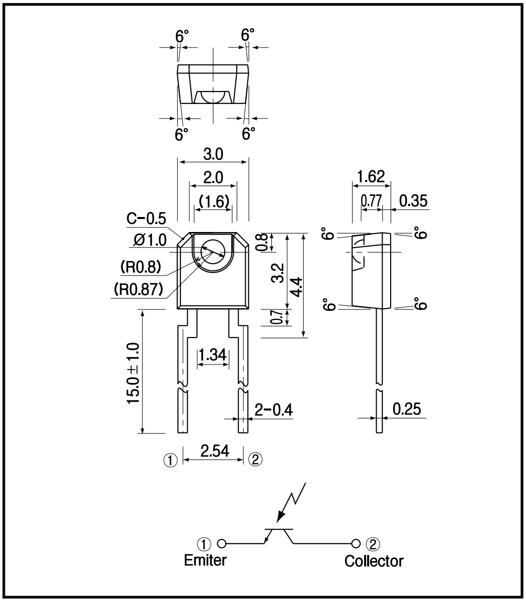
Photo transistors **KODENSHI**

ST - 305

The ST - 305 a high - sensitivity NPN silicon phototransistor mounted in a clear sidelooking package, is compact, low profile and easy to mount.

DIMENSIONS

(Unit : mm)



FEATURES

- Low profile package
- Compact
- Low - cost
- Sidelooking plastic package

APPLICATIONS

- Photointerrupters
- Optical switches

MAXIMUM RATINGS

(T_a=25℃)

Item	Symbol	Rating	Unit
C - E voltage	V_{CEO}	30	V
E - C voltage	V_{ECO}	5	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	75	mW
Operating temp.	Topr.	- 25~ +85	℃
Storage Temp.	Tstg.	- 40~ +85	℃
Soldering temp. *1	Tsol.	260	℃

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

ELECTRO-OPTICAL CHARACTERISTICS

(T_a=25℃)

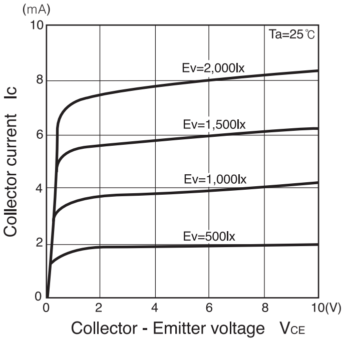
Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current		I_{CEO}	V_{CEO}=10V		1	100	nA
Light current		I_L	V_{CE}=5V, 1,000lx *2		2.0		mA
C - E saturation voltage		V_{CE}(sat)	I_C=0.5mA, 2,000lx *2		0.2	0.4	V
Switching speeds	Rise time	tr	V_{CC}=10V, I_C=5mA, R_L=100Ω		3.2		μsec.
	Fall time	tf			4.8		μsec.
Spectral sensitivity		λ		500~1,050			nm
Peak wavelength		λp			880		nm
Half anglee		△θ			±30		deg.

*2. Color temp.=2856K standard Tungsten lamp

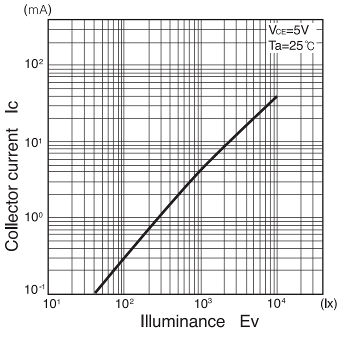
Photo transistors

ST - 305

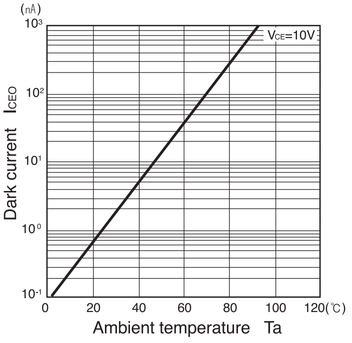
Collector current Vs. Collector - Emitter voltage



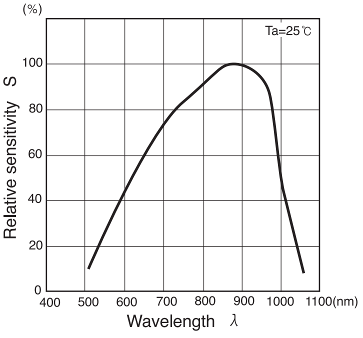
Collector current Vs. Illuminance



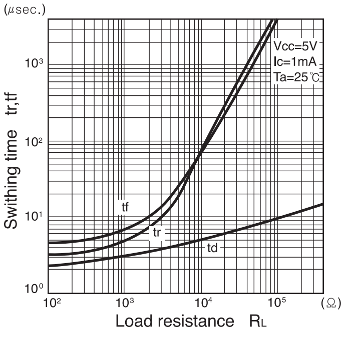
Dark current Vs. Ambient temperature



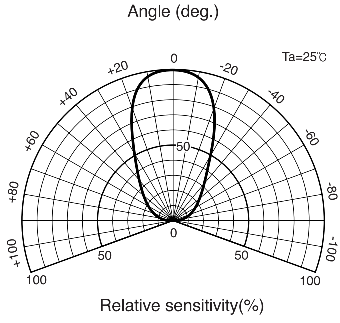
Relative sensitivity Vs. Wavelength



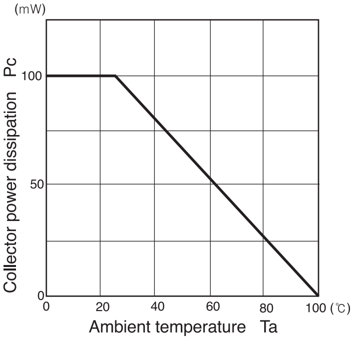
Swithing time vs. Load resistance

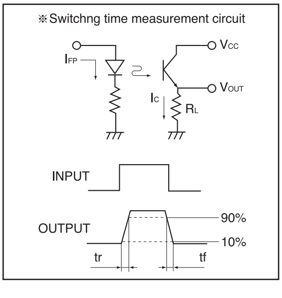


Radiant Pattern



Collector power dissipation Vs. Ambient temperature




※Switchng time measurement circuit