

# PT361/PT361F

Compact Type Intermediate acceptance Phototransistor

T-41-63

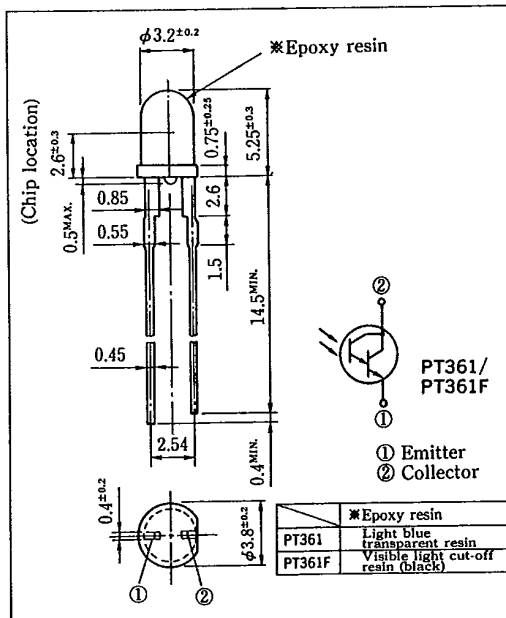
### Features

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

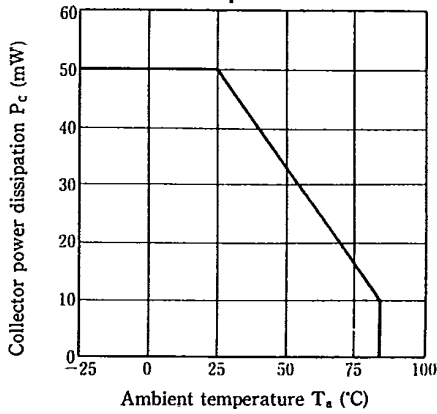
\*1 For 5 seconds at the position of 2.6mm from the bottom face of resin package

### Electro-optical Characteristics (Ta=25°C)

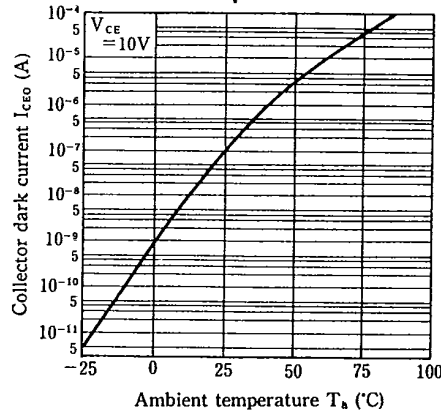
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Collector current	$I_c$	$V_{CE} = 10V, E_v = 2 lx (E_e = 0.01mW/cm^2)$	0.1	0.2	0.467	mA
Collector dark current	$I_{CE0}$	$V_{CE} = 10V, E_e = 0$	—	—	$10^{-6}$	A
*2 Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 2.5mA, E_e = 1mW/cm^2$	—	0.8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

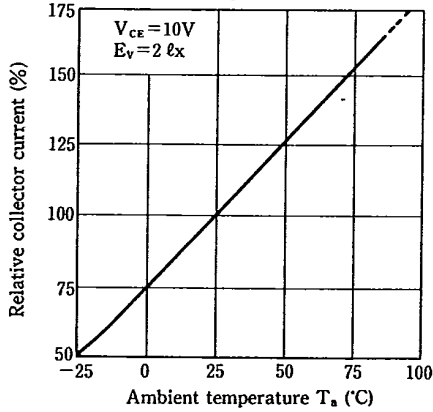
**Fig. 1 Collector Power Dissipation vs. Ambient Temperature**



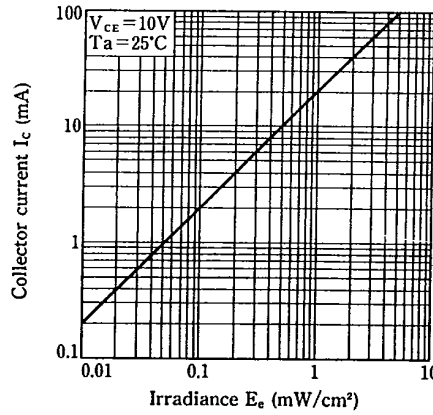
**Fig. 2 Collector Dark Current vs. Ambient Temperature**



