

ST-1CL3H

The ST-1CL3H is a high sensitivity NPN silicon phototransistor mounted in a 3Φ Low-cost ceramic package, designed for use as low-cost detector array in consumer and industrial applications.

Features

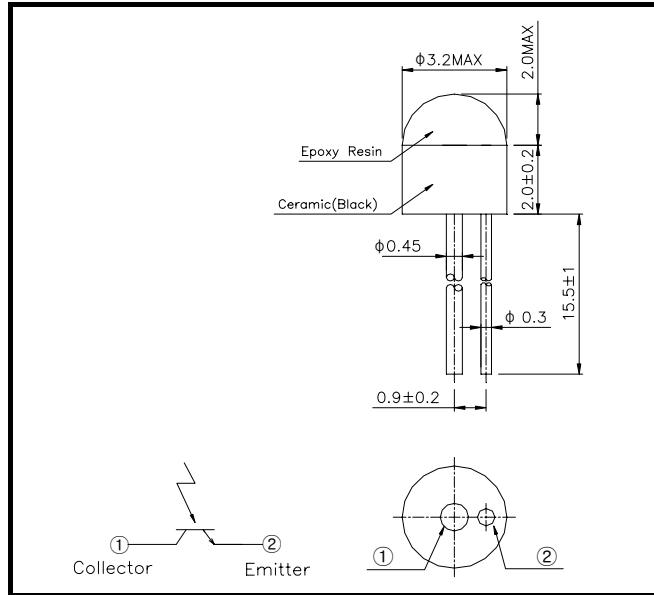
- Compact (Φ3mm)
- Wide angular response
- Low-cost

Applications

- Optical counters
- Optical detectors
- Floppy disk drives
- Encoders

Dimensions

[Unit : mm]



Absolute Maximum Ratings

[T_A = 25°C]

Parameter	Symbol	Rating	Unit
C-E Voltage	V _{CEO}	20	V
E-C Voltage	V _{ECO}	5	V
Collector current	I _C	20	mA
Collector power dissipation	P _C	75	mW
Operating temp	T _{opr.}	-20~+90	°C
Storage temp	T _{stg.}	-30~+100	°C
Soldering temp *1	T _{sol}	260	°C

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

Electro-Optical Characteristics

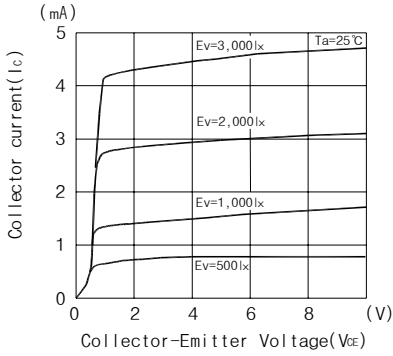
[T_A = 25°C]

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I _{CEO}	V _{CEO} =10V	-	1	200	nA
Light current	I _L	V _{CE} =3V, 1,000lx ²	0.08	1.5	-	mA
C-E saturation voltage	V _{CE(sat)}	I _C =0.2mA, 2,000lx ²	-	0.15	0.4	V
Switching speeds	Rise time	V _{CC} =10V, I _C =1mA R _L =100Ω	-	2.5	-	μsec
	Fall time		-	3.8	-	μsec
Spectral sensitivity	λ		480~1,000			nm
Peak wavelength	λ _p		-	880	-	nm
Half Angle	Δθ		-	±50	-	degrees

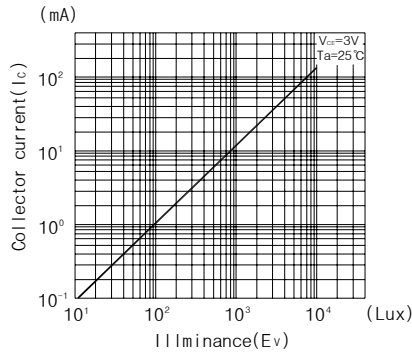
*2. Color temp = 2856K standard tungsten lamp

ST-1CL3H

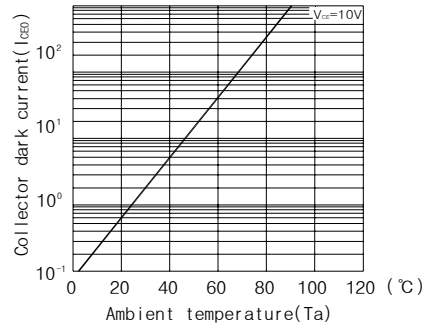
Collector current Vs. Collector-Emitter voltage



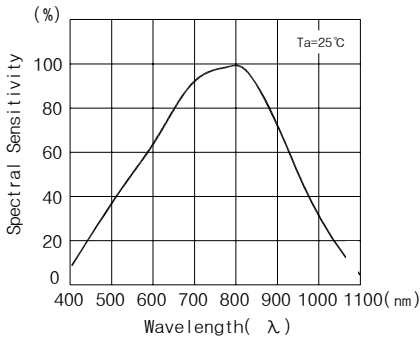
Collector current Vs. Illuminance



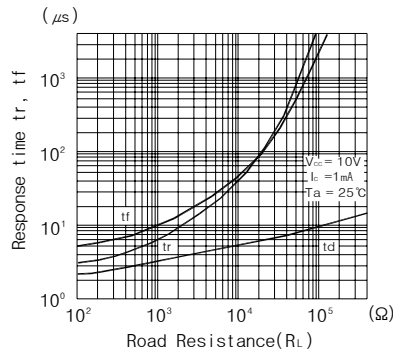
Dark current Vs. Ambient temperature



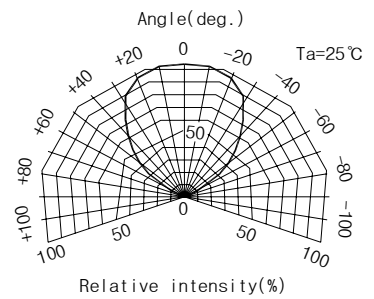
Relative sensitivity Vs. Wavelength



Switching time Vs. Load resistance



Radiant Pattern



Collector power dissipation Vs. Ambient temperature

