PT361/PT361F

Compact Type Intermediate acceptance Phototransistor

T-41-6

■ Features

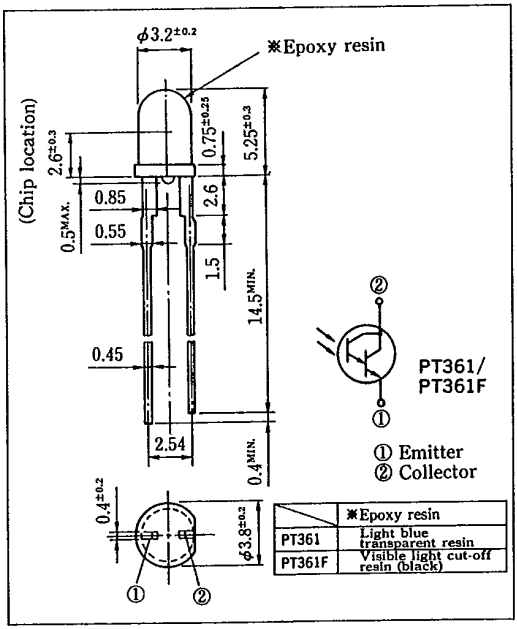
1. ϕ3.2mm compact epoxy resin package
2. High sensitivity
   (I_C : MIN. 0.1mA at E_V=2ℓx)
3. Intermediate acceptance ($\Delta\theta$: TYP. ±20°)
4. Lead pins space : 2.54mm
5. Visible light cut-off type : PT361F

■ Applications

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

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CEO}	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=2 lx (E_e=0.01mW/cm²)	0.1	0.2	0.467	mA
Collector dark current		I_{CEO}	V_{CE}=10V, E_e=0	—	—	10^{-6}	A
*2 Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=2.5mA, E_e=1mW/cm²	—	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=100Ω	—	100	400	μs

