



T-41-63

PHOTODARLINGTON TRANSISTOR

PD201

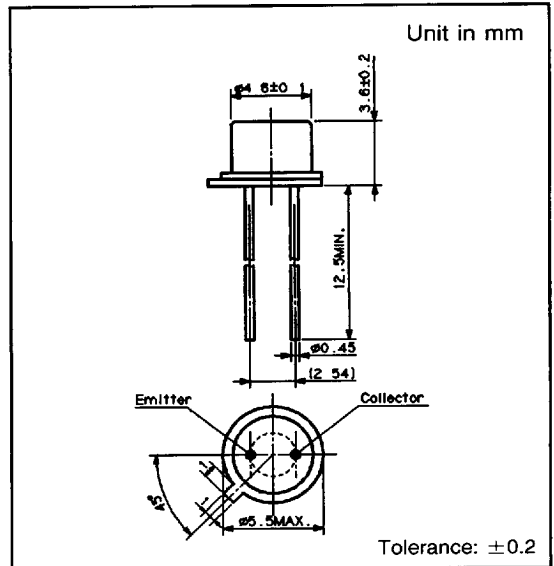
FEATURES

- HIGH SENSITIVITY
($I_c=6\text{mA}$ TYP.)
- HIGH DIRECTIVITY
- TO-18 CAN TYPE, HIGH RELIABILITY

APPLICATION

- OPTICAL SWITCH
- PHOTODIODE
- SMOKE DETECTOR

Package Dimensions



Absolute Maximum Ratings

(Ta=25°C)

Item	Symbol	Maximum Ratings	Unit
Collector Dissipation	Pc	150	mW
Collector-Emitter Breakdown Voltage	V _{CEO}	20	V
Emitter-Collector Breakdown Voltage	V _{ECO}	5	V
Collector Current	I _c	50	mA
Operating Temperature	T _{opr}	-30 ~ +125	°C
Storage Temperature	T _{stg}	-30 ~ +150	°C

Electro-Optical Characteristics

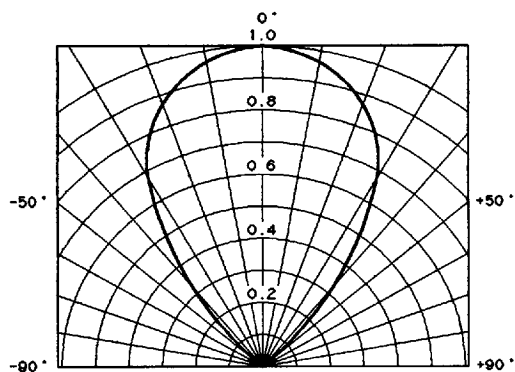
(Ta=25°C)

Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-Emitter Dark Current	I _{CEO}	—	—	1	μA	V _{CE} = 10V
Photo Current	I _c	2	6	—	mA	V _{CE} = 5V, *E _e = 0.1mW/cm ²
Response Time	Leading Time	Tr	400	—	μ sec	V _{CE} = 10V I _c = 2mA, R _L = 100Ω
	Trailing Time	T _f	400	—	μ sec	
Peak Sensitivity Wavelength	λ _p	—	800	—	nm	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	0.7	—	V	I _c = 5mA, *E _e = 10mW/cm ²

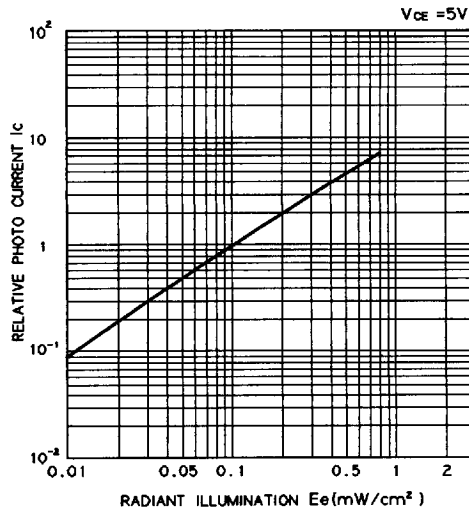
* At color temp. 2856°K standard tungsten filament bulb.

