

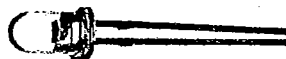


T-41-61

OPTO TECHNOLOGY

NPN SILICON PHOTOTRANSISTOR

TYPE OT 403

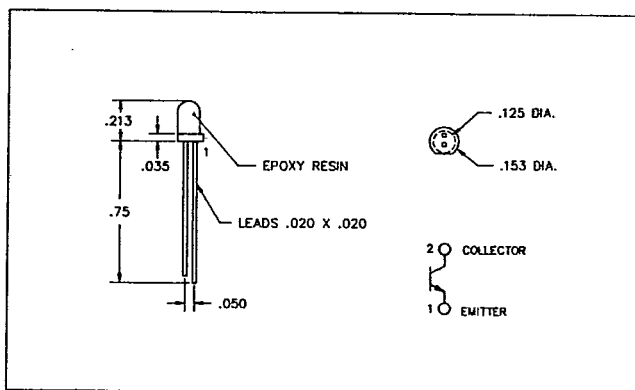


Features

- Low cost
- Miniature plastic T-1 package
- Mechanically matched to OT 303/OT 313 infrared emitters

Description

The OT 403 sensor consists of an NPN silicon phototransistor mounted in a low cost T-1 plastic package. Lensing effect of the package allows an acceptance half angle of 7.5 degrees measured from the optical axis to the half power point. This device is mechanically matched to the OTL 303 and OTL 313 emitters and is offered in two standard ranges. Other screening of the OT 403 is available upon request.



Absolute Maximum Ratings (TA = 25°C unless otherwise specified)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation	100 mW ⁽¹⁾
Storage Temperature Range	-55°C to +100°C
Operating Temperature Range	-55°C to +100°C
Lead Soldering Temperature (for 5 sec. with soldering iron)	240°C ⁽²⁾

Notes:

(1) Derate 1.33 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.

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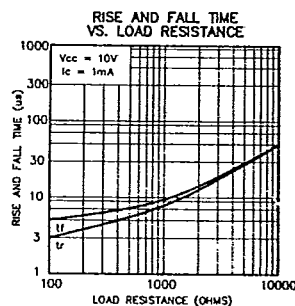
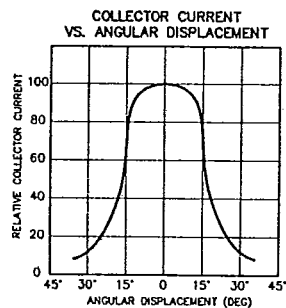
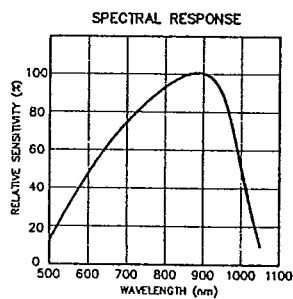
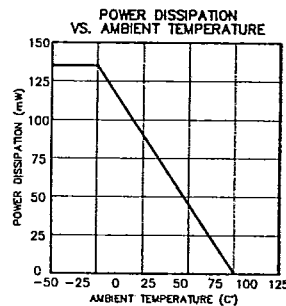
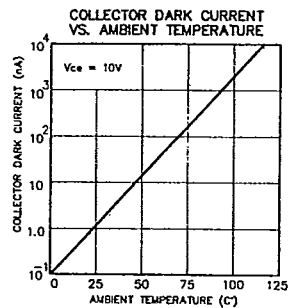
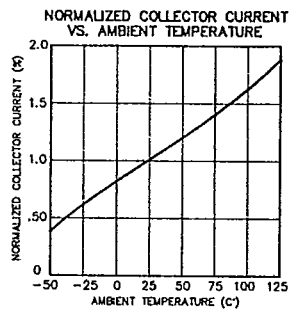
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Electrical Characteristics: (25°C)

PHOTOTRANSISTOR	SYMBOL	MIN.	TYP.	MAX.	UNITS
Light Current $H = 1 \text{ mW/cm}^2$	OT 403-1	1			mA
	OT 403-2	2		8	
	OT 403-3	5			
Dark Current $V_{CE} = 10V, H = 0$	I_{CEO}			100	nA
Collector-Emitter Voltage	V_{CEO}	30			V
Emitter-Collector Voltage	V_{ECO}	5			V
Saturation Voltage $I_C = 1 \text{ mA}$	$V_{CE(SAT)}$			.4	V
Angular Response	ϕ		15		Deg.
Rise Time or Fall Time $R_L = 1000\Omega, V_{CC} = 10V$	t_r, t_f		5		μS

SENSORS

TYPICAL PERFORMANCE CURVES



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