SB3418E-G/SB3418E-G(B)

1. Features

◆ Colored transparency lens type

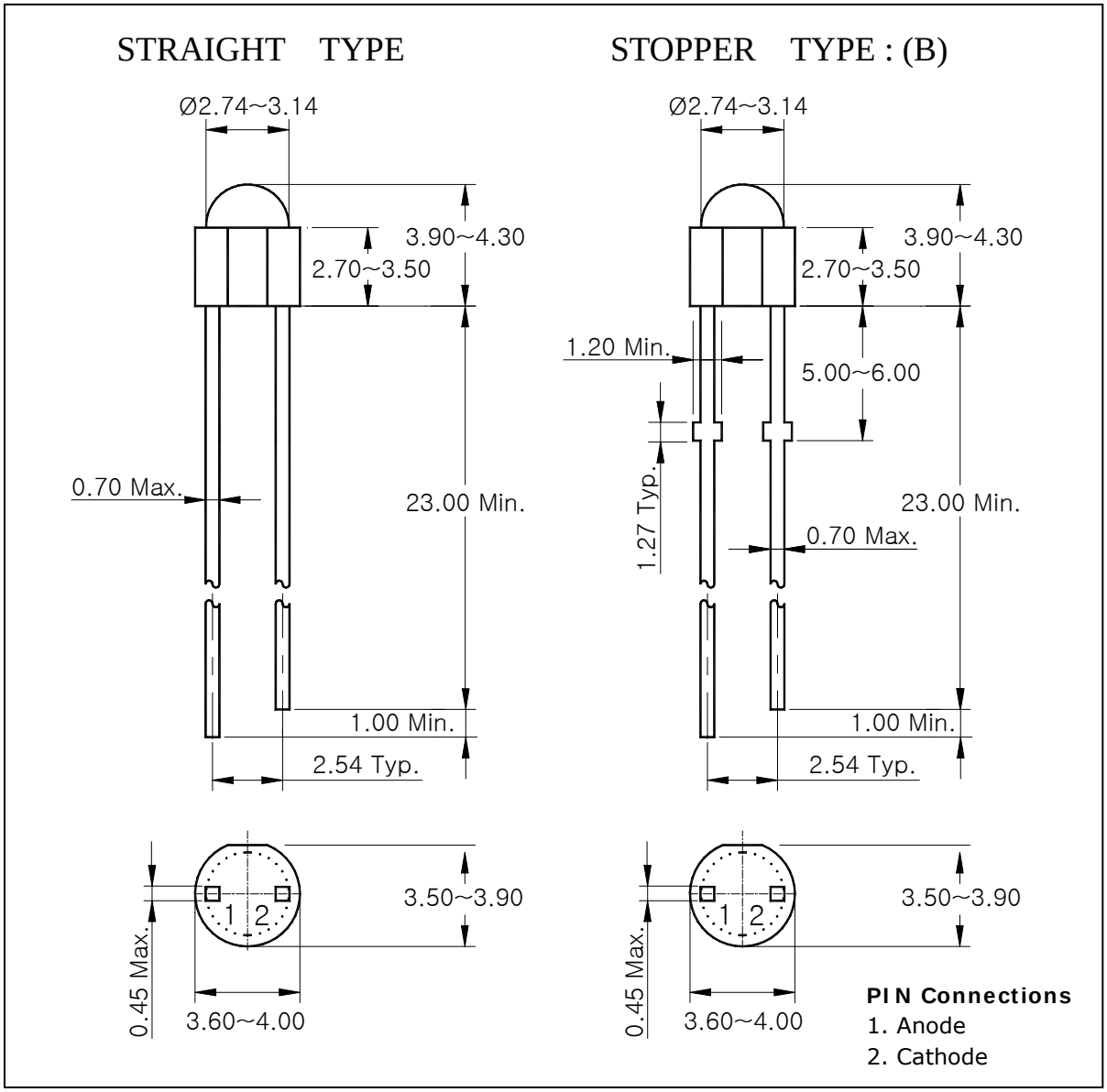
◆ϕ3mm(T-1) all plastic mold type

◆Super luminosity

◆ **E ; ESD Protected (±2.0KV, 3 Times @100pF, 1.5KΩ)**

2. Outline Dimensions

unit : mm



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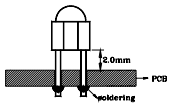
3. Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Power dissipation	P_D	114	mW
Forward current	I_F	30	mA
*1Peak forward current	I_{FP}	50	mA
Reverse voltage	V_R	4	V
Operating temperature range	T_{opr}	-30～85	℃
Storage temperature range	T_{stg}	-30～100	℃
*2Soldering temperature	T_{sol}	260℃ for 10 seconds	

*1.Duty ratio = 1/16, Pulse width = 0.1ms

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



※ Recommend document
-. LED is very sensitive to ESD.

