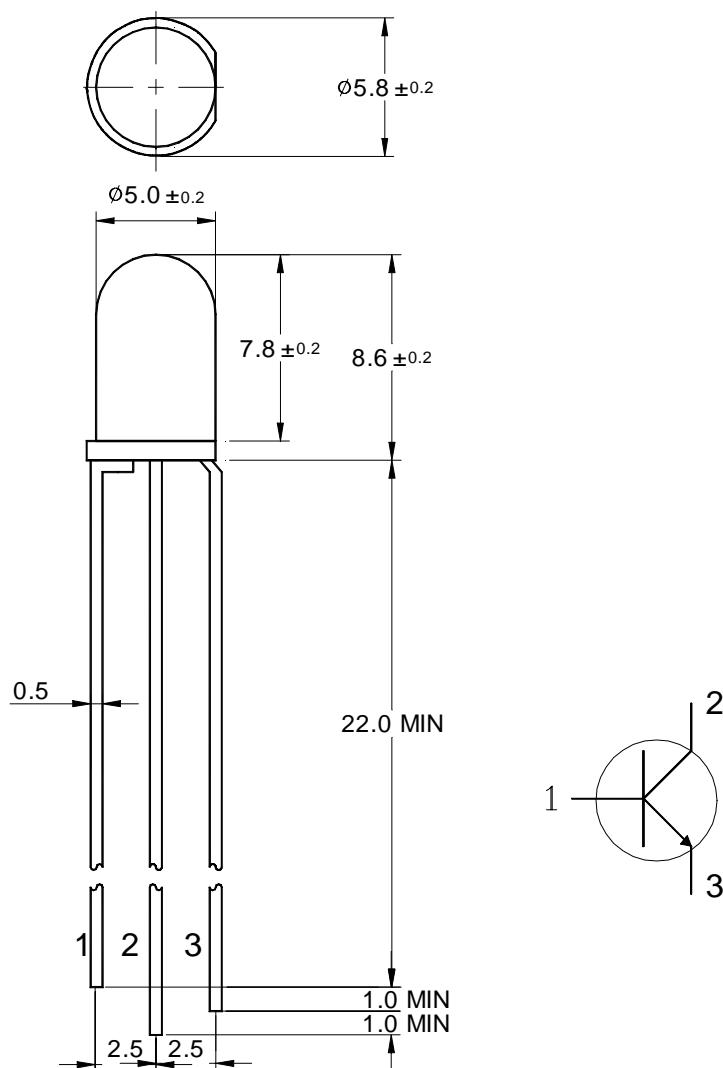


## Features

- Lensed for high sensitivity
- $\phi 5\text{mm}$ (T-1<sup>3</sup>/<sub>4</sub>) all plastic mold type
- High reliability and stable characteristics
- Visible light cut-off type
- With base terminal

## Outline Dimensions

unit : mm



### PIN Connections

1. Base
2. Collector
3. Emitter

**Absolute maximum ratings**

Characteristic	Symbol	Ratings	Unit
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Collector Voltage	$V_{ECO}$	6	V
Collector-Base Voltage	$V_{CBO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	20	mA
Collector Power Dissipation	$P_D$	75	mW
Operating Temperature	$T_{opr}$	-25 85	
Storage Temperature	$T_{stg}$	-30 100	
*1 Soldering Temperature	$T_{sol}$	260 for 5 seconds	

