

PT361/PT361F

Compact Type Intermediate acceptance Phototransistor

T-41-63

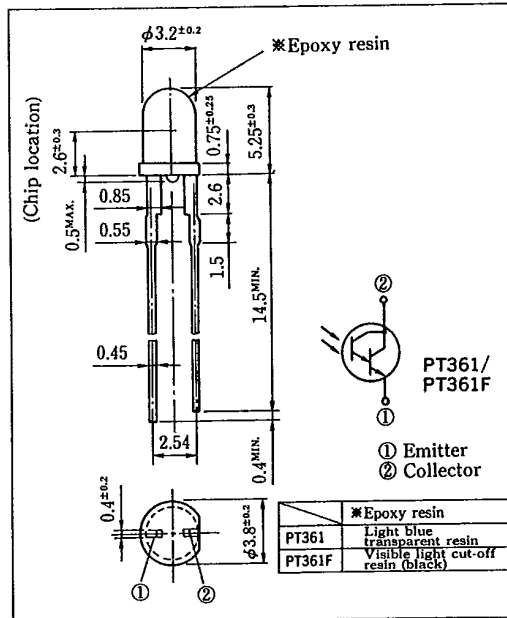
Features

1. $\phi 3.2$ mm compact epoxy resin package
2. High sensitivity
(I_c : MIN. 0.1mA at $E_v = 2lx$)
3. Intermediate acceptance ($\Delta\theta$: TYP. $\pm 20^\circ$)
4. Lead pins space : 2.54mm
5. Visible light cut-off type : PT361F

Applications

1. VCRs, Video cameras
2. Floppy disk drives
3. Optoelectronic switches

Outline Dimensions (Unit : mm)



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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CE0}	35	V
Emitter-collector voltage	V_{ECO}	6	V
Collector current	I_c	50	mA
Collector power dissipation	P_c	50	mW
Operating temperature	T_{opr}	-25 ~ +85	°C
Storage temperature	T_{stg}	-25 ~ +85	°C
*1 Soldering temperature	T_{sol}	260	°C

*1 For 5 seconds at the position of 2.6mm from the bottom face of resin package

Electro-optical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Collector current	I_c	$V_{CE}=10V, E_v=2lx (E_e=0.01mW/cm^2)$	0.1	0.2	0.467	mA
Collector dark current	I_{CE0}	$V_{CE}=10V, E_e=0$	—	—	10^{-6}	A
*2 Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c=2.5mA, E_e=1mW/cm^2$	—	0.8	1.0	V
Peak sensitivity wavelength	PT361	λ_p	—	800	—	nm
	PT361F		—	860	—	nm
Response time (Rise)	t_r	$V_{CE}=2V, I_c=10mA$	—	100	400	μs
Response time (Fall)	t_f	$R_L=100\Omega$	—	100	400	

*2 E_v, E_e : Illuminance, irradiance by CIE standard light source A (tungsten lamp)

