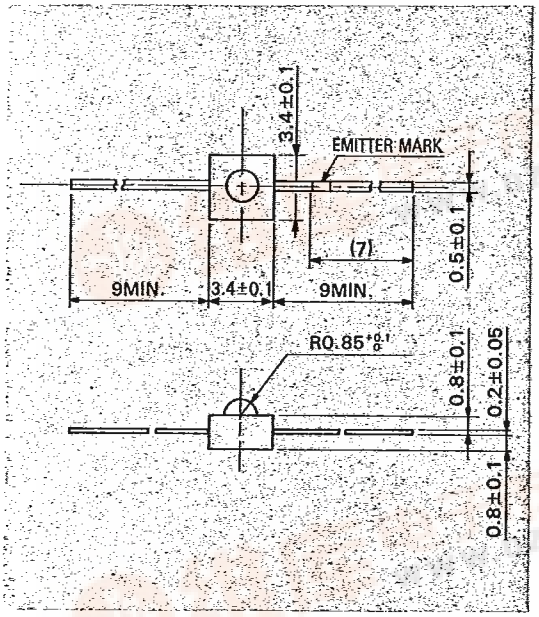
STANLEY

STANLEY PHOTO DARLINGTONTRANSISTOR

PD502

T-41-63

■ Package Dimensions



■ FEATURES

(1) Midget resin package of 3.4 mm dia. permits use in limited space
(2) High photo current
(Typ. 4mA at Ee = 0.01mW/cm²)

■ APPLICATIONS

(1) Photoelectric switch, photoelectric counter
(2) Tape and card readers
(3) Position-rotation detection
(4) Infrared ray applied devices

■ Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Maximum Ratings	Unit
Collector Dissipation	Pc	60	mW
Collector-Emitter Breakdown Voltage	V_{CEO}	20	V
Emitter-Collector Breakdown Voltage	V_{ECO}	5	V
Collector Current	Ic	20	mA
Operating Temperature	Topr	−30 ~ +85	℃
Storage Temperature	Tstg	−30 ~ +100	℃

■ 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}	——	——	1	μA	V_{CE} = 10 V、Ee = 0
Photo current		Ic	1	4	——	mA	V_{CE} = 5 V、*Ee=0.01mW/cm²
Response Time	Rise	t_r	——	400	——	μ sec	Vcc = 10 V
	Fall	t_f	——	400	——	μ sec	Ic = 2mA、RL = 100 Ω
Peak Sensitivity Wavelength		λp	——	800	——	nm	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	——	0.7	——	V	Ic = 5mA、*Ee = 10mW/cm²

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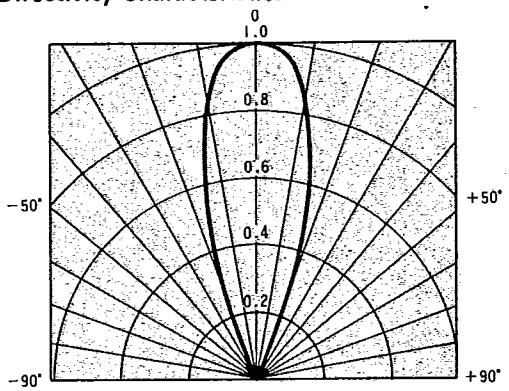
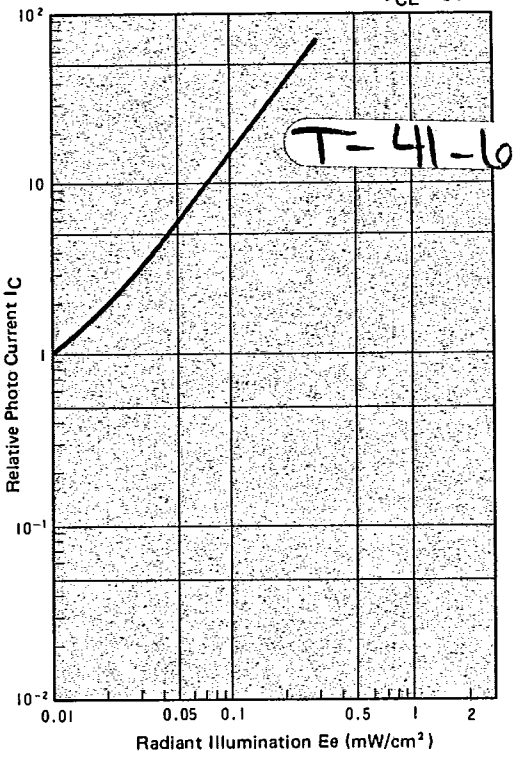
■ Directivity Characteristics



