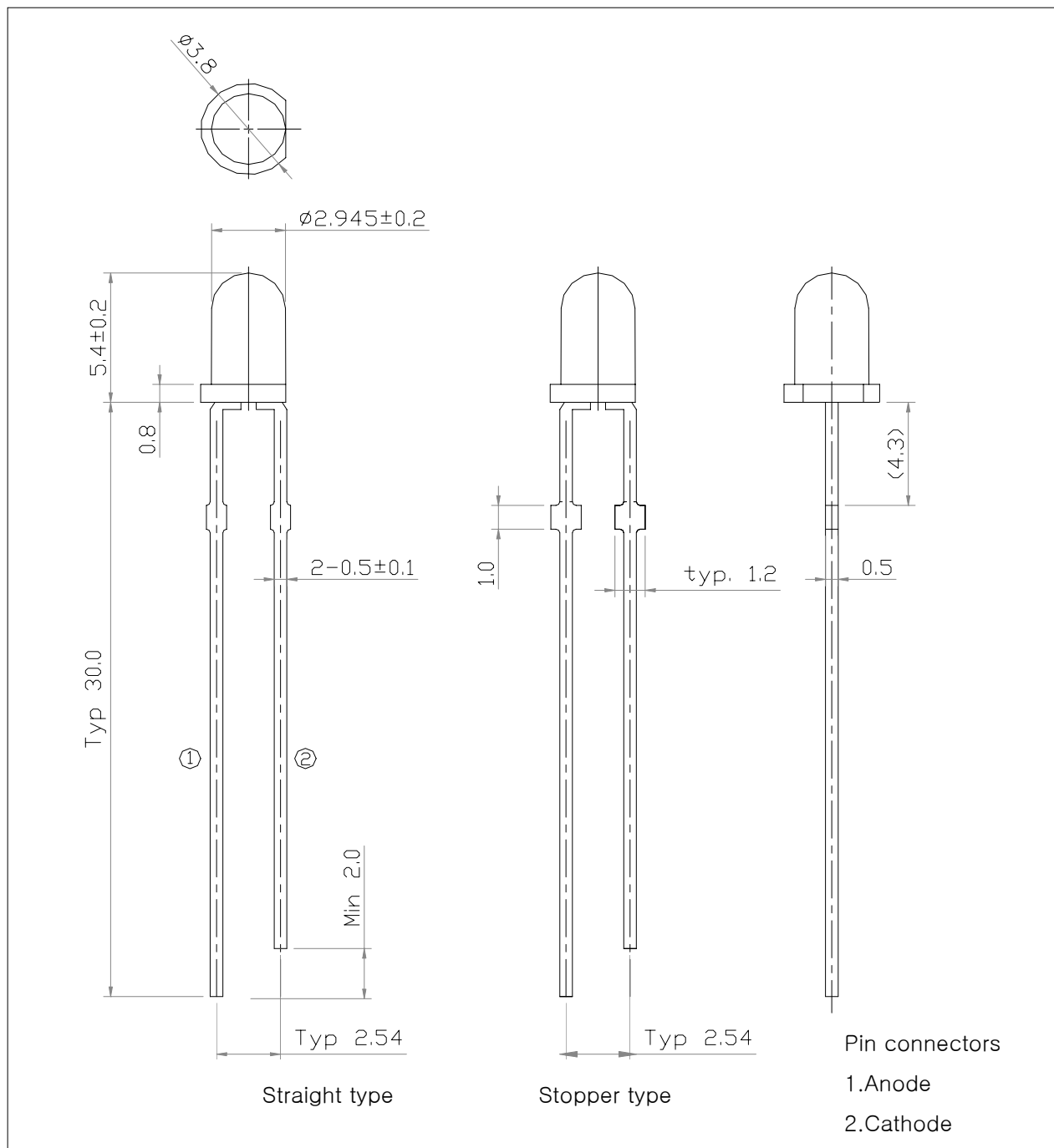


■ Features

- Colorless transparency lens type
- $\phi 3\text{mm}$ (T-1) all plastic mold type
- High luminosity
- ESD Class(Mil Std-883d Method 3015.7) based on Human Body Model(HBM) : 950V

■ Outline dimensions

(unit : mm)



■ Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Power dissipation	P_D	120	mW
Forward Current	I_F	30	mA
* ¹ 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
* ² Soldering Temperature	T_{sol}	260°C for 3 seconds	

