T-41-61

PT360/PT360F Compact Type Phototransistor

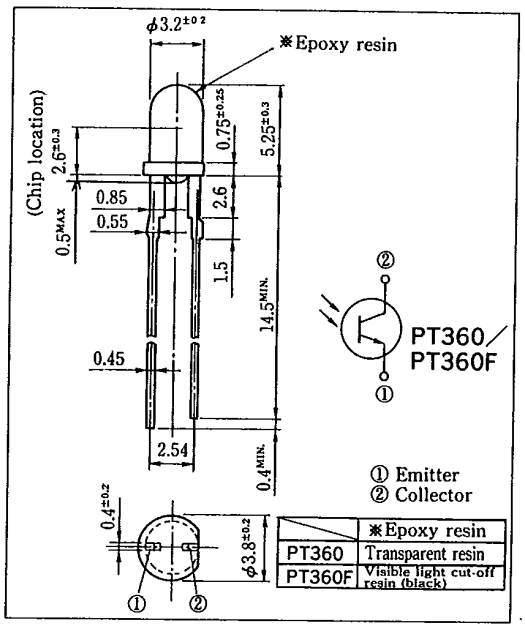
■ Features

1. ϕ3.2mm compact type epoxy resin package
2. Intermediate acceptance($\triangle\theta$: TYP. $\pm$20°)
3. Lead pins space: 2.54mm
4. Visible light cut-off type: PT360F

■ Applications

1. VCRs, Video camera
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	20	mA
Collector power dissipation	P_C	50	mW
Operating temperature	T_{opr}	−25~+85	°C
Storage temperature	T_{stg}	−25~+85	°C
*1Soldering 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
*2Collector current		I_C	V_{CE}=5V, E_V=100 lx (E_e=0.52mW/cm²)	75	200	420	μA
Collector dark current		I_{CEO}	V_{CE}=20V, E_e=0	—	2×10^{-9}	10^{-7}	A
*2Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=0.5mA, E_e=10mW/cm²	—	0.2	0.4	V
Peak sensitivity wavelength	PT360	λ_P		—	800	—	nm
	PT360F			—	860	—	nm
Response time (Rise)		t_r	V_{CE}=20V, I_C=1mA	—	10	40	μs
Response time (Fall)		t_f	R_L=1kΩ	—	8	35	μs