■ Relative Photo Current Vs. Radiant Illumination



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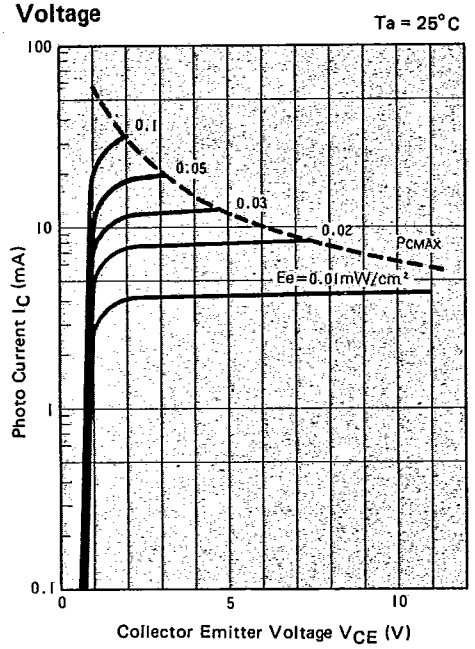
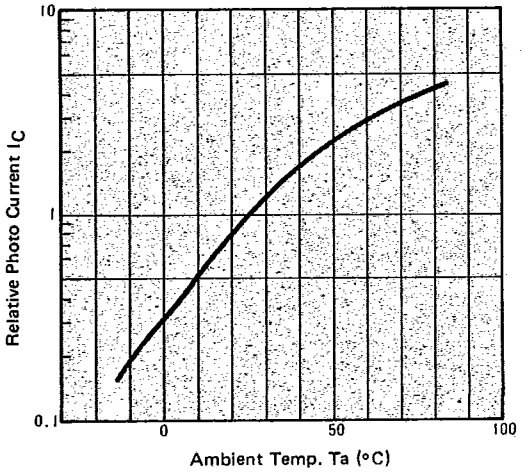
■ Photo Current Vs. Collector Emitter Voltage



■ Photo Current Vs. Ambient Temp.



