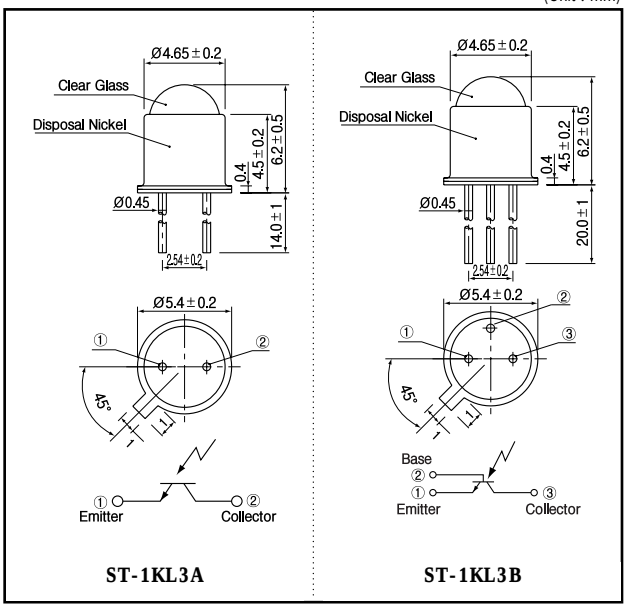
ST - 1KL3A · ST - 1KL3B

The ST - 1KL3A and 1KL3B are high - sensitivity NPN silicon phototransistors mounted in durable, hermetically sealed TO - 18 metal can which provide years of reliable performance, even under demanding conditions such as use outdoors.

DIMENSIONS (Unit : mm)



ST-1KL3A ST-1KL3B

FEATURES

- Narrow angular response
- Durable
- High reliability in demanding environments
- Two leads (Collector, Emitter) ST - 1KL3A
- Three leads (Collector, Emitter, Base) ST - 1KL3B

APPLICATIONS

- Optical switches
- Optical detectors
- Infrared sensors
- Encoders
- Smoke detectors

MAXIMUM RATINGS (Ta=25℃)

Item	Symbol	Rating	Unit
C - E voltage	V_{CEO}	40	V
E - C voltage	V_{ECO}	6	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	150	mW
Operating temp.	Topr.	- 30 ~ + 100	℃
Storage Temp.	Tstg.	- 50 ~ + 150	℃
Soldering temp. *1	Tsol.	260	℃

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

ELECTRO-OPTICAL CHARACTERISTICS (Ta=25℃)

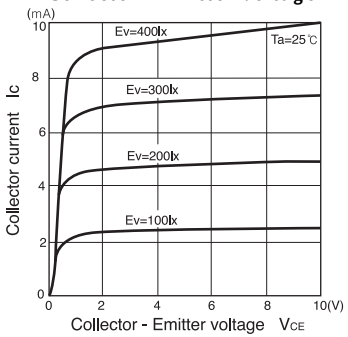
Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current		I_{CEO}	V_{CEO}=10V		1	200	nA
Light current		I_L	V_{CE}=10V, 200lx *2	1.5	5.0	15	mA
C - E saturation voltage		V_{CE}(sat)	I_C=5mA, 2,000lx *2		0.2	0.4	V
Switching speeds	Rise time	tr	V_{CC}=10V, I_C=5mA, R_L=100Ω		3.2		μsec.
	Fall time	tf			4.8		μsec.
Spectral sensitivity		λ		500~1,050			nm
Peak wavelength		λp			880		nm
Half anglee		△θ			±6		deg.

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

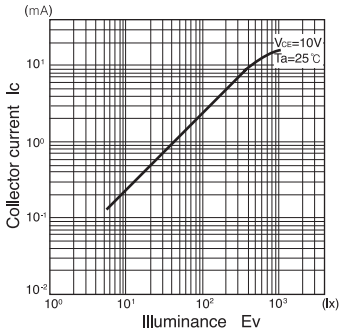
Photo transistors

ST - 1KL3A· ST - 1KL3B

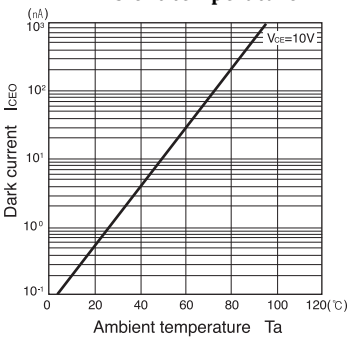
Collector current Vs. Collector - Emitter voltage



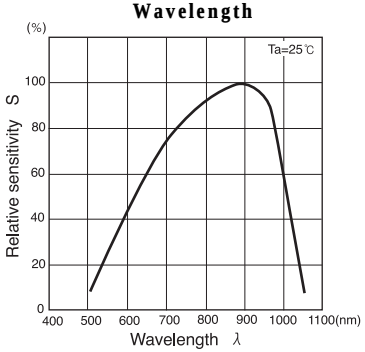
Collector current Vs. Illuminance



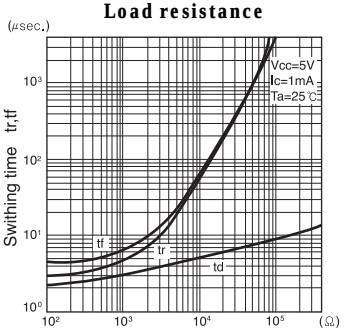
Dark current Vs. Ambient temperature



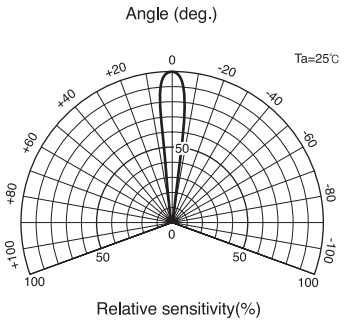
Relative sensitivity Vs. Wavelength



Swithing time vs. Load resistance



Radiant Pattern



Collector power dissipation Vs. Ambient temperature