KST - 312

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

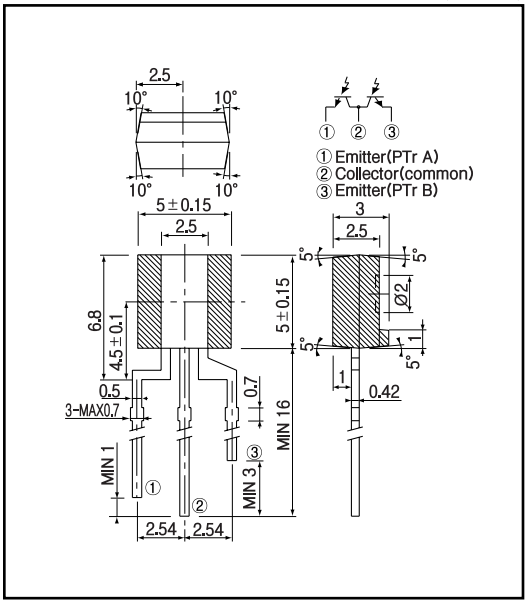
FEATURES

- 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_{CEO}	30	V
E - C voltage	V_{ECO}	5	V
Collector current	I_C	-	mA
Collector power dissipation	P_C	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_{CEO}	V_{CEO}=10V			100	nA
Light current		I_L	V_{CE}=5V,1mW/cm²	160		960	μA
C - E saturation voltage		V_{CE}(sat)	I_C=100μA		0.1	0.4	V
Switching speeds	Rise time	tr	V_{CC}=5V, I_C=1mA, R_L=1KΩ		15		μsec.
	Fall time	tf			18		μsec.
Spectral sensitivity		λ		880 1050			nm
Peak wavelength		λp			880		nm
Half angle		△θ			±60		deg.

Photo transistors

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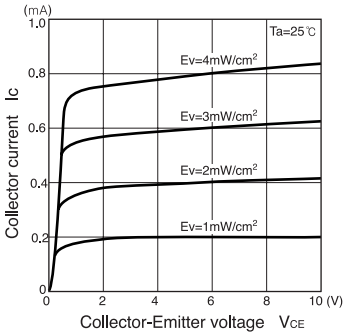
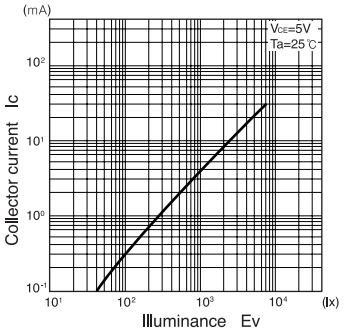
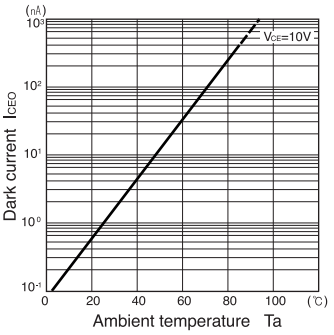
Collector current Vs. Collector - Emitter voltage



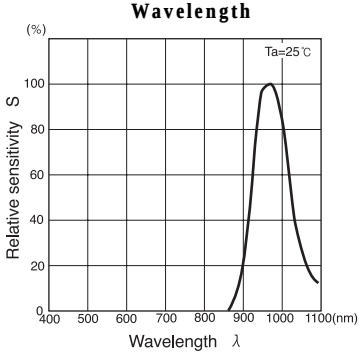
Collector current Vs. Illuminance



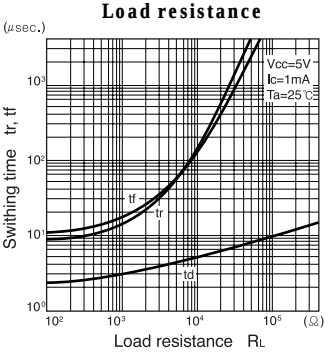
Dark current Vs. Ambient temperature



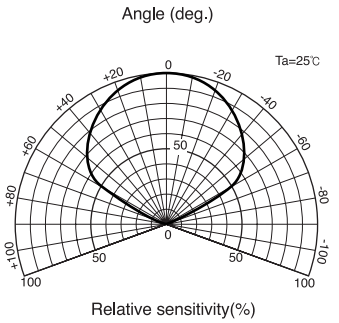
Relative sensitivity Vs. Wavelength



Swithing time vs. Load resistance



Radiant Pattern



Collector power dissipation Vs. Ambient temperature