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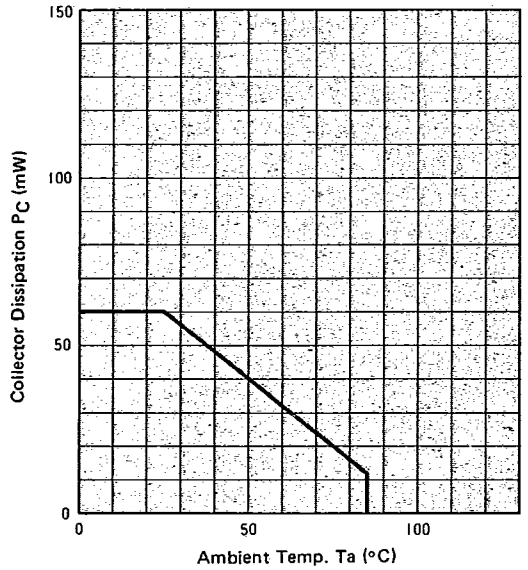
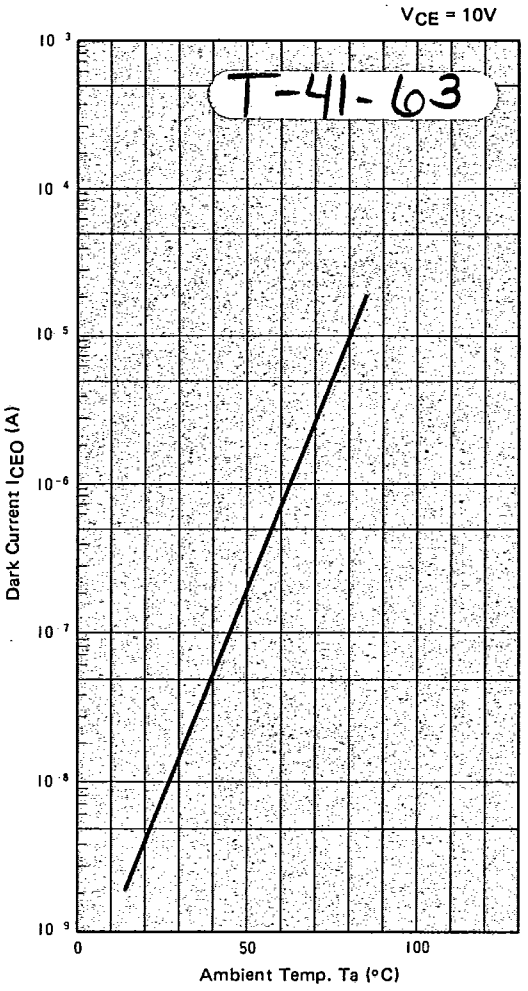
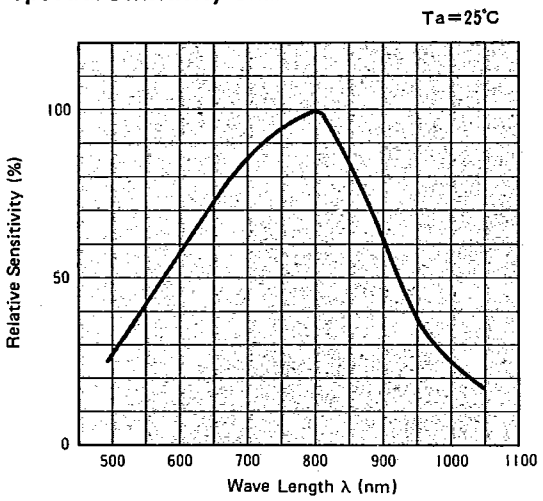
■ Collector Dissipation Vs. Ambient Temp.



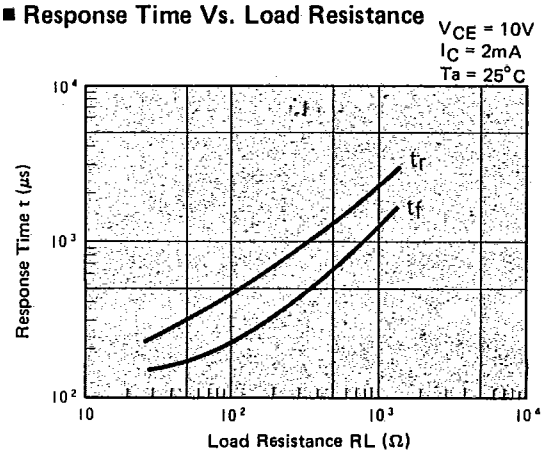
■ Dark Current Vs. Ambient Temp.



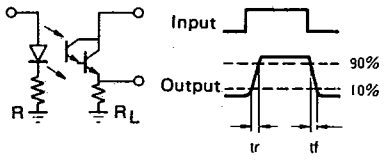
■ Spectral Sensitivity Characteristics



■ Response Time Vs. Load Resistance



■ Response Time Measuring Circuit



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