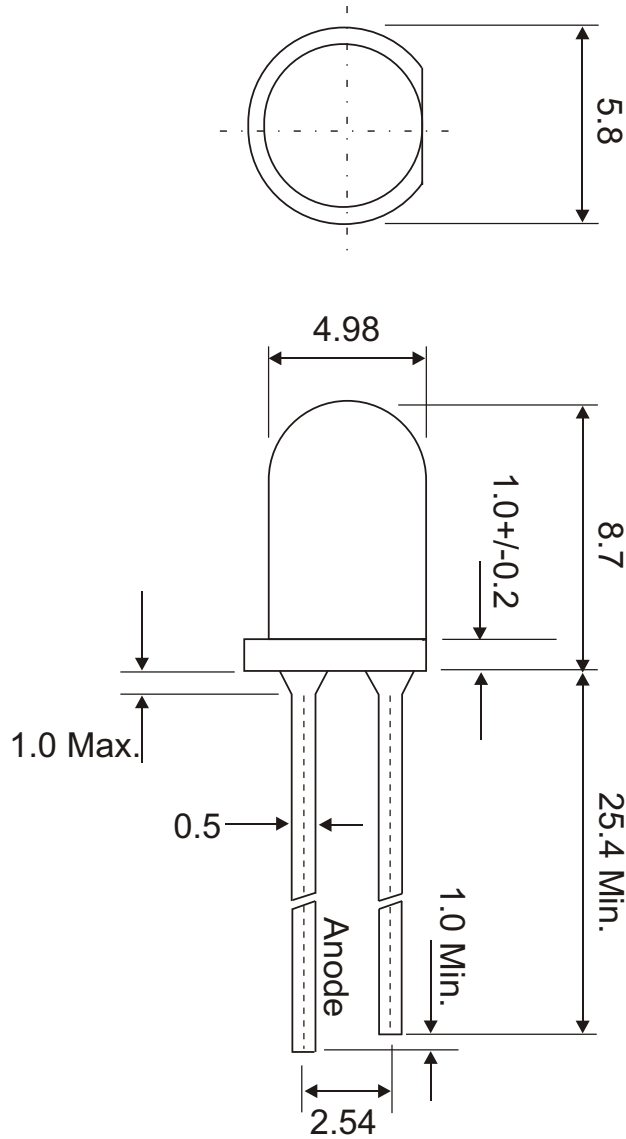


■ PACKAGE DIMENSIONS :



Chips Material	Emitting Color	Lens Shape	Lens Color
InGaN	White	5mm Round	Water Clear

Notes :

1. Lead spacing is measured where the leads emerge from the package
2. Protruded resin under flange 1.5mm(0.059") Max.
3. All dimensions are in millimeters, Tolerance is 0.25mm unless otherwise noted.
4. This is a static sensitive devices, not to be handled by unauthorized personnel.
5. ESD Class (Mil Std-883d Method 3015.7) based on Human Body Model : 1000V



■ Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	See Page 4 for our * Ranking System*			mcd	I _F = 20 mA
Viewing Angle *	2θ 1/2		15		deg.	I _F = 20 mA
Chromaticity Coordinates		See Page 4 for our * Ranking System*				I _F = 20 mA
Spectrum Radiation Bandwidth	Δλ		25		nm	I _F = 20 mA
Forwards Voltage	V _F	See Page 4 for our * Ranking System*			V	I _F = 20 mA
Recommended Working Current		15	20	25	mA	

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

■ Absolute Maximum Ratings (Ta=25°C)

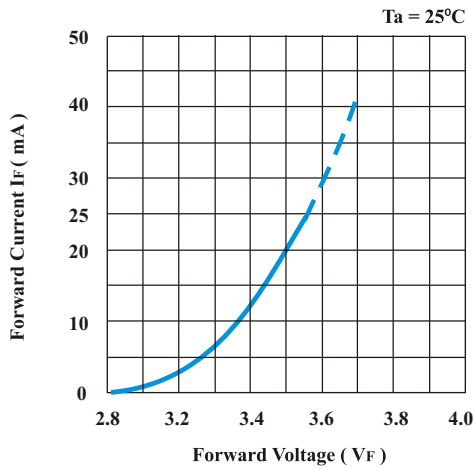
Characteristic	Symbol	Ratings	Unit
Power Dissipation	P _D	130	mW
Forward Current	I _F	30	mA
Peak Forward Current #	I _{PF}	100	mA
Reverse Voltage	V _R	5	V
Reverse Current	I _R	50	μA
Operation Temperature Range	T _{opr}	-30 ~ + 80	°C
Storage Temperature Range	T _{stg}	-40 ~ + 100	°C
Soldering Temperature Range *	T _{sol}	250°C for 3 seconds (max.)	