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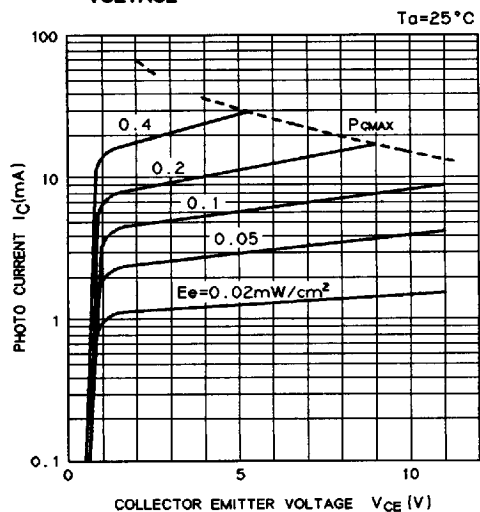
■ DIRECTIVITY CHARACTERISTICS



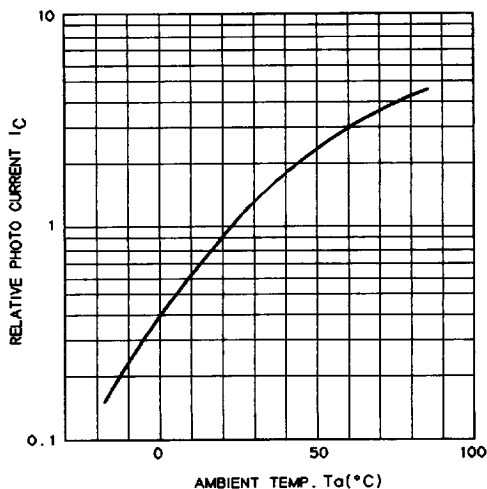
■ RELATIVE PHOTO CURRENT vs. RADIANT ILLUMINATION



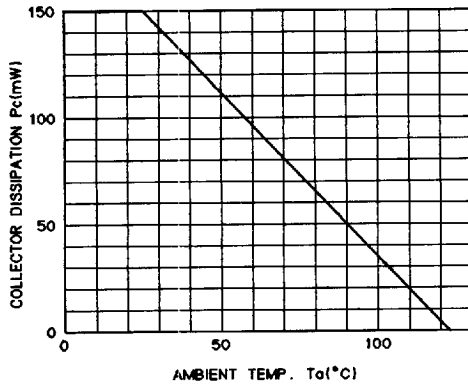
■ PHOTO CURRENT vs. COLLECTOR EMITTER VOLTAGE



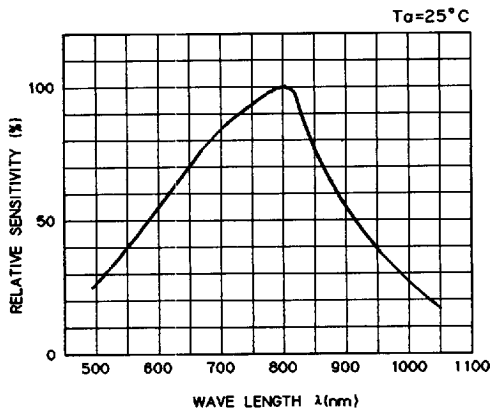
■ PHOTO CURRENT vs. AMBIENT TEMP.



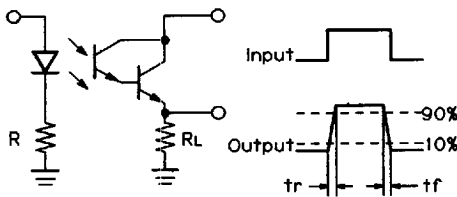
■ COLLECTOR DISSIPATION vs. AMBIENT TEMP.



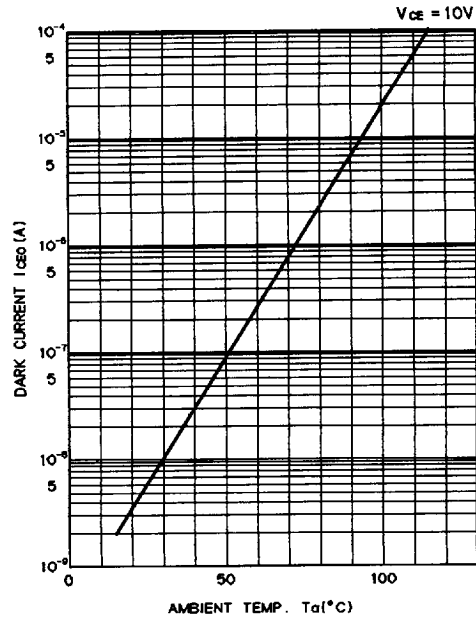
■ SPECTRAL SENSITIVITY CHARACTERISTICS



■ RESPONSE TIME MEASURING CIRCUIT



■ DARK CURRENT vs. AMBIENT TEMP.



■ RESPONSE TIME vs. LOAD RESISTANCE

