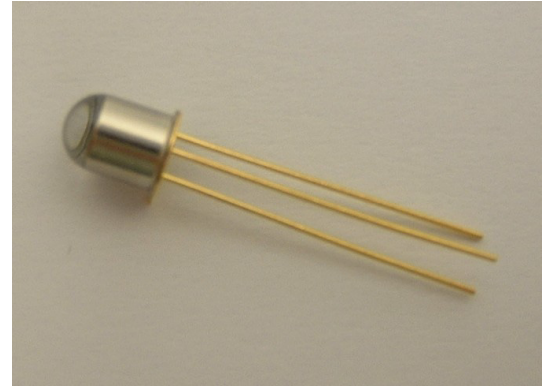


## General Description

The OST-1KL3B is high sensitivity NPN silicon photo-transistor mounted in durable, hermetically sealed TO-18 metal can which provide years of reliable performance, even under demanding conditions such as use outdoors.



## Features

- Narrow angular response
- Durable
- High reliability in demanding environments
- Blue enhanced
- Meet RoHS

## Applications

- Optical counters
- Optical detectors
- Infrared sensors
- Encoders
- Smoke detectors

## MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
C-E voltage	V <sub>CEO</sub>	40	V
E-C voltage	V <sub>ECO</sub>	4	V
Collector current	I <sub>C</sub>	50	mA
Collector power dissipation	P <sub>C</sub>	150	mW
Operating temp.	T <sub>opr</sub>	-30 ~ +100	°C
Storage temp.	T <sub>stg</sub>	-50 ~ +150	°C
Soldering temp. *1	T <sub>sol</sub>	260	°C

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

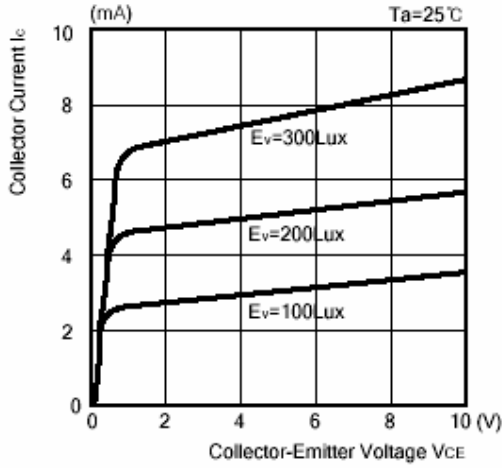
## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

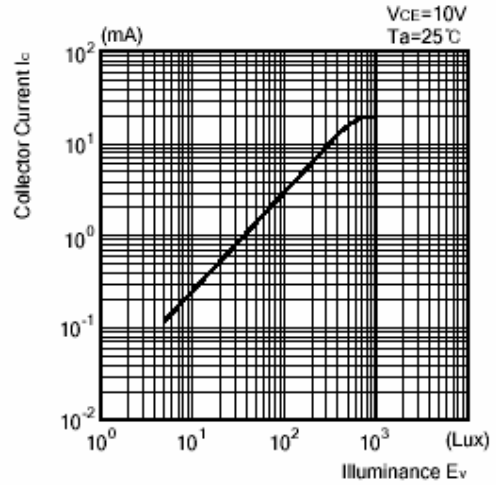
Item	Symbol	Condition	Min	Typ	Max	Unit
Collector dark current	I <sub>CEO</sub>	V <sub>CEO</sub> =10V		1	200	nA
Light current	I <sub>L</sub>	V <sub>CE</sub> =10V, 200Lux *2	1.5	6.0	15	mA
C-E saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =5mA, 2000Lux *2		0.2	0.4	V
Switching speeds	Rise time	V <sub>CC</sub> =10V, I <sub>C</sub> =5mA, R <sub>L</sub> =100Ω		8		usec
	Fall time			10		usec
Spectral sensitivity	λ		350 ~ 1050			nm
Peak wavelength	λ <sub>p</sub>			880		nm
Half angle	Δθ			±6		deg.

\* 2 Illumination is applied by a tungsten lamp of 2856K

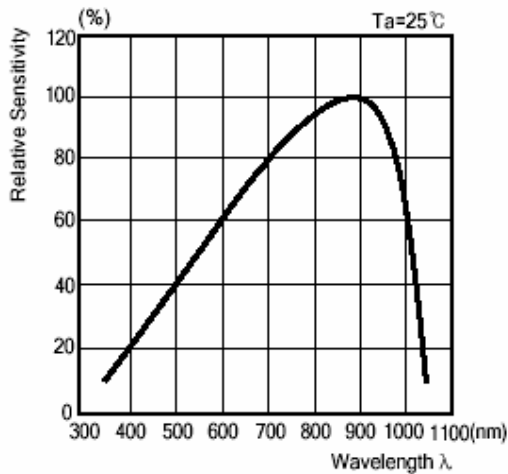
● Collector Current / Collector-Emitter Voltage  $I_c/V_{CE}$



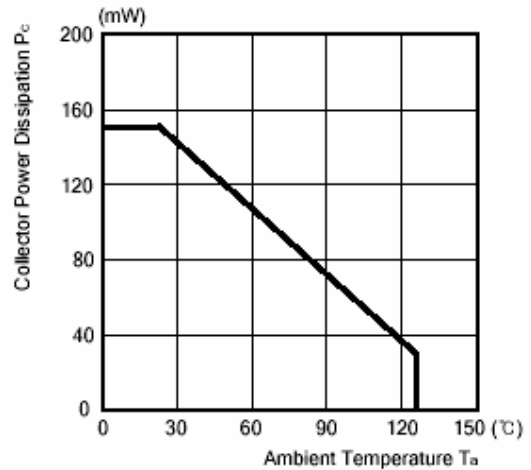
● Collector Current / Illuminance  $I_c/E_v$



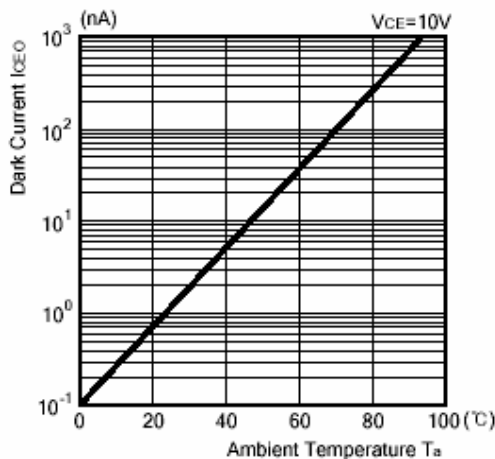
● Spectral Sensitivity



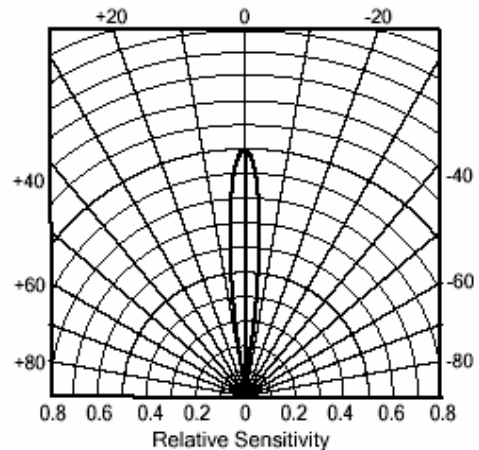
● Collector Power Dissipation / Ambient Temp.  $P_c/T_a$



● Dark Current / Ambient Temperature  $I_{CE0}/T_a$



● Directive Characteristics



**DIMENSIONS**

(Unit: mm)