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

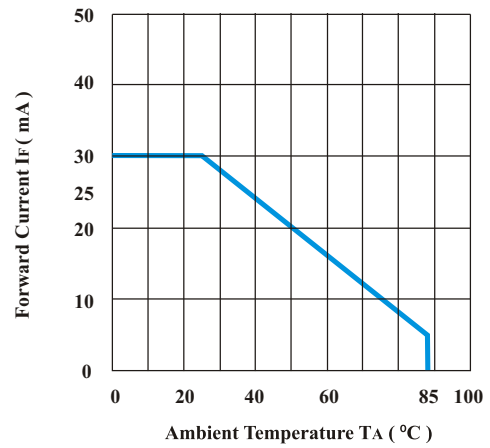
* Lead soldering temperature range (1.6mm from Body)

■ Typical Electro-Optical Characteristics Curves

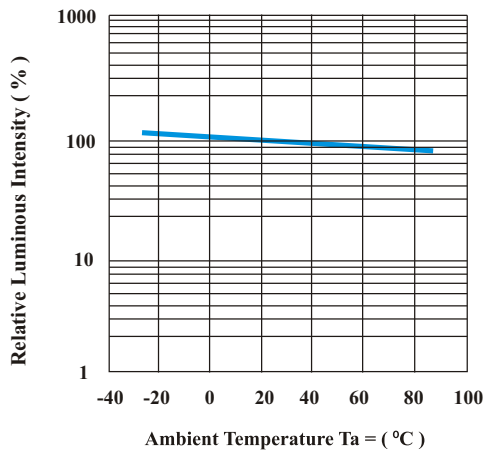
Forward Current vs Forward Voltage



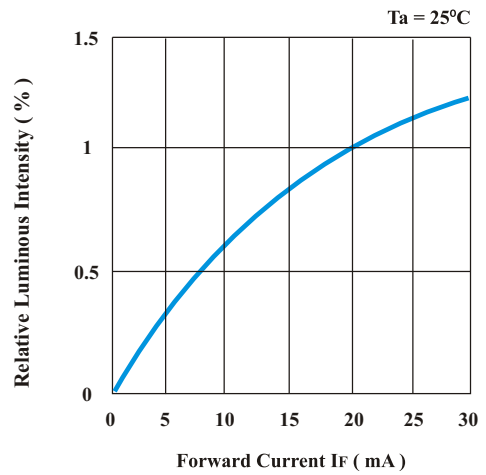
Forward Current Derating Curve



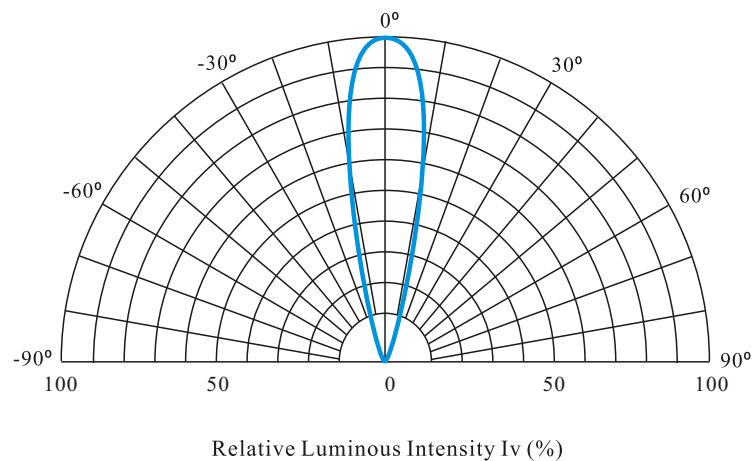
Luminous Intensity vs Ambient Temperature



Luminous Intensity vs Forward Current



Radiation Diagram



■ Ranking System (Ta = 25°C , If = 20mA)

► Color Classification Data for White LEDs

Bin #	Top		Right		Bottom		Left	
	X	Y	X	Y	X	Y	X	Y
A	0.26	0.31	0.26	0.25	0.22	0.22	0.22	0.28
B	0.29	0.33	0.29	0.27	0.26	0.25	0.26	0.31
C	0.32	0.35	0.32	0.29	0.29	0.27	0.29	0.33
D	0.36	0.38	0.36	0.32	0.32	0.29	0.32	0.35

► Luminous Intensity (Iv)

Rank Code	Range in (mcd)
A1	300 ~ 500
A2	500 ~ 800
A3	800 ~ 1000
A4	1000 ~ 1400
A5	1400 ~ 2000

Rank Code	Range in (mcd)
A6	2000 ~ 3000
A7	3000 ~ 4000
A8	4000 ~ 6000
A9	6000 ~ 8000
A10	8000 ~ 11000

► Forward Voltage (Vf) with 0.2V in Difference

Rank Code	Range in (V)
21	2.8 ~ 3.0
22	3.0 ~ 3.2
23	3.2 ~ 3.4
24	3.4 ~ 3.6
25	3.6 ~ 3.8
26	3.8 ~ 4.0

Notes :

- 1 . The above data is adjustable. For further information please feel free to contact our Eng. Dept
- 2 . The tolerance for the forward current is +/- 0.1V
- 3 . The tolerance for the luminous intensity is +/- 15%