

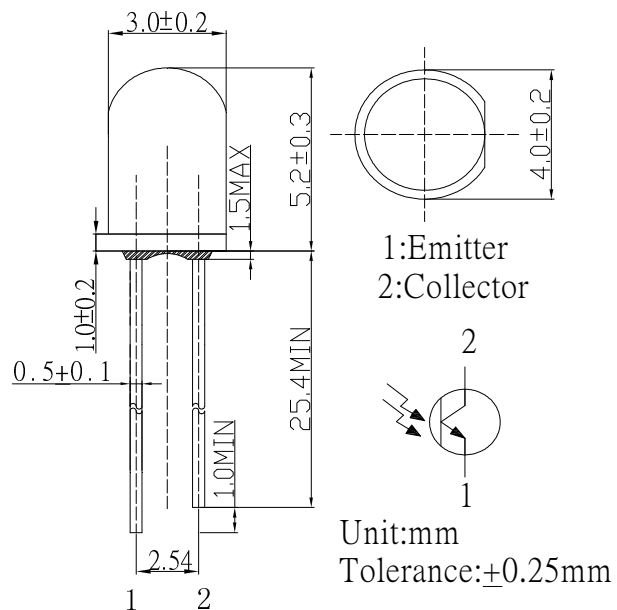
### ■ Features

- Fast response time
- High photo sensitivity
- Superior Weather-resistance
- Pb free
- The product itself will remain within RoHS compliant version.
- Water Clear Type

### ■ Applications

- Infrared applied system
- Camera
- Printer
- Optoelectronic switch

### ■ Outline Dimension



### ■ Absolute Maximum Rating (Ta=25°C)

Item	Symbol	Value	Unit
DC Forward Current	I <sub>c</sub>	20	mA
Collector-Emitter Voltage	V <sub>CEO</sub>	30	V
Emitter-Collector-Voltage	V <sub>ECO</sub>	5	V
Power Dissipation	P <sub>c</sub>	75	mW
Operating Temperature	T <sub>opr</sub>	-25 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C
Lead Soldering Temperature	T <sub>sol</sub>	260°C / 5sec	-

\*Pulse width Max.10ms Duty ratio max 1/10

### ■ Electrical -Optical Characteristics (Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Collector – Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =100 μA E <sub>e</sub> =0mW/cm <sup>2</sup>	30	--	--	V
Emitter-Collector Breakdown Voltage	BV <sub>ECO</sub>	I <sub>E</sub> =100 μA E <sub>e</sub> =0mW/cm <sup>2</sup>	5	--	--	V
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2mA E <sub>e</sub> =1mW/cm <sup>2</sup>	--	--	0.4	V
Rang Of Spectral Bandwidth	λ 0.5	---	840	--	1200	nm
Wavelength Of Peak Sensitivity	λ <sub>p</sub>	---	-	980	---	nm
Rise Time	t <sub>r</sub>	V <sub>CE</sub> =5V I <sub>C</sub> =1mA	-	15	-	μ S
Fall Time	t <sub>f</sub>	RL=1000Ω	-	15	-	
Collector Dark Current	I <sub>CEO</sub>	E <sub>e</sub> =0mW/c m <sup>2</sup> V <sub>CE</sub> =20V	-	-	100	nA
On State Collector Current	I <sub>C(on)</sub>	E <sub>e</sub> =1mW/cm <sup>2</sup> V <sub>CE</sub> =5V	0.7	2.0	--	mA

\*1 Tolerance of dominant wavelength is ±1nm

\*2 Tolerance of luminous intensity is ±15%

■ Typical Electrical/Optical/Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

