

SST533R-03 Photo Transistor

SST533R-03 is a high sensitivity NPN silicon phototransistor mounted in a $\Phi 3$ plastic package. It is compact and easy to mount.

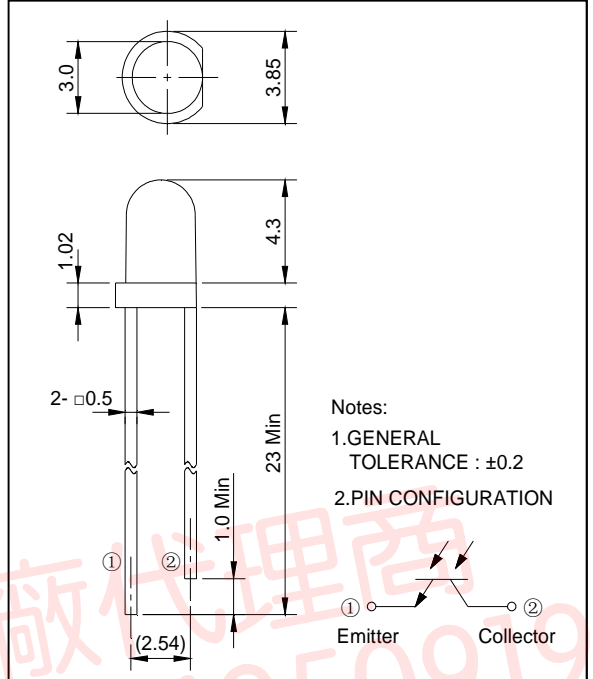
Features

- High output
- Small Size ($\Phi 3$ mm)
- Visible ray cut off
- RoHS Compliance

Application

- Photointerrupters
- Optical detectors
- Optical counters

Dimensions (Unit:mm)



MAXIMUM RATINGS

($T_a = 25^\circ\text{C}$)

Item	Symbol	Rating	Unit
C-E voltage	V_{ce}	30	V
E-C voltage	V_{ec}	6	V
Collector current	I_c	40	mA
Collector power dissipation	P_c	100	mW
Operating temp.	$T_{opr.}$	- 30~+70	$^\circ\text{C}$
Storage Temp.	$T_{stg.}$	- 40~+80	$^\circ\text{C}$
Soldering temp. * 1	$T_{sol.}$	260	$^\circ\text{C}$

Note : *1. For MAX.5 seconds at the position of 2mm from the case

ELECTRO- OPTICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$)

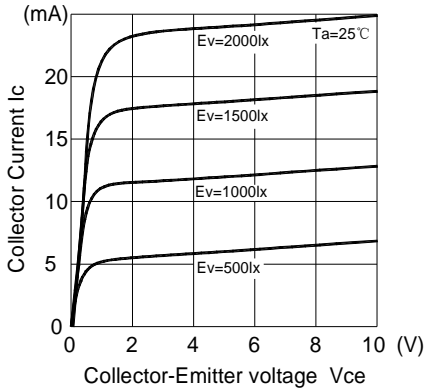
Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Collector dark current	I_{ceo}	$V_{ce}=10\text{V}$	-	1	100	nA
Light current	I_L	$V_{ce}=5\text{V}, 1,000 \text{ lx} * 2$	8	12	-	mA
C-E saturation voltage	$V_{ce(sat)}$	$I_c=0.5\text{mA}, 2,000 \text{ lx} * 2$	-	-	0.3	V
Switching speeds Rise time	t_r	$V_{cc}=10\text{V}, I_c= 5 \text{ mA} ,$ $R_L= 100\Omega$	-	3.2	-	usec
Switching speeds Fall time	t_f		-	4.8	-	usec
Spectral sensitivity	λ		700~1,050			nm
Peak wavelength	λ_p		-	880	-	nm
Half angle	$\Delta\theta$		-	± 14.5	-	deg.

Note : *2. Irradiance by CIE standard light source A (2856K tungsten lamp)

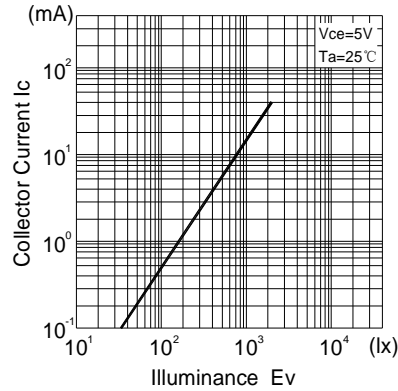
Photo Transistor

SST533R-03

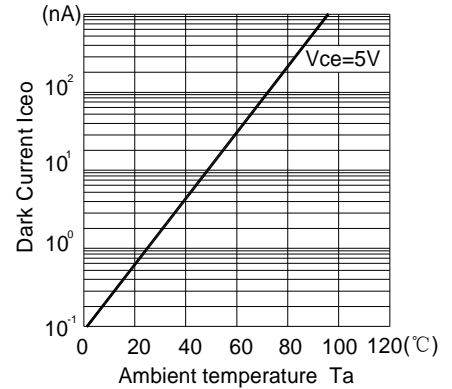
Collector current Vs. Collector-Emitter Voltage



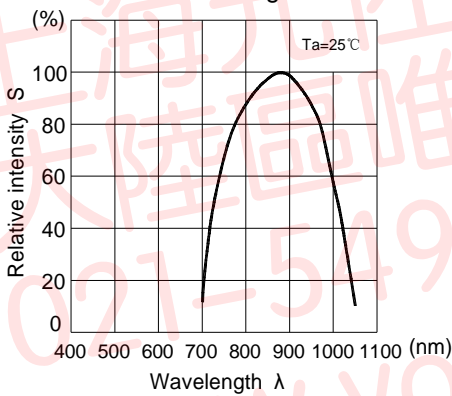
Collector current Vs. Illuminance



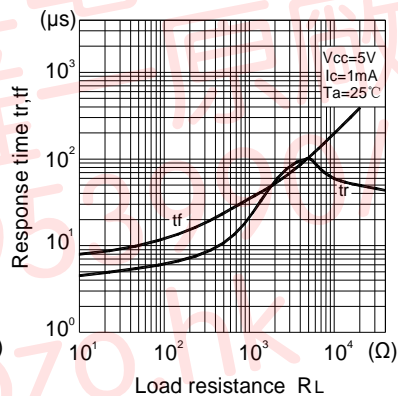
Dark Current Vs. Ambient temperature



Relative sensitivity Vs. Wavelength



Response time Vs. Load resistance



Power Dissipation Vs. Ambient Temperature

