

ST - 23G

The ST - 23G, a high - sensitivity NPN silicon phototransistor mounted in a clear sidelooking package, is compact, low profile and easy to mount.

FEATURES

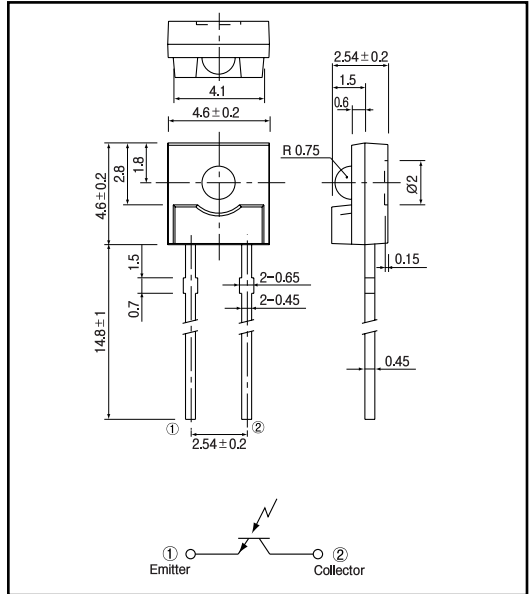
- Low profile package
- Compact
- Low - cost
- Sidelooking plastic package

APPLICATIONS

- Photointerrupters
- Optical switches

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
C - E voltage	V _{CEO}	30	V
E - C voltage	V _{ECC}	6	V
Collector current	I _c	40	mA
Collector power dissipation	P _c	100	mW
Operating temp.	T _{opr.}	- 20 ~ + 100	
Storage Temp.	T _{stg.}	- 30 ~ + 100	
Soldering temp. *1	T _{sol.}	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

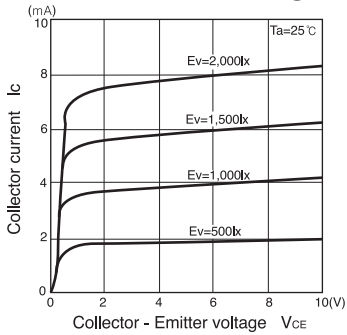
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I _{CEO}	V _{CEO} = 10V		1	100	nA
Light current	I _L	V _{CE} =5V, 1,000lx ⁻²	0.5	4.0	20	mA
C - E saturation voltage	V _{CE(sat)}	I _c =0.5mA, 2,000lx ⁻²		0.2	0.4	V
Switching speeds	Rise time	V _{CC} = 10V, I _c = 5mA, R _L = 100		3.2		µsec.
	Fall time			4.8		µsec.
Spectral sensitivity				500 - 1,050		nm
Peak wavelength	p			880		nm
Half angle				± 30		deg.

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

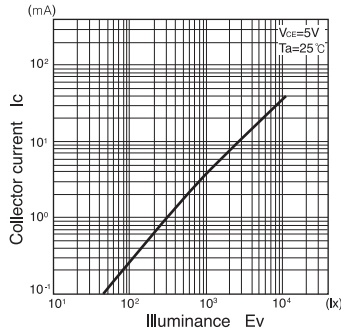
Photo transistors

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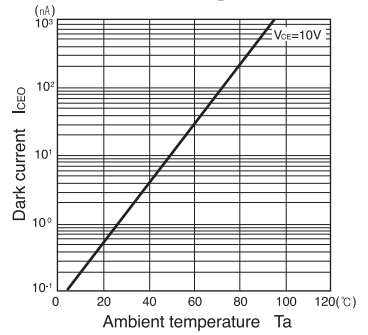
Collector current Vs. Collector - Emitter voltage



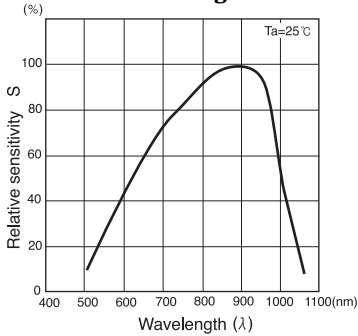
Collector current Vs. Illuminance



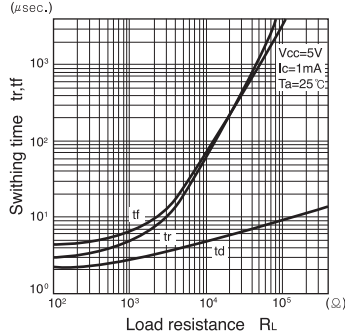
Dark current Vs. Ambient temperature



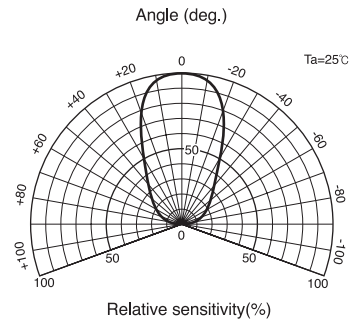
Relative sensitivity Vs. Wavelength



Switching time vs. Load resistance



Radiant Pattern



Collector power dissipation Vs. Ambient temperature

