

# PT360/PT360F

## Compact Type Phototransistor

### ■ Features

1.  $\phi$  3.2mm compact type epoxy resin package
2. Intermediate acceptance ( $\Delta\theta$ : TYP.  $\pm 20^\circ$ )
3. Lead pins space : 2.54mm
4. Visible light cut-off type : **PT360F**

### ■ Applications

1. VCRs, Camcorders
2. Floppy disk drives
3. Optoelectronic switches

### ■ 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	$I_C$	20	mA
Collector power dissipation	$P_C$	50	mW
Operating temperature	$T_{opr}$	-25 to +85	°C
Storage temperature	$T_{stg}$	-25 to +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

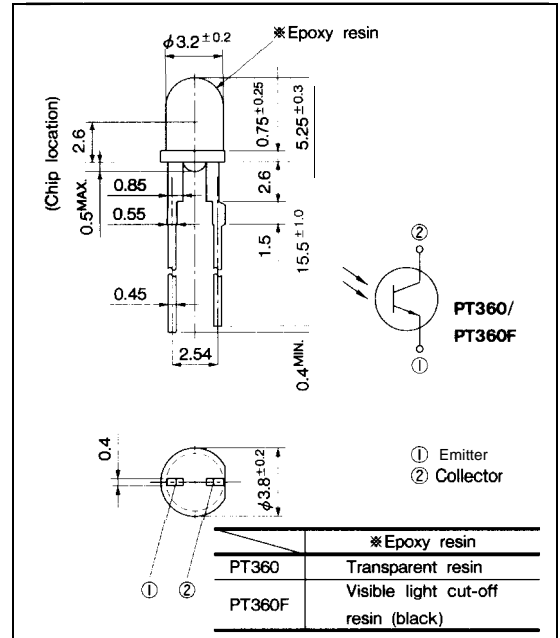
(Ta = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Collector current	$I_C$	$V_{CE}=5V, E_v=100 \ell X (E_e=0.52mW/cm^2)$	75	200	420	$\mu A$
Collector dark current	$I_{CEO}$	$V_{CE}=20v, E_e=0$	—	$2 \times 10^{-9}$	$10^{-7}$	A
*Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=0.5mA, E_e=10mW/cm^2$	—	0.2	0.4	v
Peak sensitivity Wavelength	$\lambda_p$		—	800	—	nm
			—	860	—	nm
Response time	Rise time	$V_{CE}=20V, I_C=1mA$ $R_L=1k\Omega$	—	10	40	$\mu s$
	Fall time		—	8	35	

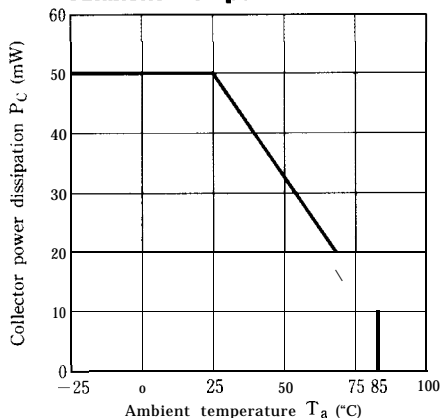
\*2  $E_v, E_e$ : Illuminance, irradiance by CIE standard light source A (tungsten lamp)

### ■ Outline Dimensions

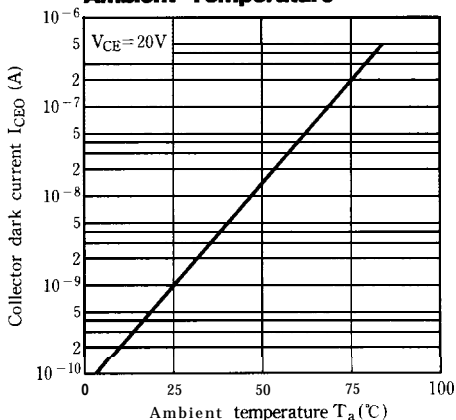
(Unit : mm)



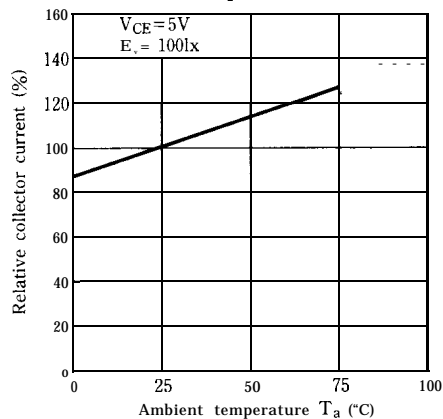
**Fig. 1 Collector Power Dissipation vs. Ambient Temperature**