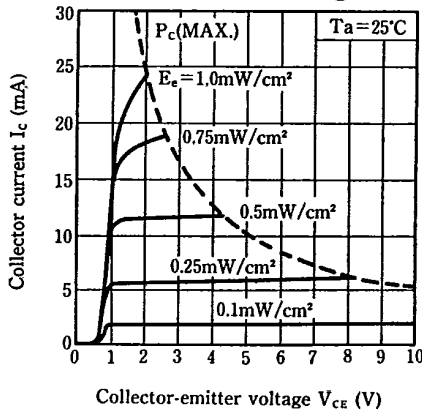
**Fig. 3 Relative Collector Current vs. Ambient Temperature**



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



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



**Fig. 6 Spectral Sensitivity**

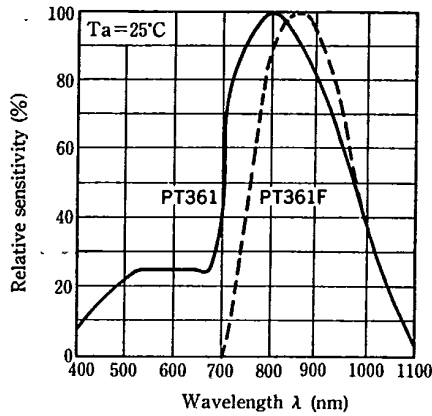
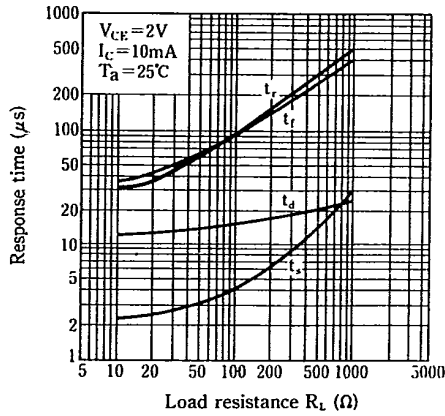


Fig. 7 Response Time vs. Load Resistance



Test Circuit for Response Time

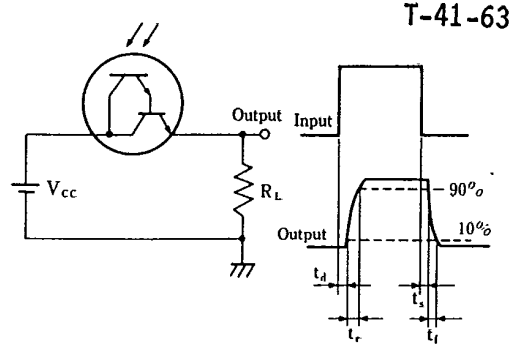


Fig. 8 Sensitivity Diagram ( $T_a = 25^\circ C$ )

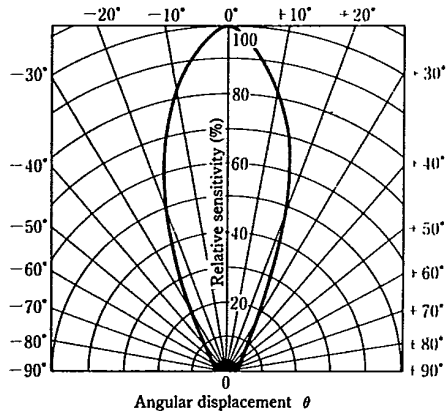
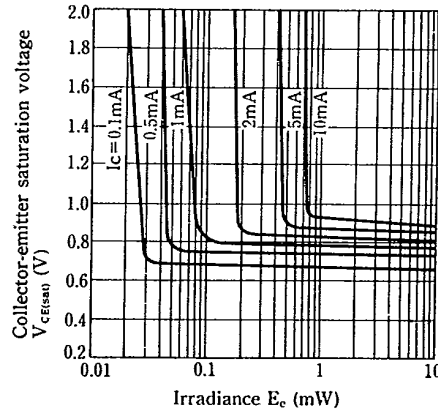


Fig. 9 Collector-emitter Saturation Voltage vs. Irradiance



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