

# KST - 312

The KST - 312 is a high - sensitivity Silicon phototransistor with two - phase output. This phototransistor is compact , and the best for the mouse.

**FEATURES**

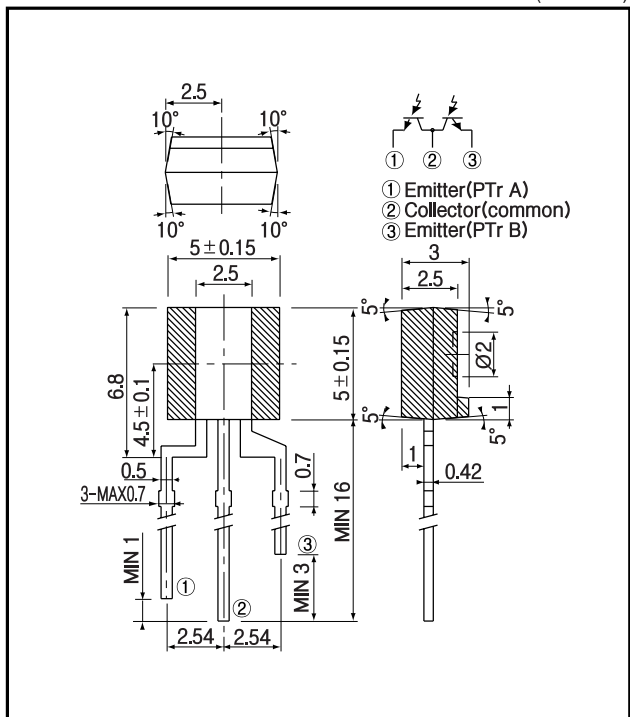
- Visible ray cut off mold type
- Built - in 2ch phototransistors

**APPLICATIONS**

- Optical mouses
- Encoders

**DIMENSIONS**

(Unit : mm)



**MAXIMUM RATINGS**

(Ta=25 )

Item	Symbol	Rating	Unit
C - E voltage	V <sub>CEO</sub>	30	V
E - C voltage	V <sub>ECO</sub>	5	V
Collector current	I <sub>c</sub>	-	mA
Collector power dissipation	P <sub>c</sub>	100	mW
Operating temp.	Topr.	- 25 ~ + 85	
Storage temp.	Tstg.	- 30 ~ + 85	
Soldering temp. *1	Tsol.	260	

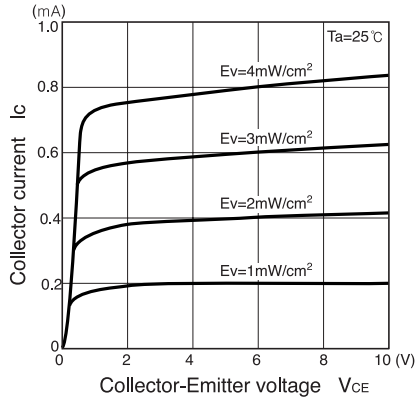
\*1. For MAX.5 seconds at the position of 2 mm from the package

**ELECTRO-OPTICAL CHARACTERISTICS**

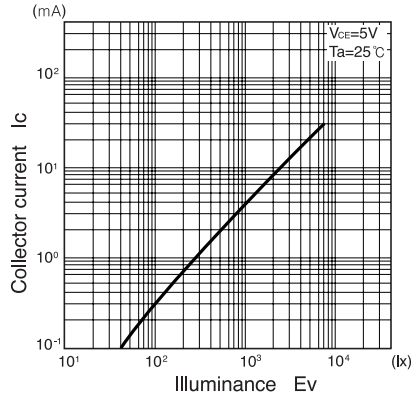
(Ta=25 )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I <sub>CEO</sub>	V <sub>CEO</sub> = 10V			100	nA
Light current	I <sub>L</sub>	V <sub>CE</sub> = 5V, 1mW/cm <sup>2</sup>	160		960	μA
C - E saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = 100 μA		0.1	0.4	V
Switching speeds	Rise time	V <sub>CC</sub> = 5V, I <sub>c</sub> = 1mA, R <sub>L</sub> = 1K		15		μsec.
	Fall time			18		μsec.
Spectral sensitivity				880 1050		nm
Peak wavelength	p			880		nm
Half angle				± 60		deg.

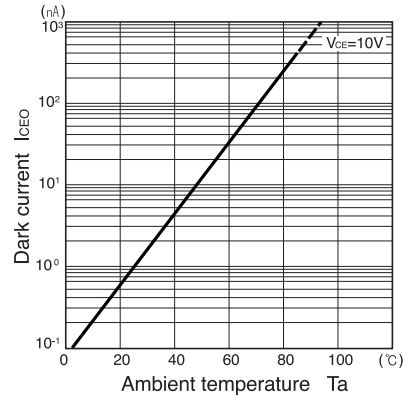
**Collector current Vs. Collector - Emitter voltage**



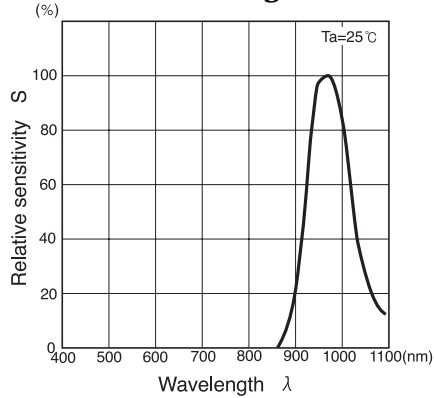
**Collector current Vs. Illuminance**



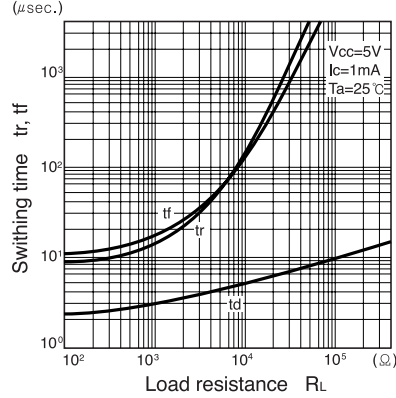
**Dark current Vs. Ambient temperature**



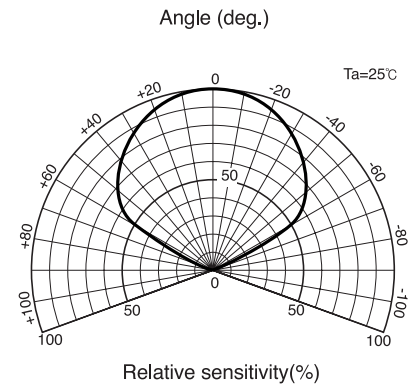
**Relative sensitivity Vs. Wavelength**



**Switching time vs. Load resistance**



**Radiant Pattern**



**Collector power dissipation Vs. Ambient temperature**

