V}, H = 0$		I_{CEO}			40	nA
Collector-Emitter Voltage		V_{CEO}	35			V
Emitter-Collector Voltage		V_{ECO}	6			V
Saturation Voltage $I_C = 1 \text{ mA}$		$V_{CE(SAT)}$			.5	V
Angular Response		ϕ		± 12		Deg.
Rise Time or Fall Time	OT 400-1	t_r, t_f		3		μS
$R_L = 100\Omega, V_{CC} = 10\text{V}$	OT 400-6			5		μS

SENSORS

TYPICAL PERFORMANCE CURVES



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