\*1. Keep the distance more than 2.0mm from PCB to the bottom of LED package

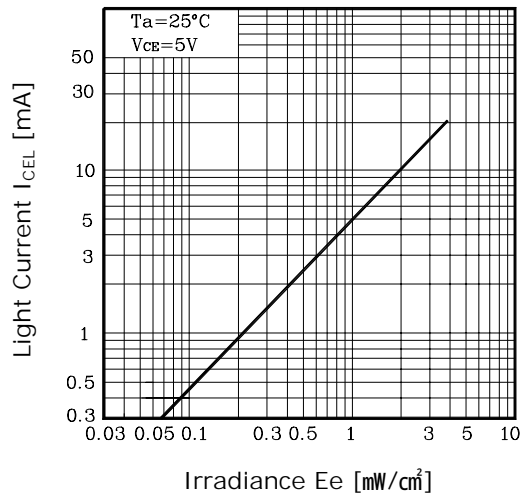
**Electrical Characteristics**

Characteristic		Symbol	Test Condition	Min	Typ	Max	Unit
Current Dark Current		$I_{CEO}$	$V_{CEO}=10V, E_e=0$	-	0.05	0.5	uA
*3Light Current		$I_{CEL}$	$V_{CE}=5V, E_e \ 1mW/cm^2$	-	5	-	mA
Current-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=0.5mA, E_e \ 1mW/cm^2$	-	0.18	-	V
Switching Time	Rise Time	$t_r$	$V_{CC}=2V, I_C=1mA$ $R_1=100$	-	10	-	us
	Fall Time	$t_f$			10		
Spectral Sensitivity			-	700 ~ 1000			nm
Peak Sensitivity Wavelength		$\lambda_p$	-	-	880	-	nm
Half angle		$\theta_{1/2}$	-	-	±35	-	deg

