

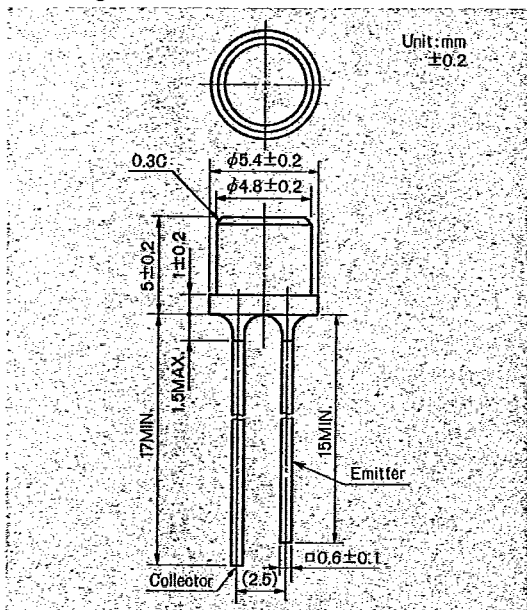


STANLEY PHOTO TRANSISTOR

PS401

T-41-61

Package Dimensions



FEATURES

- (1) Wide range of spectral wavelength covering visible light (red) to infrared light
- (2) High directivity
- (3) Low profile for fast light transmission

APPLICATIONS

- (1) Detector for optical fibers
- (2) Photoelectric switches
- (3) Selector machines
- (4) Infrared ray applied devices

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Maximum Ratings	Unit
Collector Dissipation	Pc	100	mW
Collector-Emitter Breakdown Voltage	V _{CEO}	30	V
Emitter-Collector Breakdown Voltage	V _{ECO}	5	V
Collector Current	I _c	30	mA
Operating Temperature	T _{opr}	-30 ~ +85	°C
Storage Temperature	T _{stg}	-30 ~ +100	°C

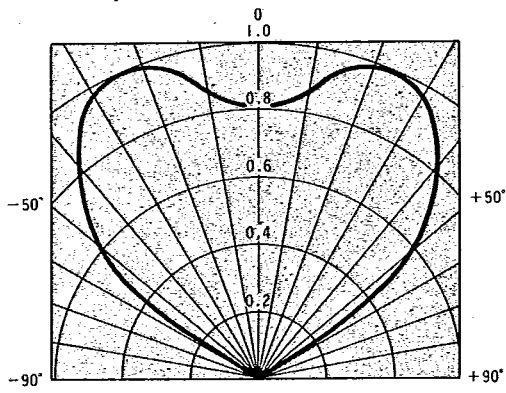
Electro-Optical Characteristics (Ta = 25°C)

*At color temp. 2856° K standard tungsten filament bulb.

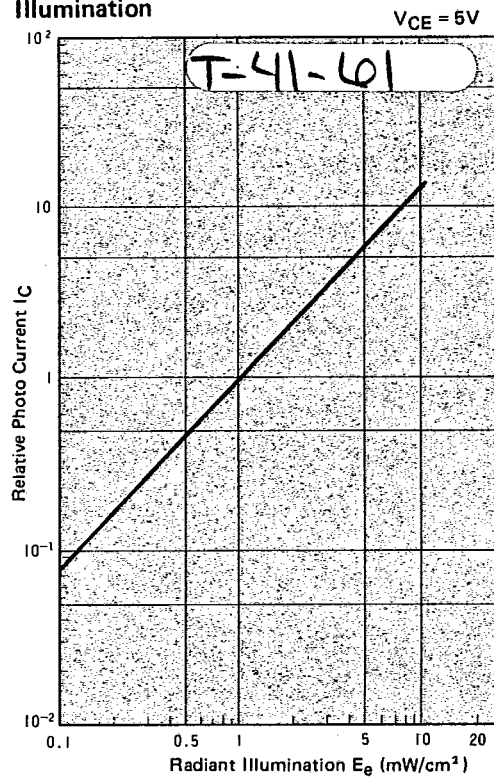
Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-Emitter Dark Current	I _{CEO}	—	—	0.2	μA	V _{CE} = 10 V, E _e = 0
Photo current	I _c	0.5	2.5	—	mA	V _{CE} = 5 V, *E _e = 10mW/cm ²
Response Time	Rise	t _r	5	—	μ sec	V _{CC} = 10 V I _c = 2mA, R _L = 100 Ω
	Fall	t _f	5	—	μ sec	
Peak Sensitivity Wavelength	λ _p	—	800	—	nm	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	0.1	—	V	I _c = 0.5mA, *E _e = 10mW/cm ²

