

Photo transistors

KODENSHI

KST - 312

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

FEATURES

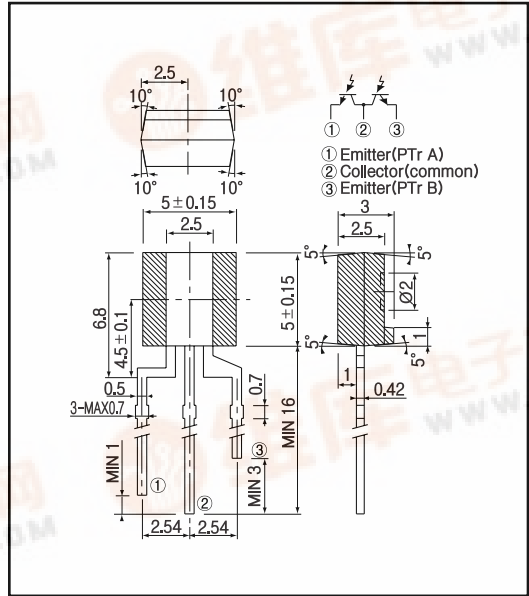
- Visible ray cut off mold type
- Bult - in 2ch phototransistors

APPLICATIONS

- Optical mouses
- Encoders

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
C - E voltage	V_{CE0}	30	V
E - C voltage	V_{ECO}	5	V
Collector current	I_c	-	mA
Collector power dissipation	P_c	100	mW
Operating temp.	$T_{opr.}$	- 25 ~ + 85	
Storage temp.	$T_{stg.}$	- 30 ~ + 85	
Soldering temp. *1	$T_{sol.}$	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

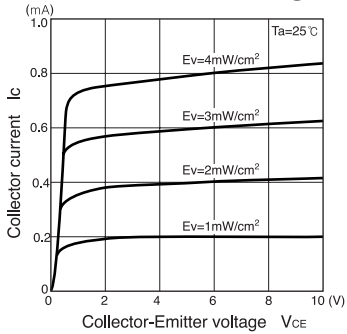
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I_{CE0}	$V_{CE0}=10V$			100	nA
Light current	I_L	$V_{CE}=5V, 1mW/cm^2$	160		960	μA
C - E saturation voltage	$V_{CE(sat)}$	$I_c=100\mu A$		0.1	0.4	V
Switching speeds	Rise time	$V_{CC}=5V, I_c=1mA, R_L=1K$		15		$\mu sec.$
	Fall time			18		$\mu sec.$
Spectral sensitivity				880 1050		nm
Peak wavelength				880		nm
Half angle	ρ			± 60		deg.



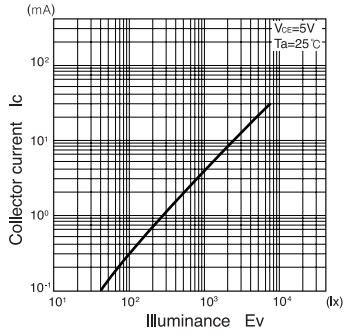
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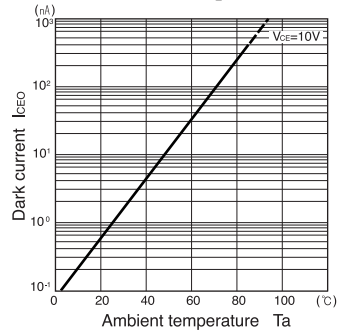
Collector current Vs. Collector - Emitter voltage



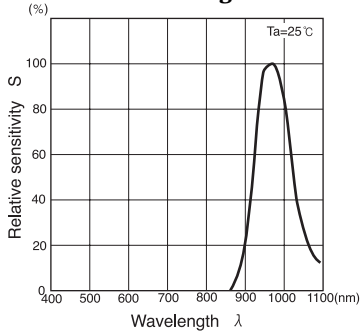
Collector current Vs. Illuminance



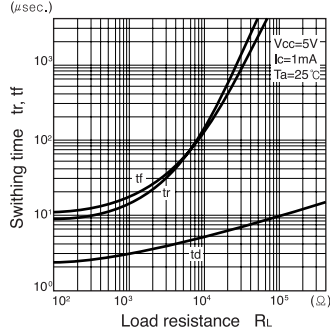
Dark current Vs. Ambient temperature



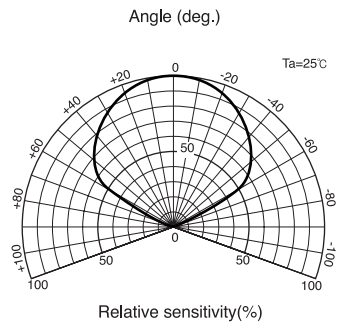
Relative sensitivity Vs. Wavelength



Switching time vs. Load resistance



Radiant Pattern



Collector power dissipation Vs. Ambient temperature

