PT495F

Intermediate Acceptance High Sensitivity Phototransistor

■ Features

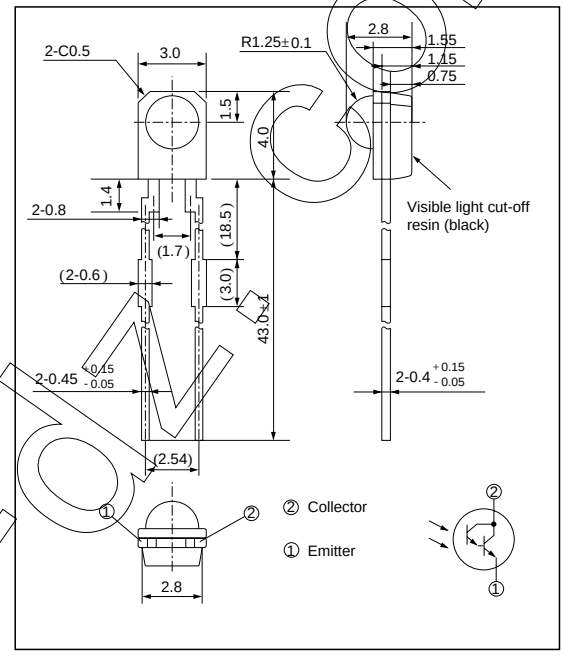
1. Epoxy resin package type
2. Compact
3. Intermediate acceptance (Δθ : TYP.± 40˚)
4. Long lead pin type (MAX. lead length of 51.5 mm acceptable to order)
5 . Visible light cut-off type

■ Applications

1. VCRs
2. Optoelectronic switches

■ Outline Dimensions

(Unit : mm)



(Note) MAX. lead length of 51.5 mm acceptable to order

■ 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	75	mW
Operating temperature	T_{opr}	-25 to +85	˚C
Storage temperature	T_{stg}	-40 to +85	˚C
*1 Soldering temperature	T_{sol}	260	˚C

*1 1 For 3 seconds at the position of 1.4 mm from the resin edge

■ Electro-optical Characteristics

(Ta=25˚C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2Collector current		I_C	V_{CE} = 2V, E_V = 2 lx	0.2	-	0.8	mA
Dark current		I_{CEO}	V_{CE} = 10V, E_e = 0	-	-	10^{-6}	A
*2Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C = 0.8mA, E_e = 1mW/cm²	-	-	1.0	V
Peak sensitivity wavelength		λ_p	-	-	860	-	nm
Response time	Rise	t_r	V_{CE} = 2V, I_C = 5mA	-	80	400	µs
	Fall	t_f	R_L = 100Ω	-	70	350	
Half intensity angle		Δθ	-	-	± 40	-	°

