

规格承认书

客户名称		光敏管
业务联系人		
联系电话		型号: CYPT-F3E

Light Activated Triode 光敏管

型号: **CYPT-F3E**

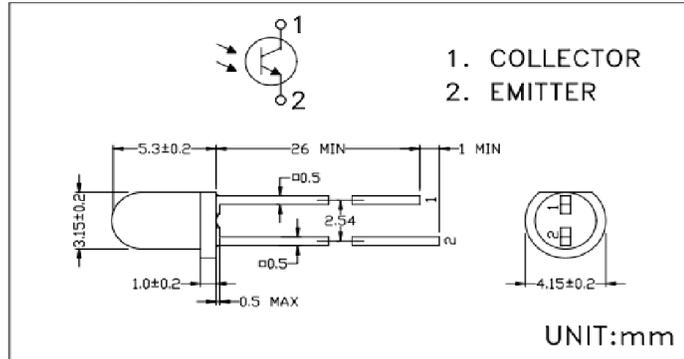
1. General Description:

The CHQPT-F3E is a high sensitivity NPN silicon phototransistor mounted in a compact clear resin package. This phototransistor permits narrow angular response.

2. Features

- Compact (Ø3mm)
- Narrow beam angle ($\pm 20^\circ$)
- Low cost

Dimensions



3. Applications

- ▣ Remoter control sensors
- ▣ Card readers
- ▣ Optical switches

4. Absolute Maximum Ratings

($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Collector Power Dissipation	P_D	100	mW
Operating Temperature	T_{opr}	-20 ~ +65	$^\circ\text{C}$
Storage Temperature	T_{stg}	-20 ~ +85	$^\circ\text{C}$
Soldering Temperature *1	T_{sol}	260	$^\circ\text{C}$

*1 At the position of 2mm from the bottom of the package within 5 seconds.

5. Electro-optical Characteristics

($T_a=25^\circ\text{C}$)

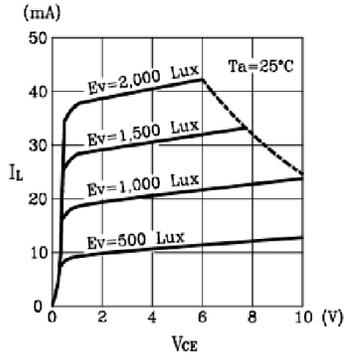
Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Collector Light Current	I_c	$V_{CE}=3\text{V}$, $E_v=1000\text{Lux}$, ($E_e=5\text{mW}/\text{cm}^2$) *2	5	20		mA
Collector Dark Current	I_{CEO}	$V_{CE}=10\text{V}$, $E_e=0$ *2		1	100	nA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c=0.2\text{mA}$, $E_v=2000\text{Lux}$ $E_e=10\text{mW}/\text{cm}^2$ *2			0.4	V
Peak Sensitivity Wavelength	λ_p			880		nm
Spectral Sensitivity	$\Delta\lambda$			450 ~ 1050		nm
Angular Response	$\Delta\theta$			± 20		deg.
Rising Response Time	t_r	$V_{cc}=10\text{V}$, $I_c=1\text{mA}$, $R_L=100\Omega$		2.5		μs
Falling Response Time	t_f			3.8		μs
Magnification A multiple	PD		1000	1250	1500	

*2 E_v , E_e are illuminance irradiant by CIE standard light source A (tungsten lamp) at 2856K

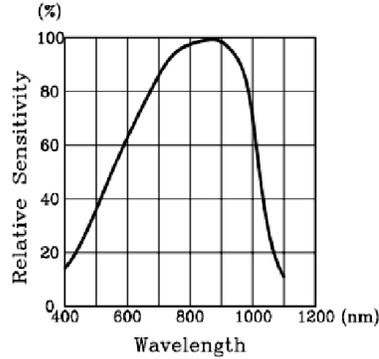
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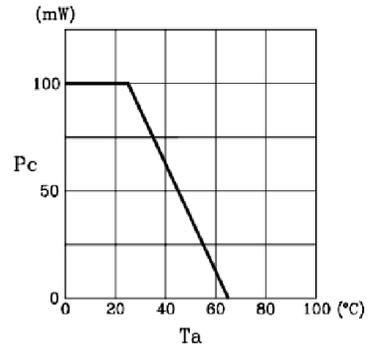
Light Current vs Collector-Emitter Voltage



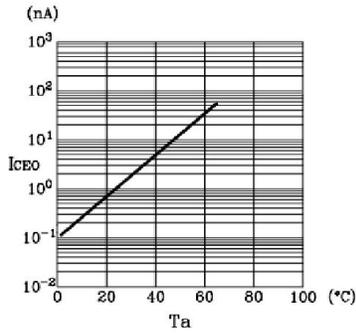
Spectral Sensitivity



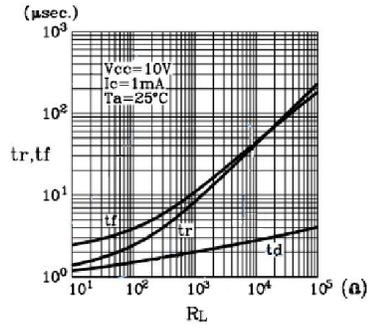
Power Dissipation vs Ambient Temperature



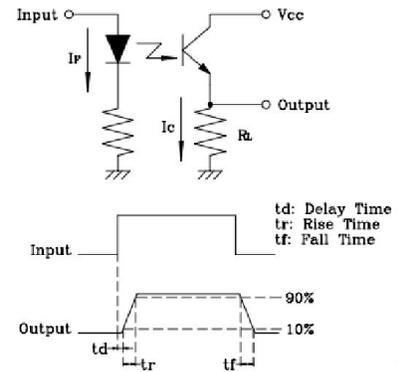
Dark Current vs Ambient Temperature



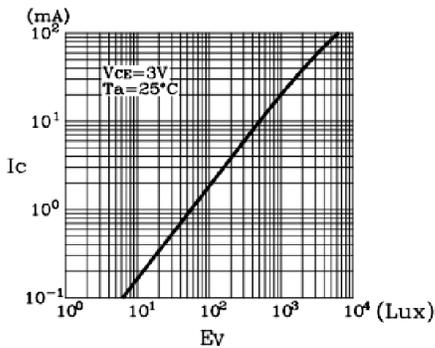
Response Time vs Load Resistance



Response Time Test Conditions



Collector Current vs Luminous Incidence



Sensitivity Diagram