4. Electrical / Optical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
*3Forward Voltage	V_F	I_F= 20mA	-	-	3.8	V
*4Luminous Intensity	I_V	I_F= 20mA	230	-	1170	mcd
*5Dominant Wavelength	λ_D	I_F= 20mA	465	-	480	nm
Spectrum Bandwidth	$\Delta\lambda$	I_F= 20mA	-	24	-	nm
Reverse Current	I_R	V_R=4V	-	-	10	uA
*6Half angle	$\theta 1/2$	I_F= 20mA	-	±45	-	deg

*3. Forward voltage tolerance for each Grade Classification limit is ±0.1V

*4. Luminous Intensity Maximum tolerance for each Grade Classification limit is ±18%

*5. Dominant Wavelength Maximum tolerance for each Grade Classification limit is ±1nm

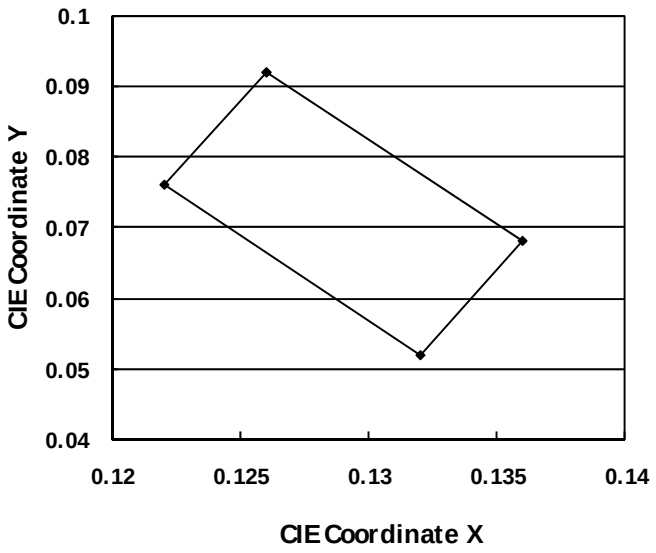
*6. θ1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

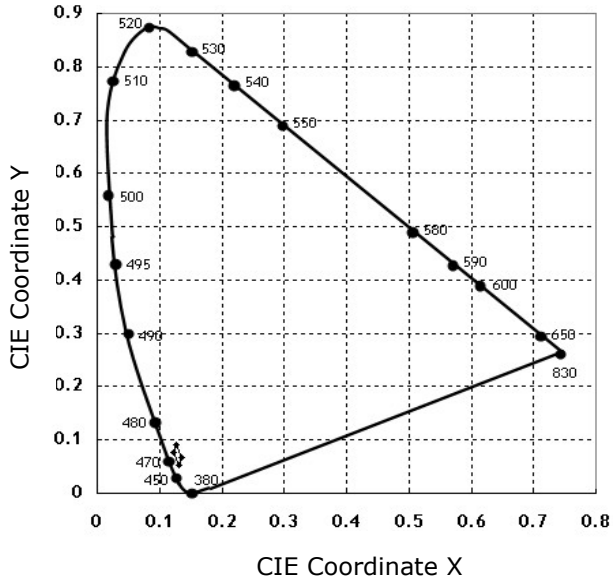
◆ V_F / I_V / λ_D Grade Classification (Ta=25℃)

Test Condition @I_F = 20mA		
Forward Voltage [V]	Luminous Intensity [mcd]	Dominant Wavelength [nm]
1 : 2.8~3.2	O : 230~350	a : 465~470
	P : 350~520	
2 : 3.2~3.5		b : 470~475
	Q : 520~780	
3 : 3.5~3.8		c : 475~480
	R : 780~1170	

(Do not use to combine grade classification. It must be used separately grade classification)

▶ CIE 1931 UCS Diagram





◆ CIE Coordinates Grade Classification (Ta=25℃, I_F=20mA)

Color Bin	CIE Coordinates	
	X	Y
-	0.126	0.092
	0.122	0.076
	0.132	0.052
	0.136	0.068

(Do not use to combine grade classification. It must be used separately grade classification)