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

Fig. 1 Collector Power Dissipation vs. Ambient temperature

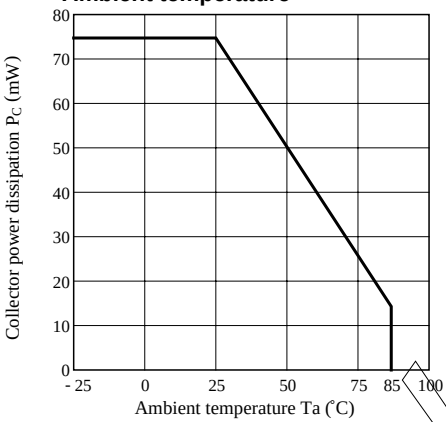


Fig. 2 Dark Current vs. Ambient temperature

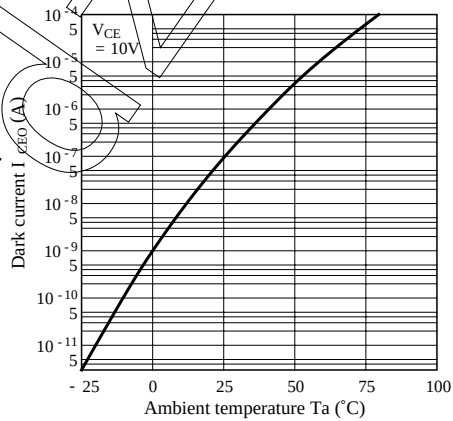


Fig. 3 Relative Collector Current vs. Ambient temperature

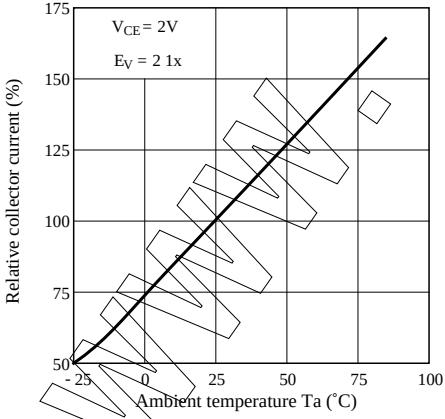


Fig. 4 Collector Current vs. Irradiance

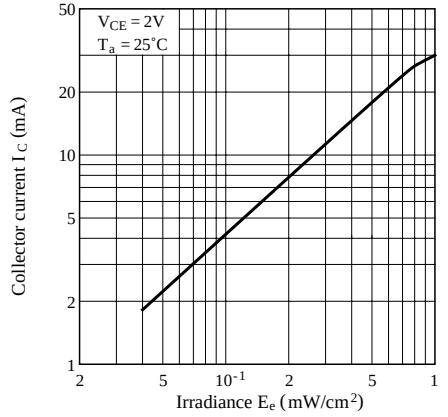


Fig. 5 Collector Current vs. Collector-emitter voltage

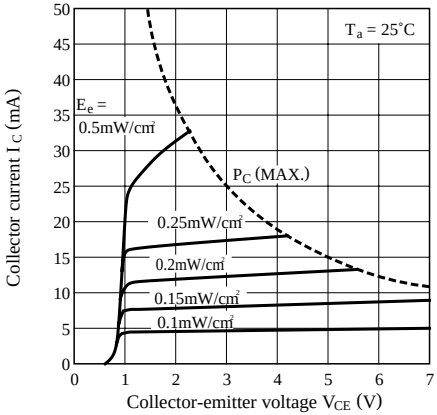


Fig. 6 Spectral Sensitivity

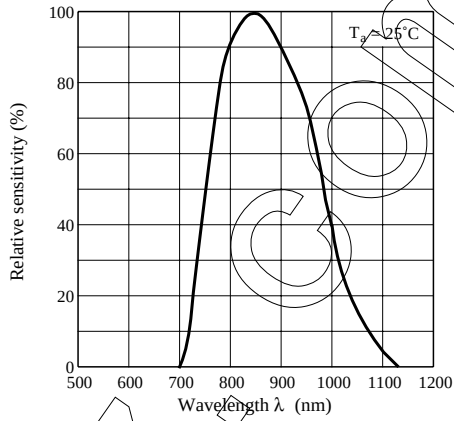
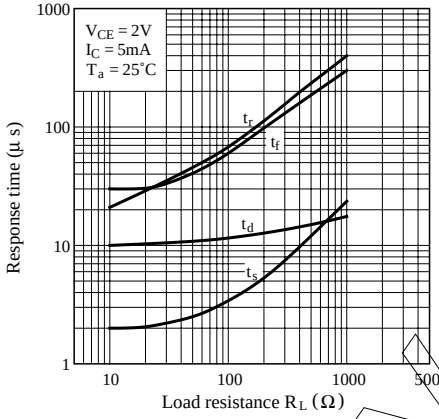


Fig. 7 Response Time vs. Load Resistance



Test Circuit for Response Time

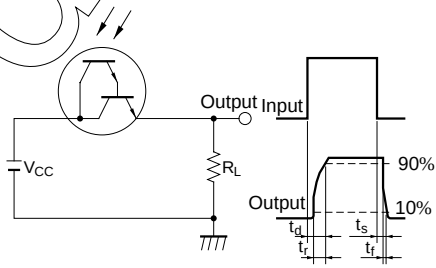


Fig. 8 Radiation Diagram (T_a = 25°C)

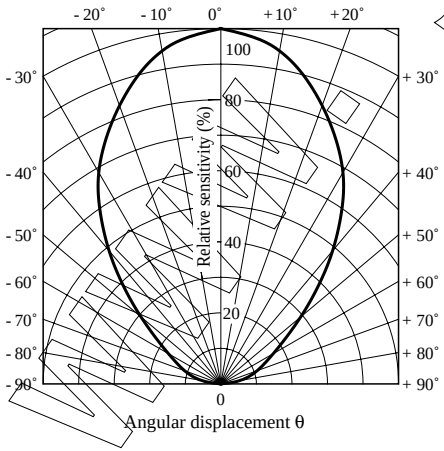
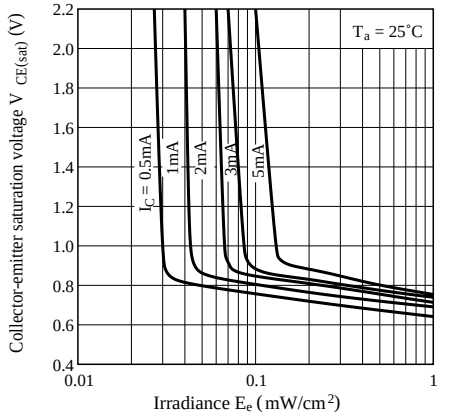


Fig. 9 Collector-emitter Saturation Voltage vs. Irradiance



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

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