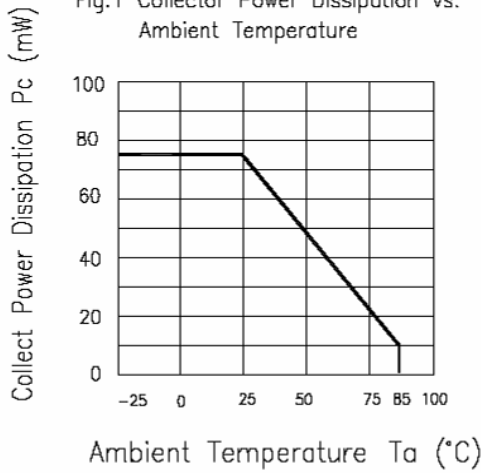


Fig.2 Collector Dark Current vs. Ambient Temperature

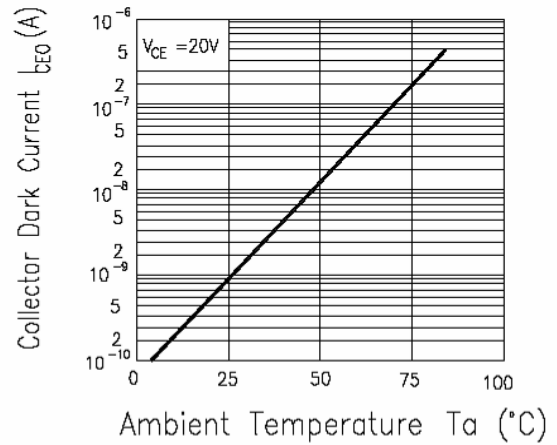


Fig. 3 Relative Collector Current vs. Ambient Temperature

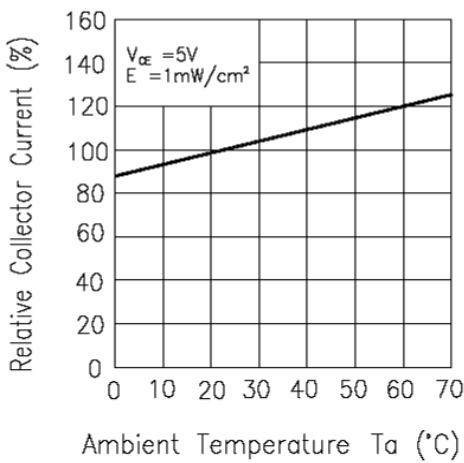


Fig.4 Collector Current vs. Irradiance

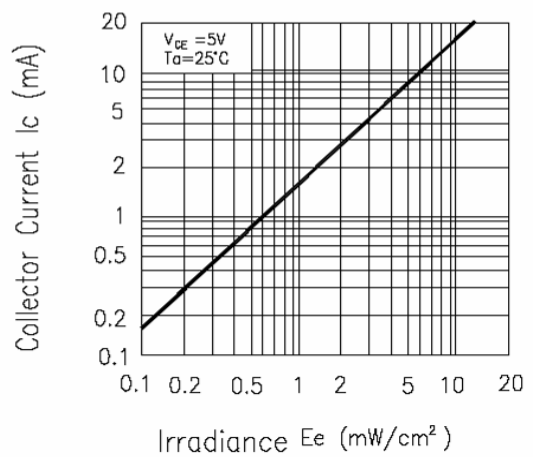


Fig.5 Spectral Sensitivity

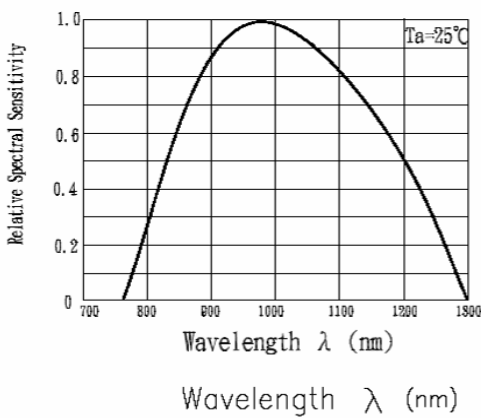
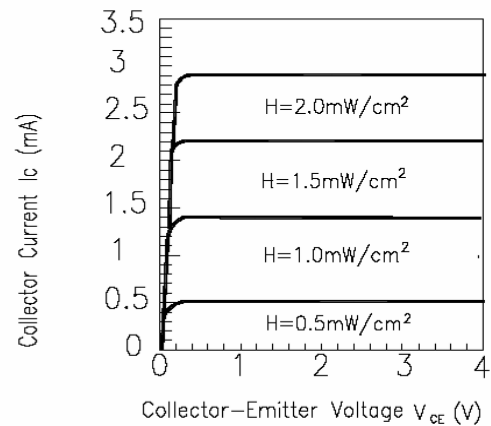


Fig.6 Collector Current vs. Collector-Emitter Voltage



■ **Reliability**

The reliability of products shall be satisfied with items listed below.

Confidence level: 90%

LTPD:10%

Test Items	Test Conditions	Failure Judgement Criteria	Samples(n)
			Defective(c)
Operation life	$V_{CE}=5V$ , $T_a : 25^{\circ}C$ 1000hrs	$I_{C(on)} \leq L \times 0.8$  L : Lower specification limit	n =22 , c=0
Temperature cycle	1 cycle $-55^{\circ}C$ to $+25^{\circ}C$ to $+85^{\circ}C$ (30min) (5min) (30min) 50 cycle test		n =22 , c=0
Thermal shock	$-10^{\circ}C$ to $+100^{\circ}C$ (5min) (10sec) (5min) 50cycle test		n =22 , c=0
High temperature storage	Temp : $+100^{\circ}C$ 1000hrs		n =22 , c=0
Low temperature storage	Temp : $-55^{\circ}C$ 1000hrs		n =22 , c=0
High temperature High humidity	$T_a : 85^{\circ}C$ RH : 85% 1000hrs		n =22 , c=0
Solder heat	Temp : $260 \pm 5^{\circ}C$ 5sec 4mm Form the bottom of the package.		n =22 , c=0
Solderability	Temp : $230 \pm 5^{\circ}C$ 5sec 4mm Form the bottom of the package.	More than 90% of Lead to be covered by soldering	n =22 , c=0

■ Test Method For Power

Condition:  $H=1\text{Mw/cm}^2$ ,  $V_{ce}=5\text{V}$

Test Item: Collector Current (unit: mA)