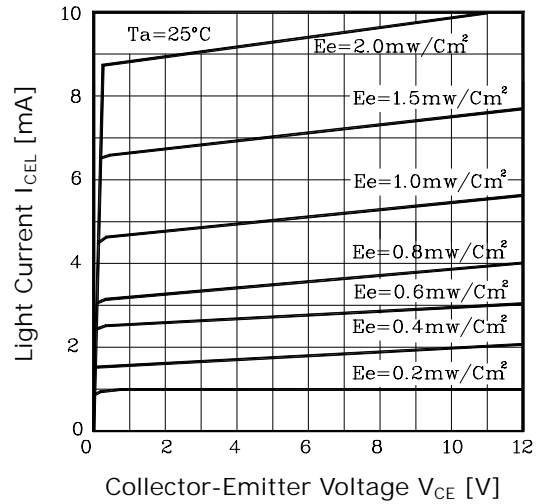
\*1. Tolerance =  $\pm 30\%$

## Characteristic Diagrams

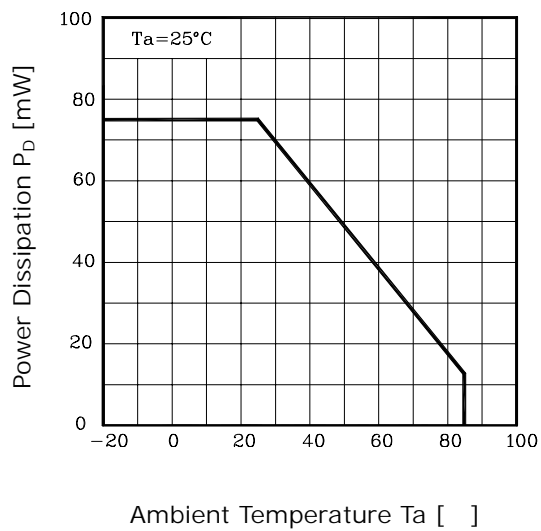
**Fig. 1**  $I_{CEL} - E_e$



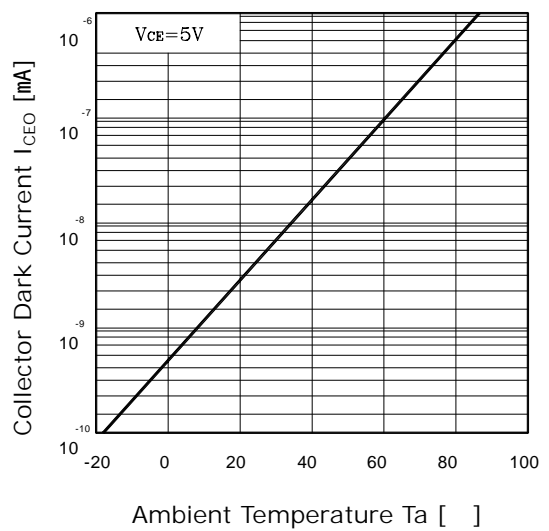
**Fig. 2**  $I_{CEL} - V_{CE}$



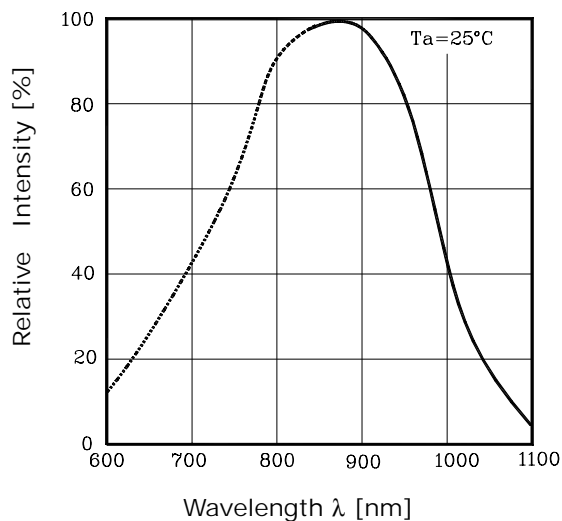
**Fig. 3**  $P_D - T_a$



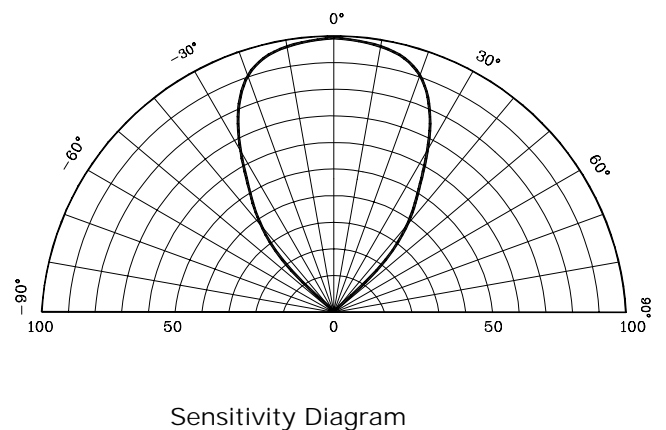
**Fig. 4**  $I_{CEO} - T_a$



**Fig. 5** Spectrum Sensitivity



**Fig. 6** Sensitivity Diagram



Characteristic Diagrams

Fig. 7  $I_{CEL} - E_e$

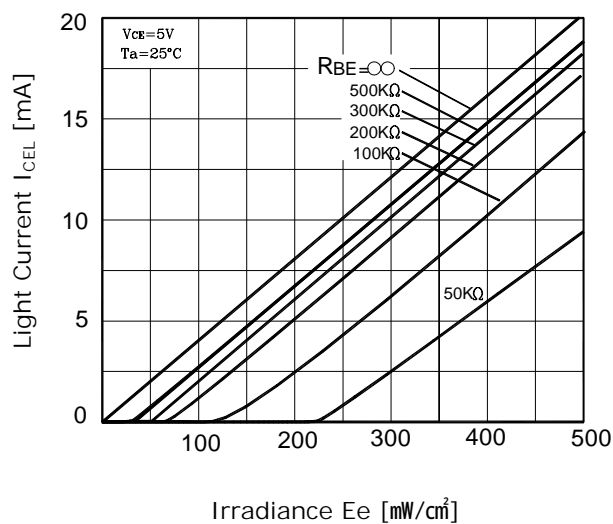


Fig. 8 Spectrum Sensitivity

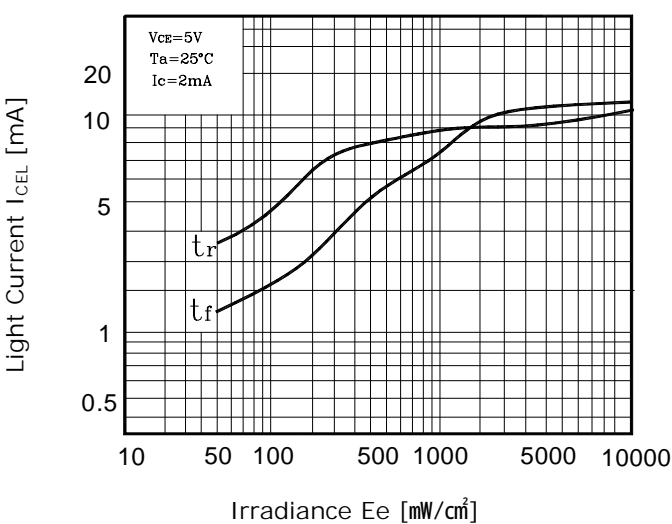


Fig. 9 Switching Time Test Circuit