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

Fig. 1 Collector Power Dissipation vs. Ambient Temperature

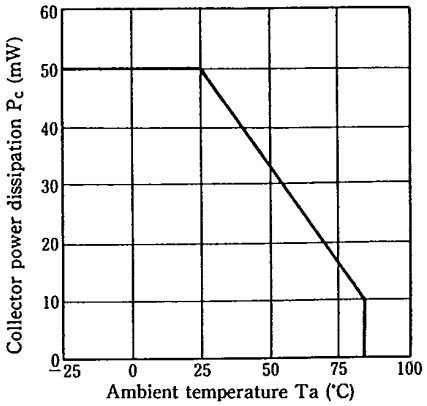


Fig. 2 Collector Dark Current vs. Ambient Temperature

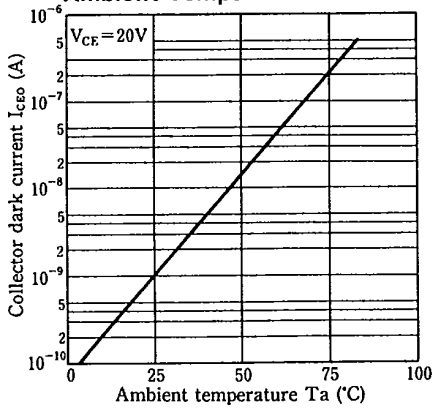


Fig. 3 Relative Collector Current vs. Ambient Temperature

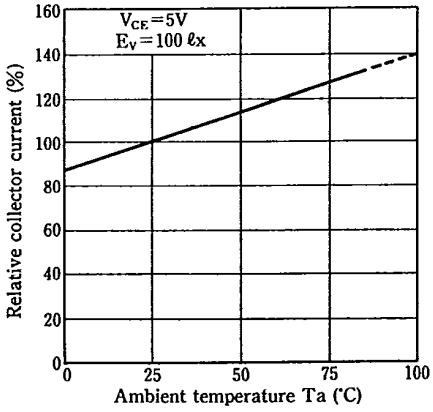


Fig. 4 Collector Current vs. Irradiance

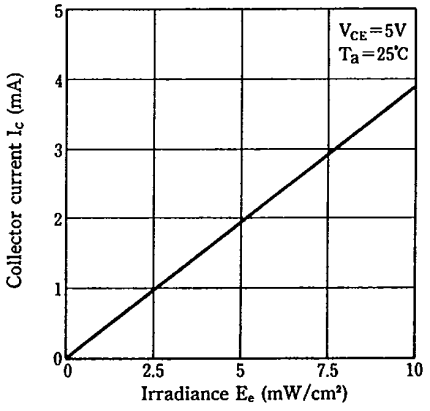


Fig. 5 Collector Current vs. Collector-emitter Voltage

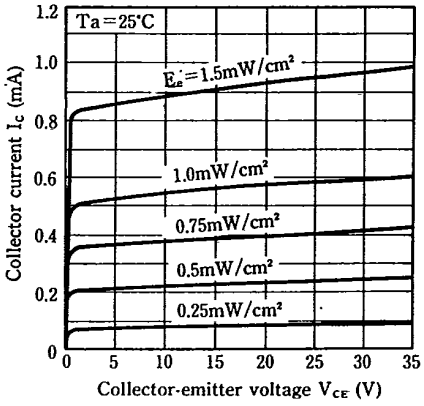
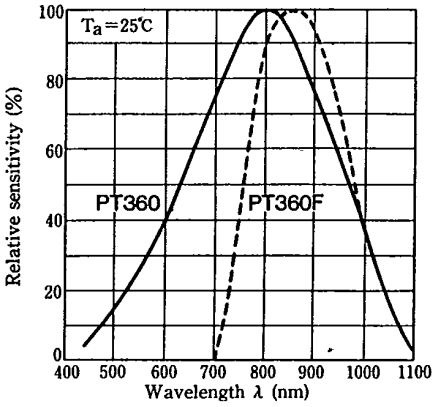
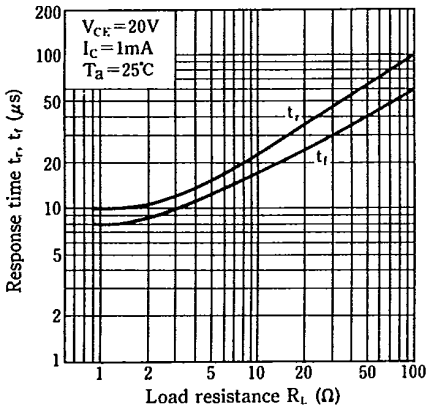


Fig. 6 Spectral Sensitivity



5

Fig. 7 Response Time vs. Load Resistance



Test Circuit for Response Time

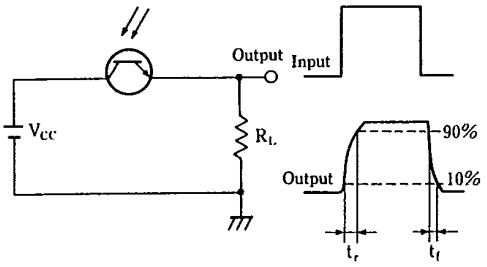


Fig. 8 Sensitivity Diagram (T_a=25°C)

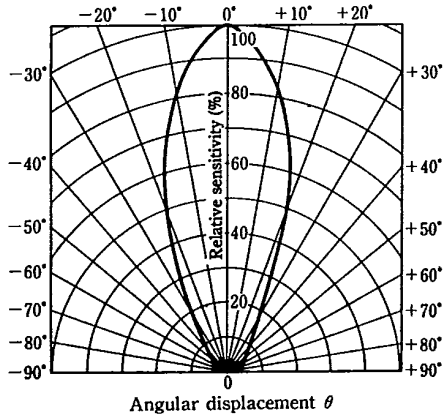


Fig. 9 Collector-emitter Saturation Voltage vs. Irradiance