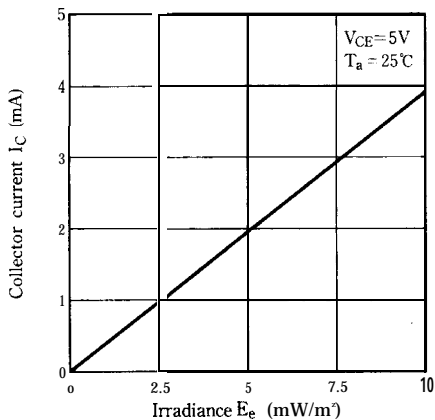
**Fig. 2 Collector Dark Current vs. Ambient Temperature**



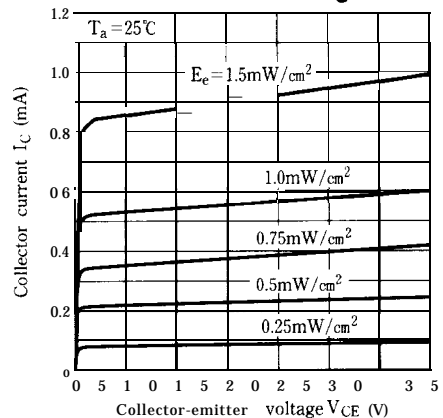
**Fig. 3 Relative Collector Current vs. Ambient Temperature**



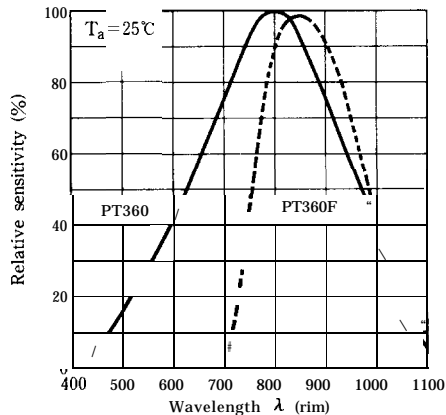
**Fig. 4 Collector Current vs. Irradiance**



**Fig. 5 Collector Current vs. Collector-emitter Voltage**

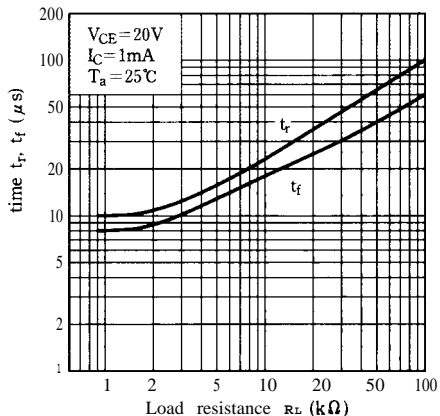


**Fig. 6 Spectral Sensitivity**

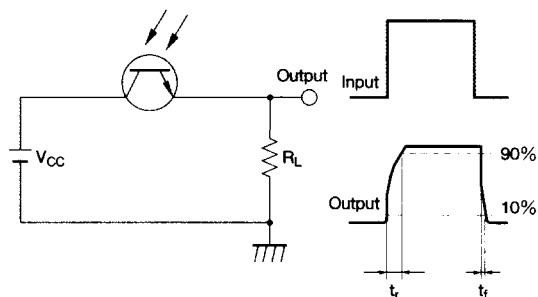


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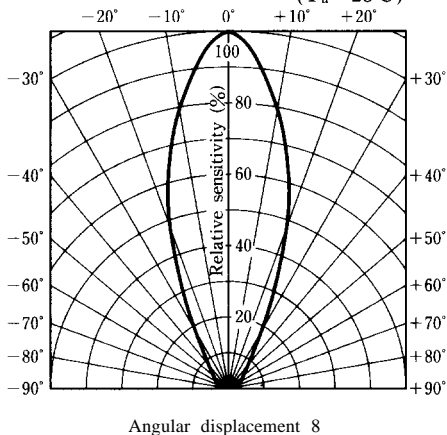
**Fig. 7 Response Time vs. Load Resistance**



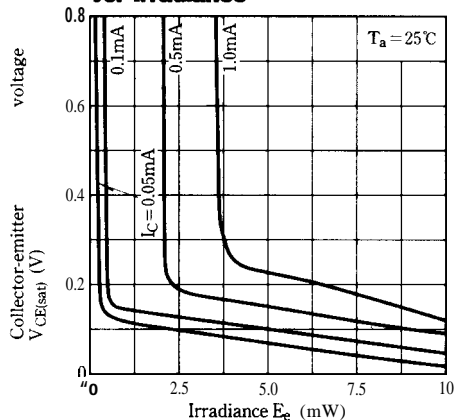
**Test Circuit for Response Time**



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



**Fig. 9 Collector-emitter Saturation Voltage vs. Irradiance**



● Please refer to the chapter “Precautions for Use.” (Page 78 to 93)