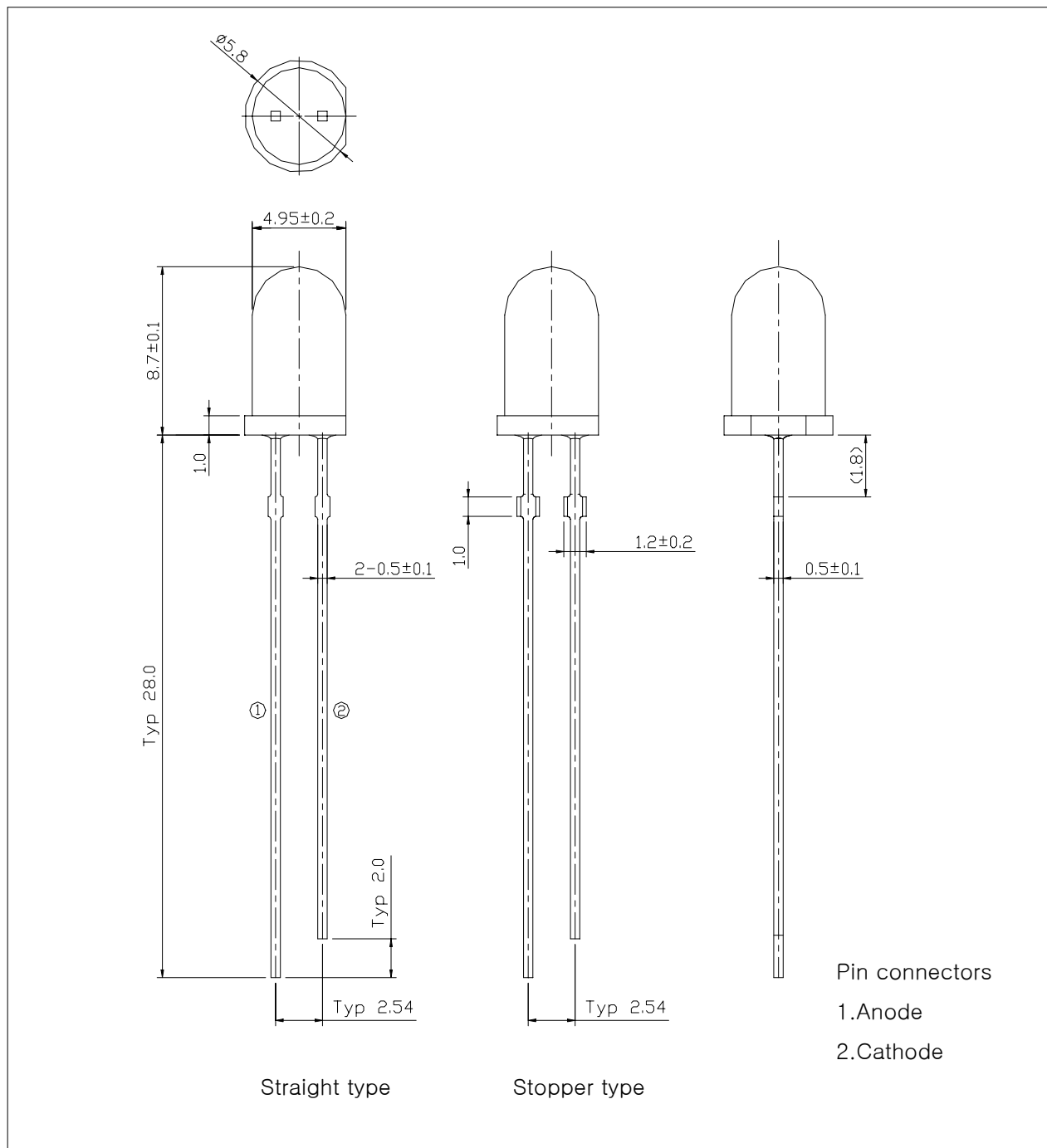


## ■ Features

- Colorless transparency lens type
- $\phi 5\text{mm}$ (T-1 $\frac{3}{4}$ ) all plastic mold type
- High luminosity
- ESD Class(Mil Std-883d Method 3015.7) based on Human Body Model(HBM) : Class 3

## ■ Outline dimensions

(unit : mm)



■ Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Power dissipation	$P_D$	120	mW
Forward Current	$I_F$	30	mA
* <sup>1</sup> Peak Forward Current	$I_{FP}$	100	mA
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-30~85	°C
Storage Temperature	$T_{stg}$	-40~100	°C
* <sup>2</sup> Soldering Temperature	$T_{sol}$	260°C for 3 seconds	

\*1.Duty ratio 1/10, Pulse Width 10msec

\*2.Keep the distance more than 2.0mm from PCB to the bottom of LED package

■ Electrical – Optical characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
ESD Check Forward Voltage	$V_{F2}$	$I_F=10\mu A$	2.0	-	-	V
Reverse Current	$I_R$	$V_R=5V$	-	-	50	uA
Dominant Wavelength	$\lambda_d$	$I_F=20mA$	465	-	475	nm
Spectrum Bandwidth	$\Delta\lambda$	$I_F=20mA$	-	35	-	nm
* <sup>3</sup> Half Angle	$\theta_{1/2}$	$I_F=20mA$	-	±18	-	deg

\*3.  $\theta_{1/2}$  is the off-axis angle where the luminous intensity is 1/2 the peak intensity

### ■ Dominant Wavelength

(Ta=25°C)

W <sub>D</sub> RANK	Test Condition	Min.	Typ.	Max.	Unit
A	I <sub>F</sub> = 20mA	465	–	470	nm
B		470	–	475	

\* Wavelength are tested at a current pulse duration 25ms and an accuracy of ±1 nm.