PHOTO-TRANSISTOR

■ Directivity Characteristics

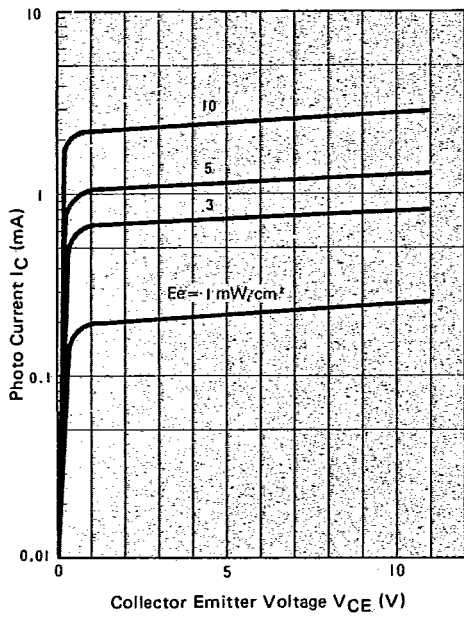


■ Relative Photo Current Vs. Radiant Illumination

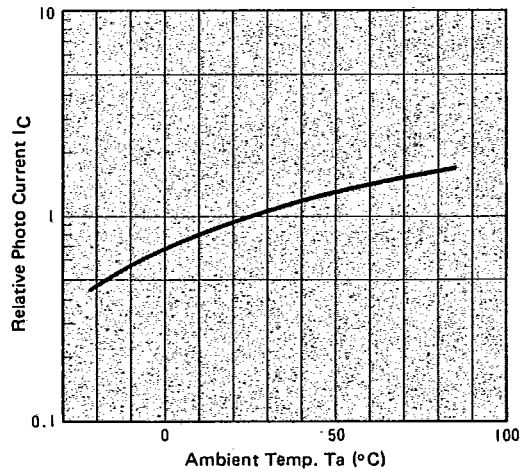


■ Photo Current Vs. Collector Emitter Voltage

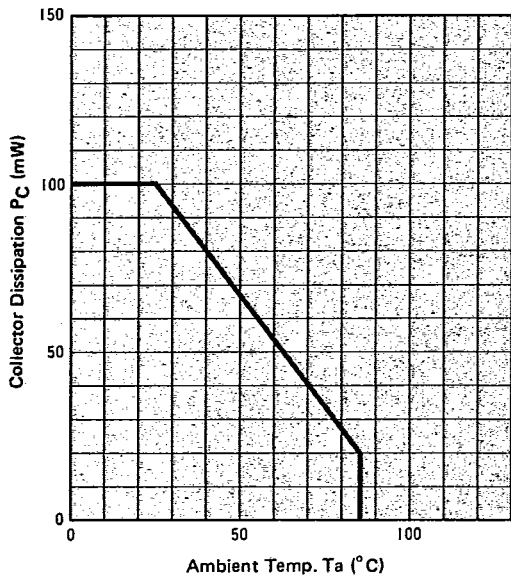
$T_a = 25^\circ C$



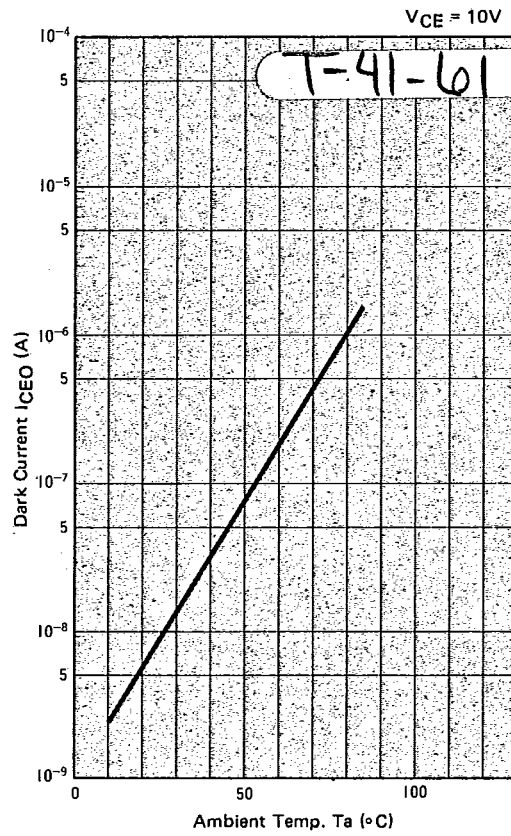
■ Photo Current Vs. Ambient Temp.



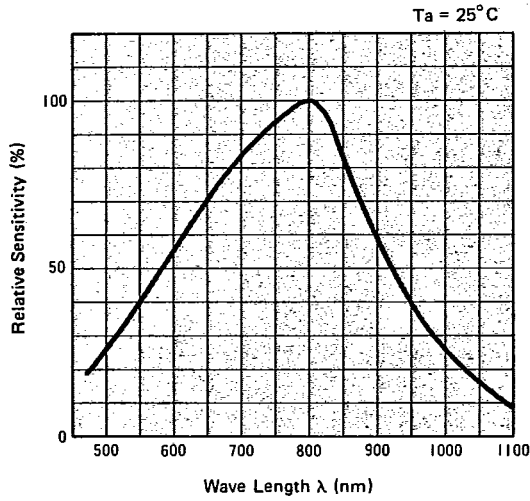
■ Collector Dissipation Vs. Ambient Temp.



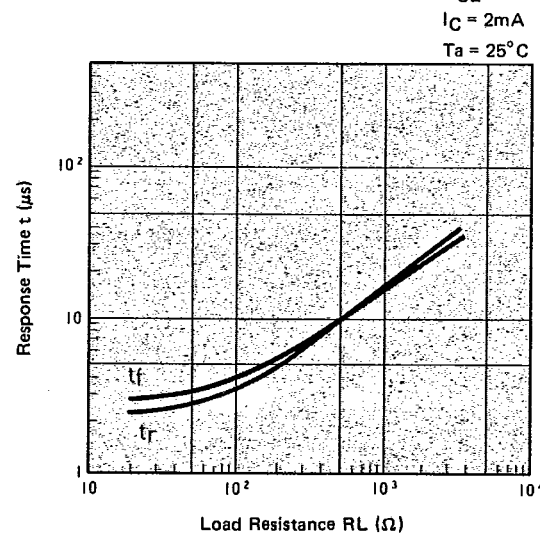
■ Dark Current Vs. Ambient Temp.



■ Spectral Sensitivity Characteristics



■ Response Time Vs. Load Resistance



■ Response Time Measuring Circuit