Fig. 1 Collector Power Dissipation vs. Ambient Temperature

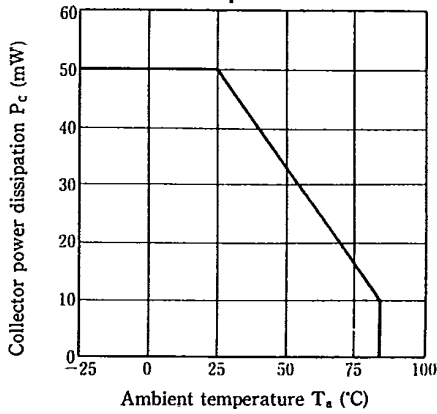


Fig. 2 Collector Dark Current vs. Ambient Temperature

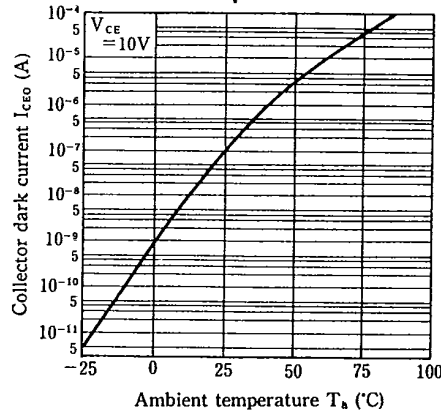


Fig. 3 Relative Collector Current vs. Ambient Temperature

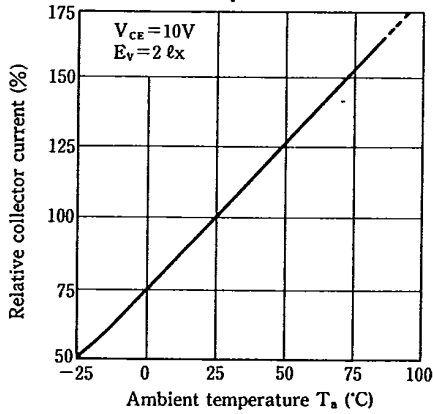


Fig. 4 Collector Current vs. Irradiance

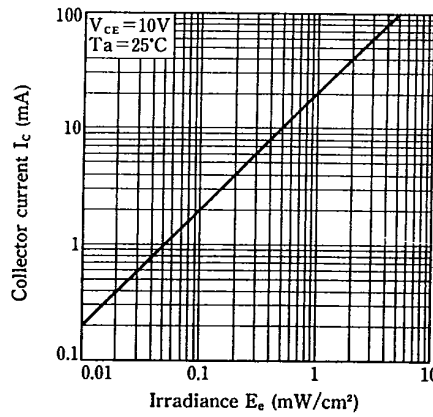


Fig. 5 Collector Current vs. Collector-emitter Voltage

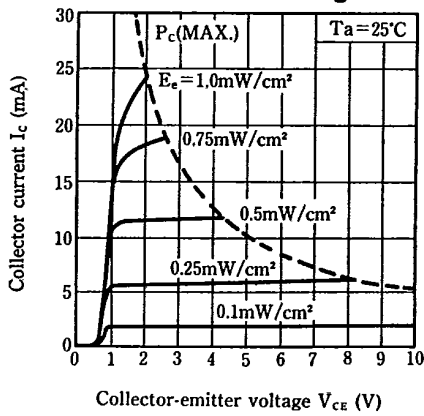


Fig. 6 Spectral Sensitivity

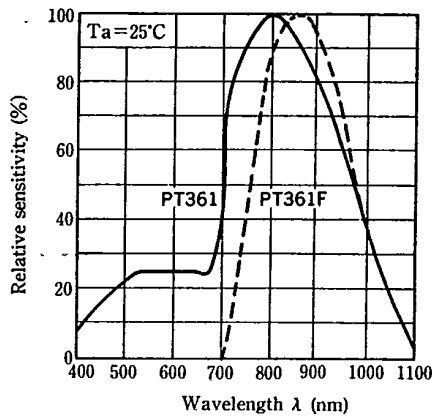
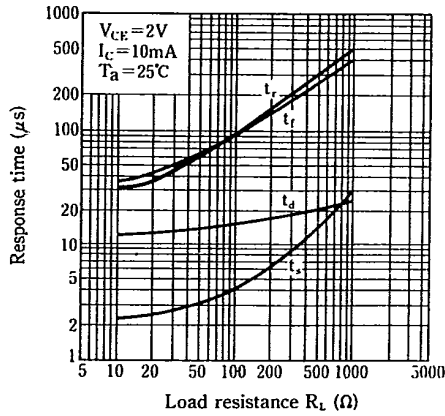


Fig. 7 Response Time vs. Load Resistance



Test Circuit for Response Time

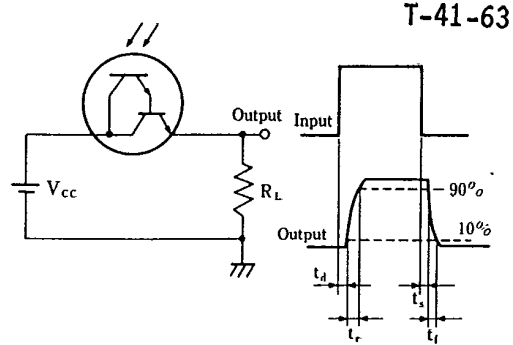


Fig. 8 Sensitivity Diagram ($T_a = 25^\circ C$)

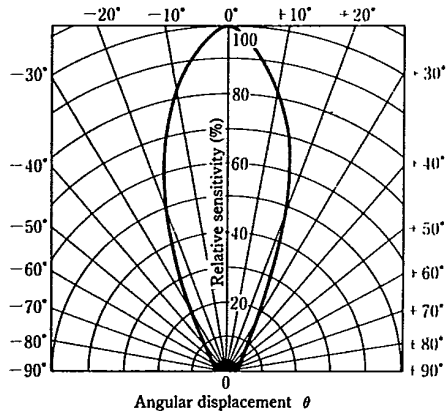
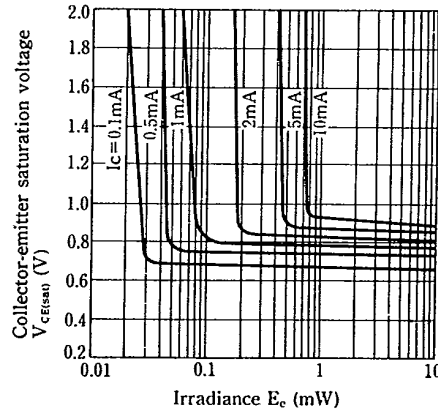


Fig. 9 Collector-emitter Saturation Voltage vs. Irradiance



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