### ■ Luminous intensity ranks

(Ta=25°C)

I <sub>v</sub> RANK	Test Condition	Min.	Typ.	Max.	Unit
N	I <sub>F</sub> = 20mA	600	–	850	mcd
O		850	–	1200	
P		1200	–	1700	
Q		1700	–	2400	

\* Luminous intensity is tested at a current pulse duration of 25 ms and an accuracy of ±11%.

Intensity Measured : 0.01sr(CIE. LED\_B) I<sub>F</sub>= 20mA

### ■ Forward Voltage

(Ta=25°C)

V <sub>F</sub> RANK	Test Condition	Min.	Typ.	Max.	Unit
1	I <sub>F</sub> = 20mA	–	3.1	3.3	V
2		3.3	3.5	3.8	

\* Voltages are tested at a current pulse duration of 1 ms and an accuracy of ±0.1V.

### ■ Precautions On LED using

\* To avoid optical difference, Please do not mix differently-ranked product.

■ Characteristic Diagrams

Fig. 1 IF-VF

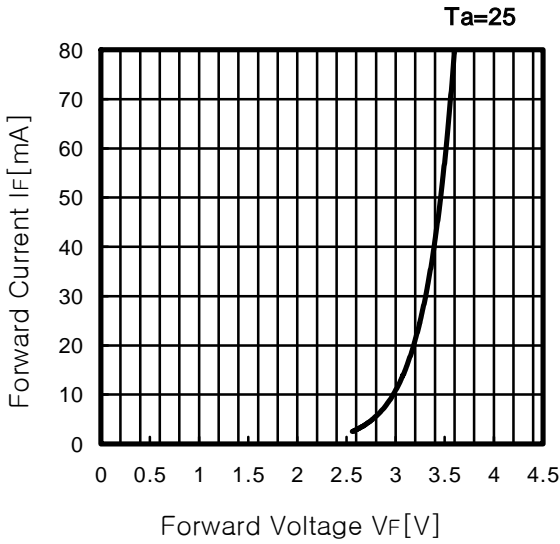


Fig. 2 IV-IF

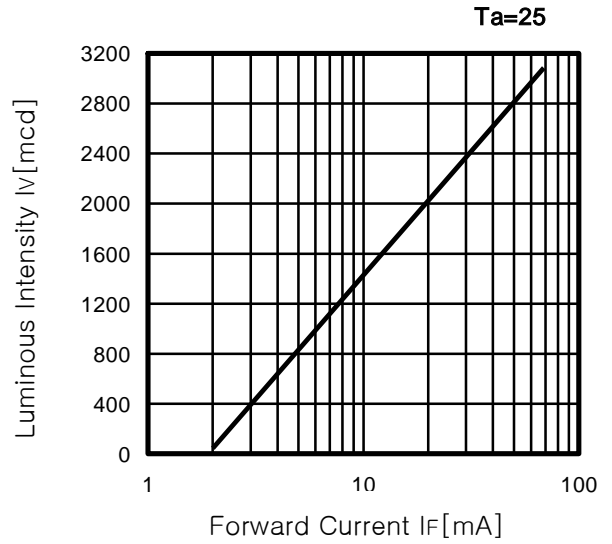


Fig. 3 IF-Ta

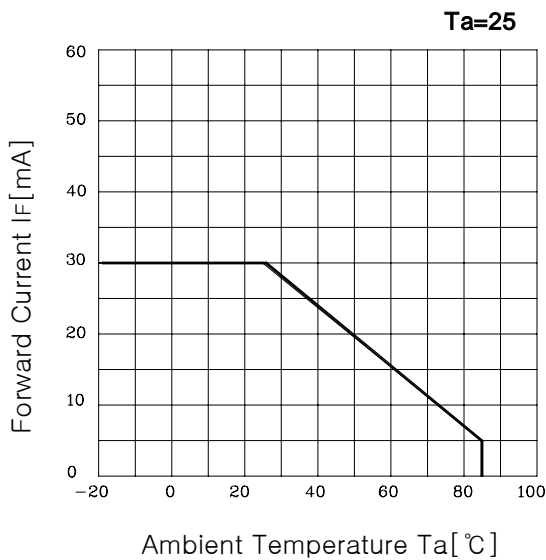
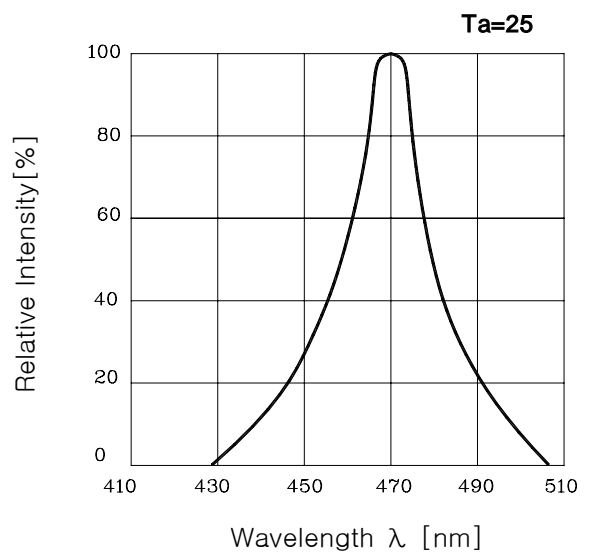


Fig. 4 Spectrum Distribution



**Fig. 5 Radiation Characteristics**