*1.Duty ratio $\leq 1/10$, Pulse Width $\leq 10\text{msec}$

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

■ Electrical – Optical characteristics

($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
ESD Check Forward Voltage	V_{F2}	$I_F=10\mu\text{A}$	2.0	–	–	V
Reverse Current	I_R	$V_R=5\text{V}$	–	–	50	μA
Dominant Wavelength	λ_d	$I_F=20\text{mA}$	465	–	475	nm
Spectrum Bandwidth	$\Delta\lambda$	$I_F=20\text{mA}$	–	35	–	nm
* ³ Half Angle	$\theta_{1/2}$	$I_F=20\text{mA}$	–	± 15	–	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 _D RANK	Test Condition	Min.	Typ.	Max.	Unit
A	I _F = 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 _v RANK	Test Condition	Min.	Typ.	Max.	Unit
M	I _F = 20mA	420	–	600	mcd
N		600	–	850	
O		850	–	1200	
P		1200	–	1700	

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

Intensity Measured : 0.01sr(CIE. LED_B)

■ Forward Voltage

(Ta=25°C)

V _F RANK	Test Condition	Min.	Typ.	Max.	Unit
1	I _F = 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 $I_F - V_F$

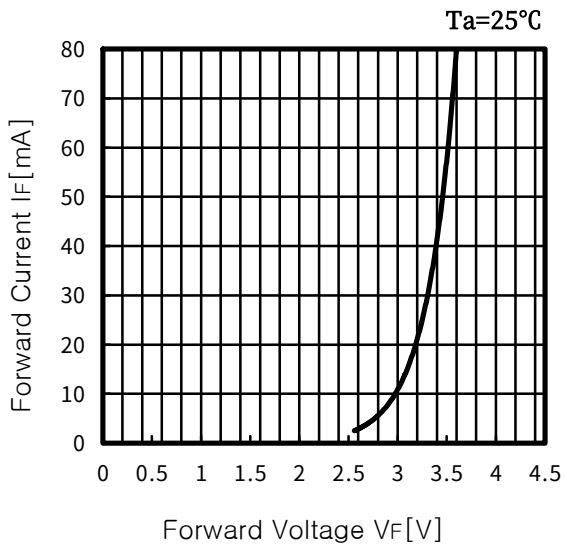


Fig. 2 $I_v - I_F$

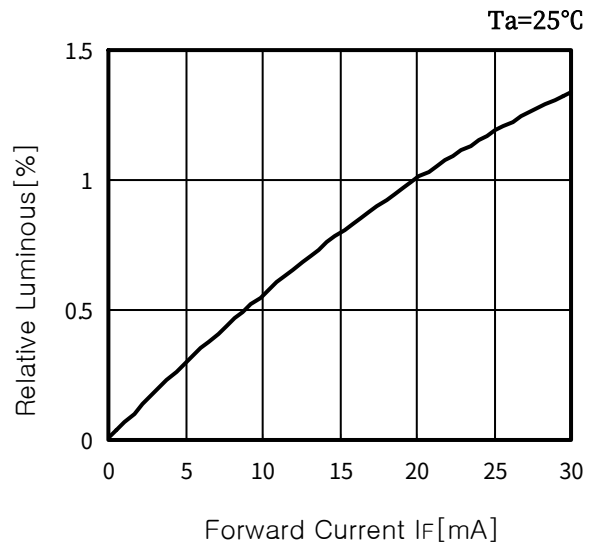


Fig. 3 $I_F - T_a$

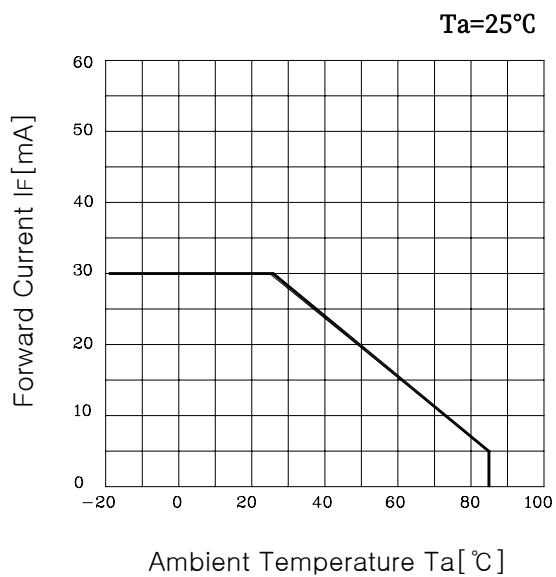


Fig. 4 Spectrum Distribution

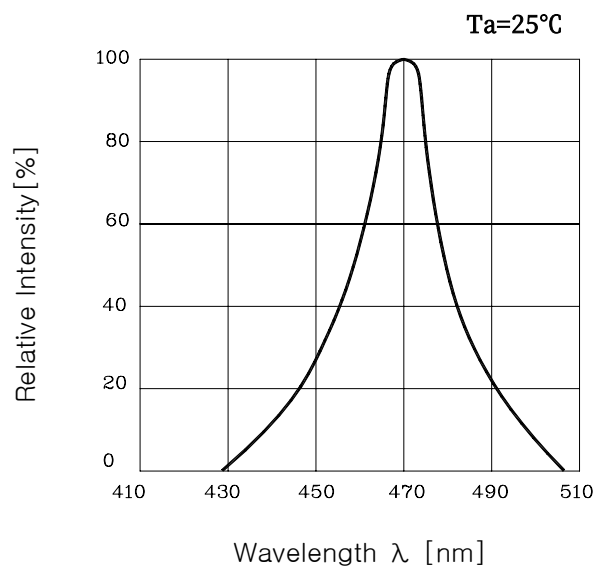
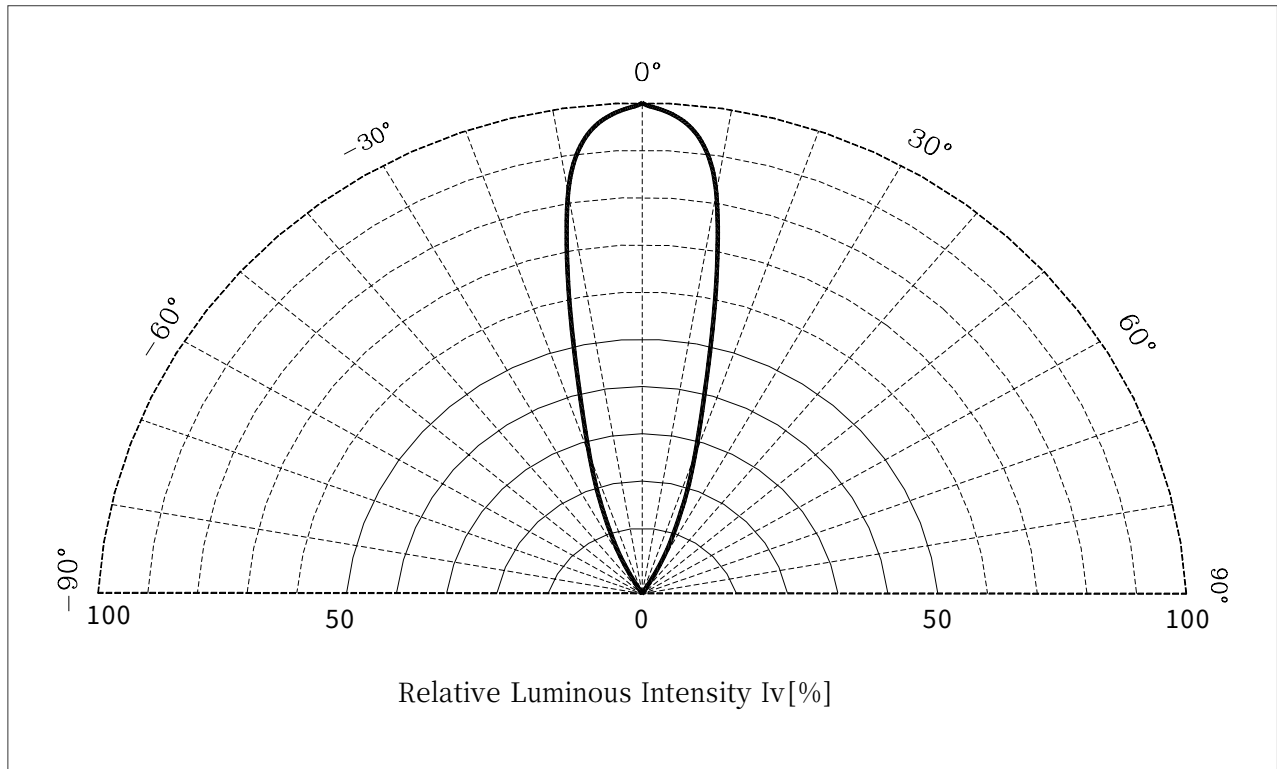


Fig. 5 Radiation Characteristics



[illegible]