

ST23G

The ST23G, a high - sensitivity NPN silicon phototransistor mounted in a clear sidelooking package, is compact, low profile and easy to mount.

FEATURES

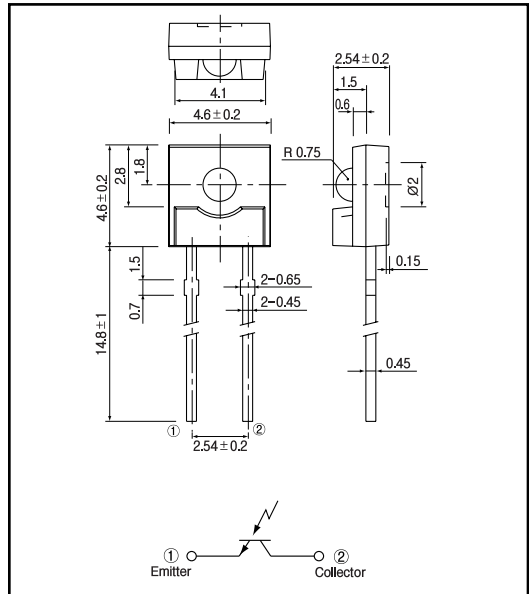
- Low profile package
- Compact
- Low - cost
- Sidelooking plastic package

APPLICATIONS

- Photointerrupters
- Optical switches

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
C - E voltage	V_{CE0}	30	V
E - C voltage	V_{ECO}	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)

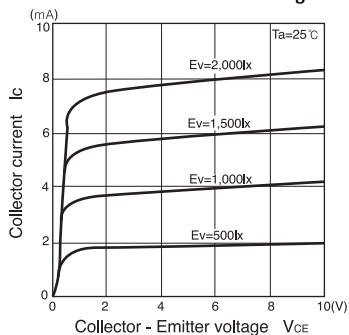
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I_{CEO}	$V_{CE0} = 10V$		1	100	nA
Light current	I_L	$V_{CE} = 5V, 1,000lx^{*2}$	0.5	4.0	20	mA
C - E saturation voltage	$V_{CE(sat)}$	$I_C = 0.5mA, 2,000lx^{*2}$		0.2	0.4	V
Switching speeds	Rise time	$V_{CC} = 10V, I_C = 5mA, R_L = 100\Omega$		3.2		$\mu sec.$
	Fall time			4.8		$\mu sec.$
Spectral sensitivity	λ			500 ~ 1,050		nm
Peak wavelength	λ_p			880		nm
Half angle	θ			± 30		deg.

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

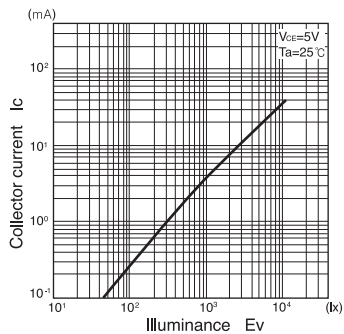
Photo transistors

ST23G

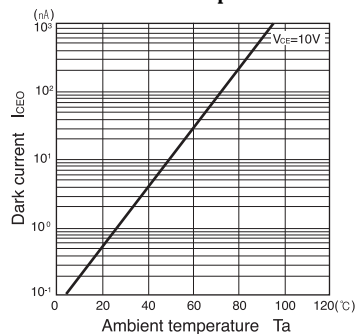
**Collector current Vs.
Collector - Emitter voltage**



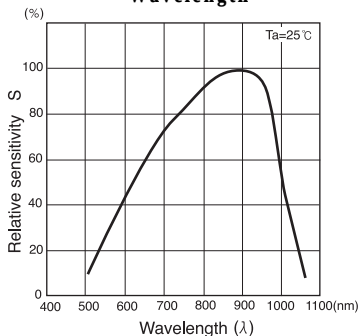
**Collector current Vs.
Illuminance**



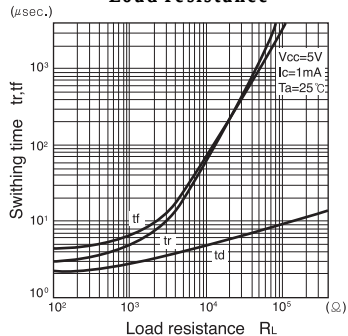
**Dark current Vs.
Ambient temperature**



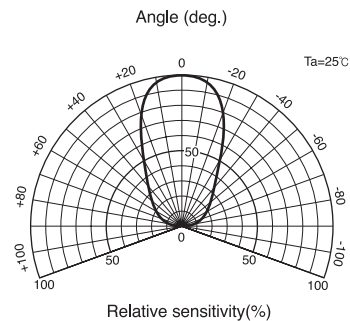
**Relative sensitivity Vs.
Wavelength**



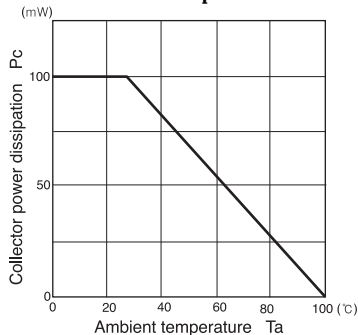
**Switching time vs.
Load resistance**



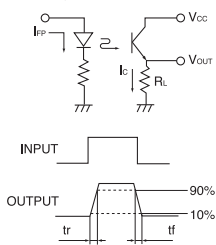
Radiant Pattern



**Collector power dissipation Vs.
Ambient temperature**



*** Switching time measurement circuit**



ST-23G 仕様書

RANK별 분류		
ITEM	LIMIT	COND.
BVCEO	33V↑	1mA
BVECO	5.0V↑	0.1mA
ICEO	100nA↓	10V
Icel	A :1.53 ~ 2.53 BA:2.07 ~ 3.30 BB:2.70 ~ 4.40 CA:3.60 ~ 6.05 CB:4.95 ~ 8.80 DA :7.2 ~ 14.2 DB:12.2 ~ 17.6 E :14.4mA↑	1000Lux 5v

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