

T-41-63

PHOTODARLINGTON TRANSISTOR

PD306

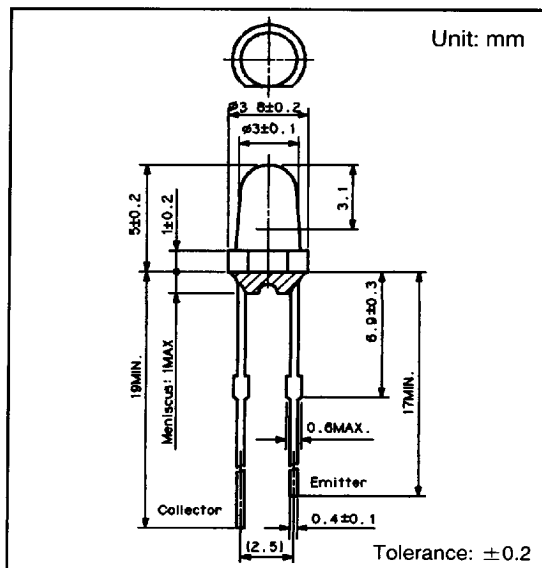
■ FEATURES

- HIGH DIRECTIVITY LENS
- 3mm DIA. MOLDED EPOXY TYPE

■ APPLICATION

- PHOTSENSOR
- PHOTO SWITCH

■ Package Dimensions



■ Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Maximum Ratings	Unit
Collector Dissipation	Pc	100	mW
Collector-Emitter Breakdown Voltage	V _{CEO}	20	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

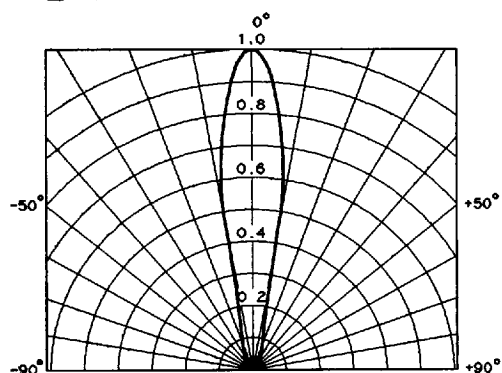
■ Electro-Optical Characteristics

(Ta = 25°C)

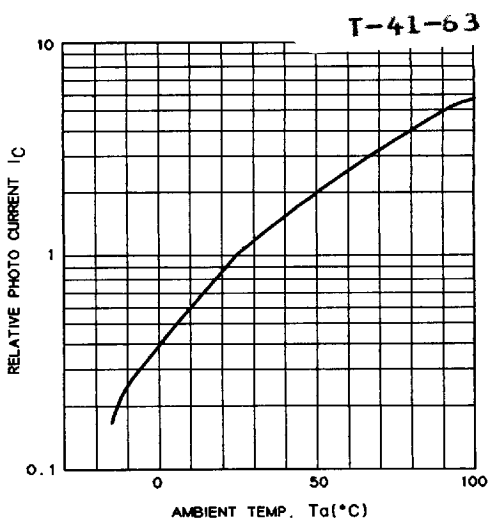
Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-Emitter Dark Current	I _{CED}	—	—	1.0	μA	V _{CE} = 10V
Photo Current	I _c	0.5	2	—	mA	V _{CE} = 5V, E _e = 0.01mW/cm ²
Response Time	Leading Time	Tr	—	400	μ sec	V _{CE} = 10V I _c = 2mA, R _L = 100Ω
	Tailing Time	Tf	—	400	μ sec	
Peak Sensitivity Wavelength	λ _p	—	800	—	nm	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	0.7	—	V	I _c = 2mA, E _e = 10mW/cm ²

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

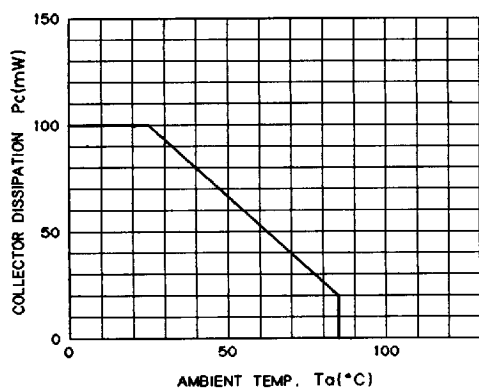
■ DIRECTIVITY CHARACTERISTICS



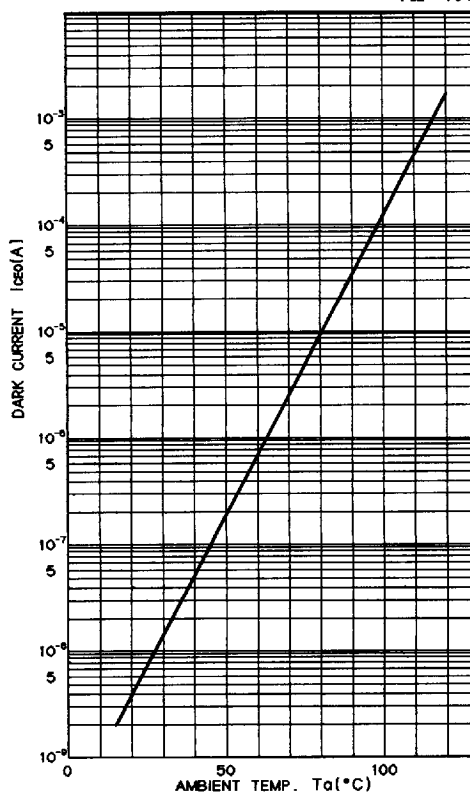
■ PHOTO CURRENT vs. AMBIENT TEMP.



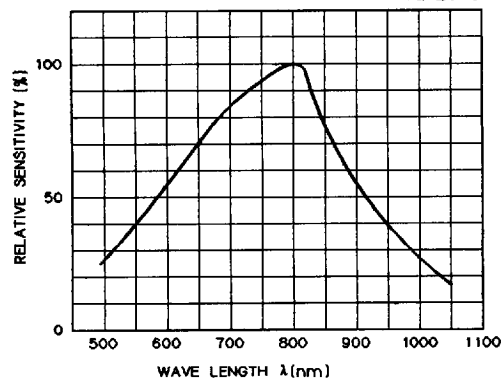
■ COLLECTOR DISSIPATION vs. AMBIENT TEMP.



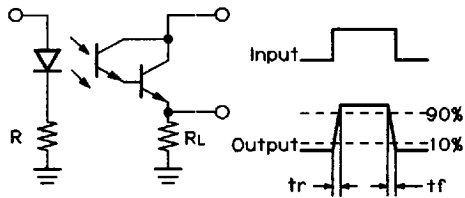
■ DARK CURRENT vs. AMBIENT TEMP.

 $V_{CE} = 10V$ 

■ SPECTRAL SENSITIVITY CHARACTERISTICS

 $T_a = 25^{\circ}\text{C}$ 

■ RESPONSE TIME MEASURING CIRCUIT



■ RESPONSE TIME vs. LOAD RESISTANCE

$V_{CE} = 10V$
 $I_C = 2mA$
 $T_a = 25^\circ C$