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

Fig. 1 Collector Power Dissipation vs. Ambient Temperature

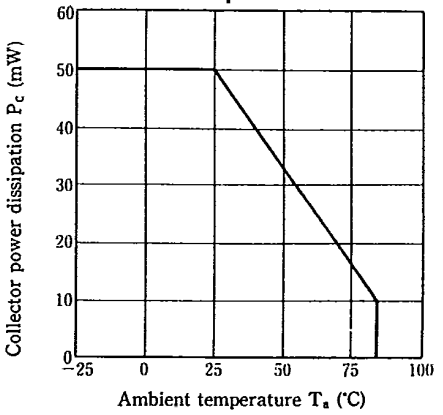


Fig. 2 Collector Dark Current vs. Ambient Temperature

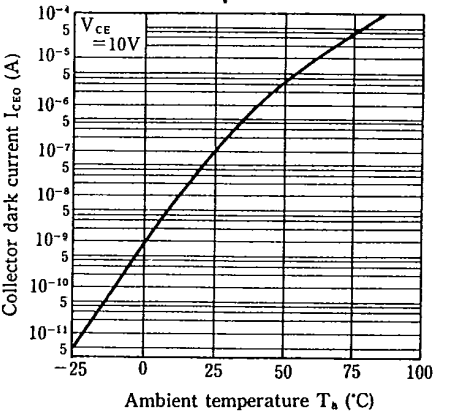


Fig. 3 Relative Collector Current vs. Ambient Temperature

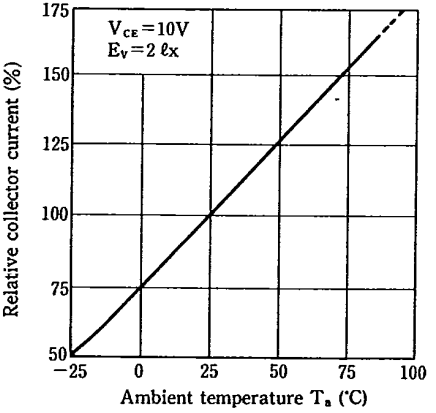


Fig. 4 Collector Current vs. Irradiance

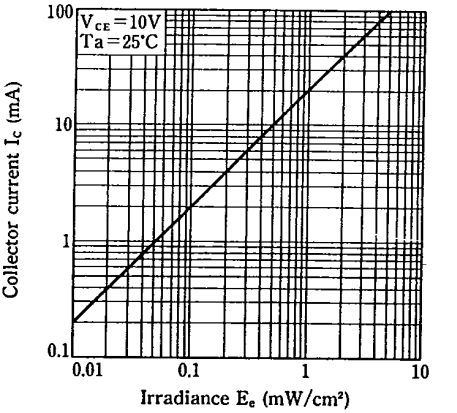


Fig. 5 Collector Current vs. Collector-emitter Voltage

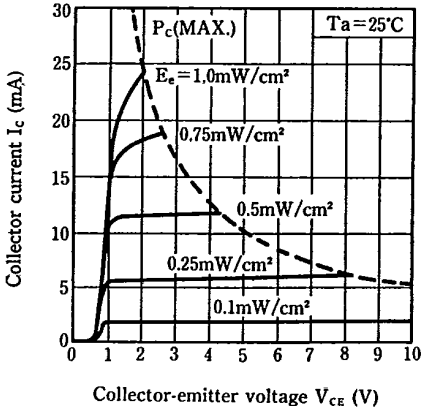


Fig. 6 Spectral Sensitivity

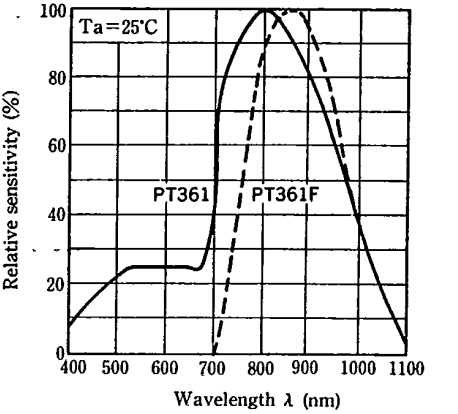
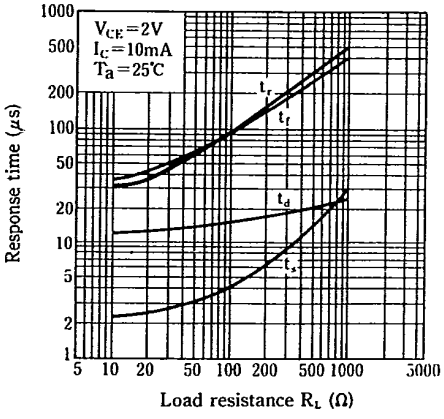


Fig. 7 Response Time vs. Load Resistance



Test Circuit for Response Time

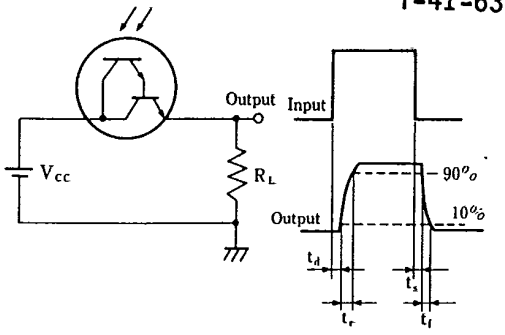


Fig. 8 Sensitivity Diagram (T_a=25°C)

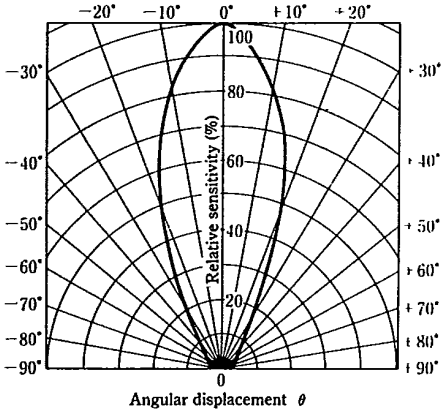


Fig. 9 Collector-emitter Saturation Voltage vs. Irradiance