5. Characteristic Diagrams

Fig. 1 I_F - V_F

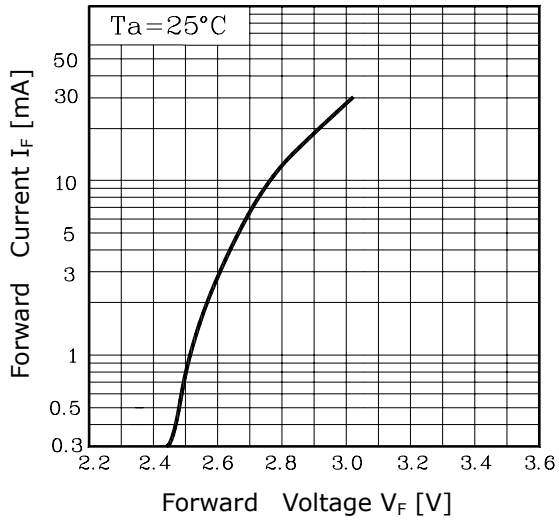


Fig. 2 I_V - I_F

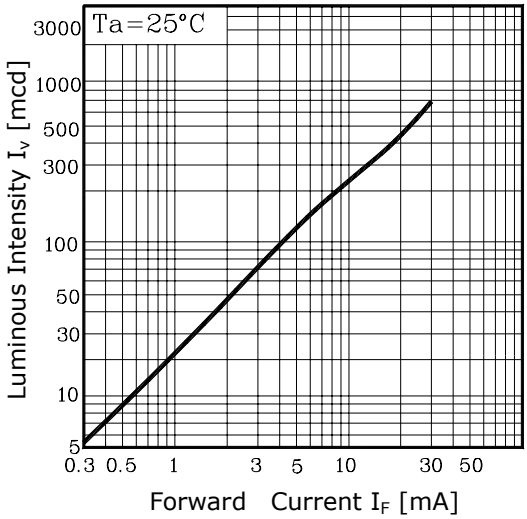


Fig. 3 I_F – Ta

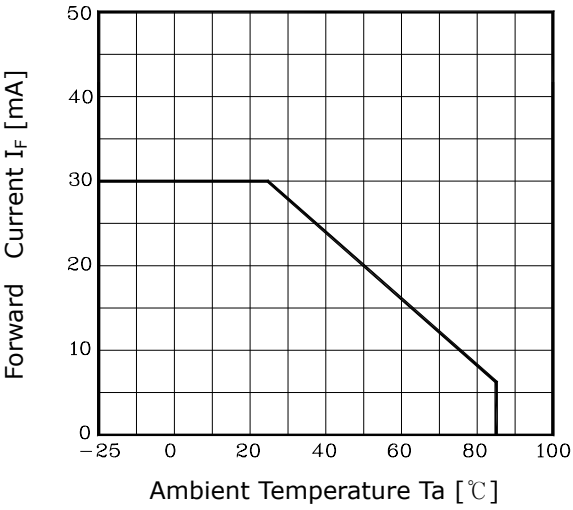


Fig.4 Spectrum Distribution

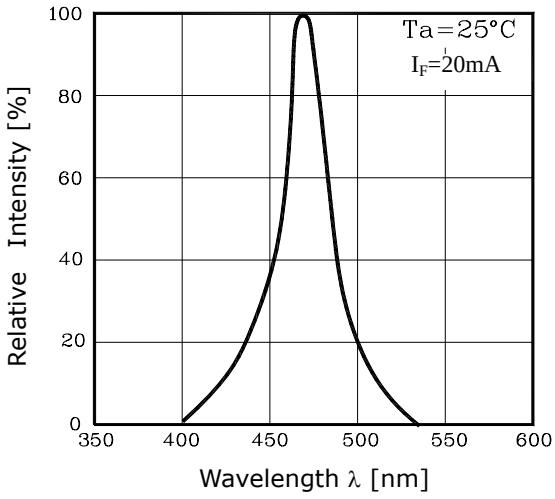
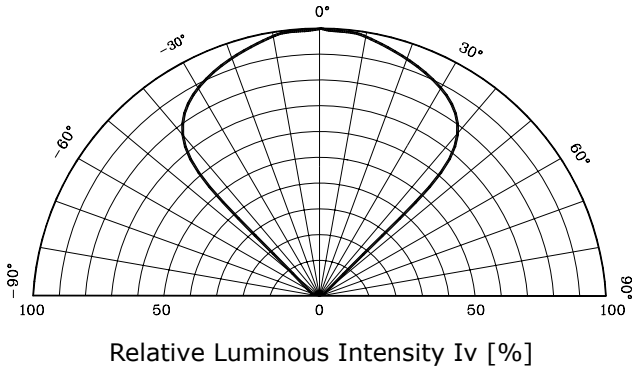


Fig. 5 Radiation Diagram



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