

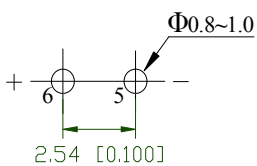
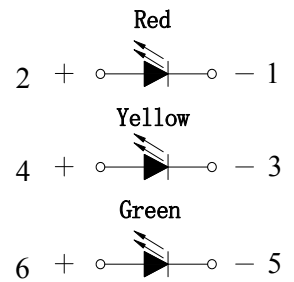
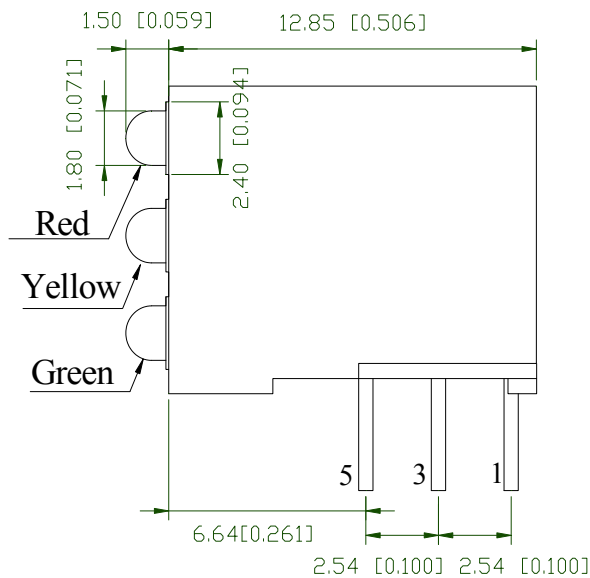
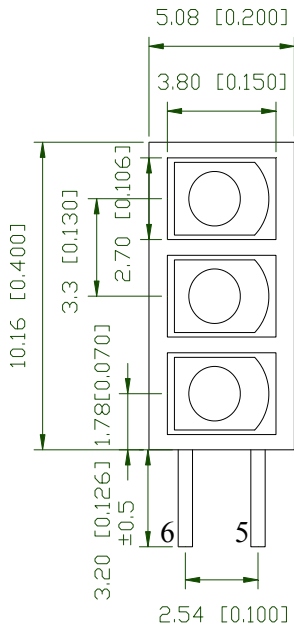
Features:

- Low power consumption.
- High efficiency.
- Good control and free combinations on the colors of LED lamps.
- Good lock and easy to assembly.
- Stackable and easy to assembly.
- Stackable vertically and easy to assembly.
- Stackable horizontally and easy to assembly.
- Versatile mounting on P.C board or panel.
- Black case enhances contrast ratio.

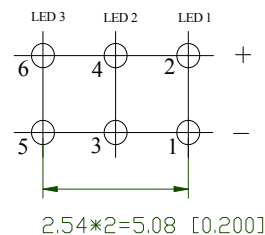
Applications:

- Computer.
- Communication.
- Industrial.

Part No.	Emitting Color	Lens Color(LED)
RND 135-00109	Deep Red	Red Diffused
	Yellow	Yellow Diffused
	Yellow Green	Green Diffused



RECOMMENDED
P.C.B LAYOUT



Absolute Maximum Ratings at Ta=25°C

Parameters	Symbol	Max.	Unit	
Power Dissipation	Red	P_d	65	mW
	Yellow	P_d	78	
	Yellow Green	P_d	78	
Peak Forward Current ^(a)		I_{FP}	100	mA
DC Forward Current ^(b)	Red	I_F	25	mA
	Yellow	I_F	30	
	Yellow Green	I_F	30	
Reverse Voltage		V_R	5	V
Operating Temperature Range		T_{opr}	-40°C to +80°C	
Storage Temperature Range		T_{stg}	-40°C to +85°C	
Soldering Temperature		T_{sld}	260°C for 5 Seconds	

Notes:

- a. Derate linearly as shown in derating curve.
- b. Duty Factor = 10%, Frequency = 1 kHz.

Electrical Optical Characteristics at Ta=25°C

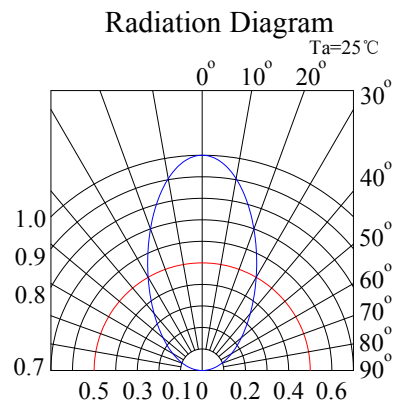
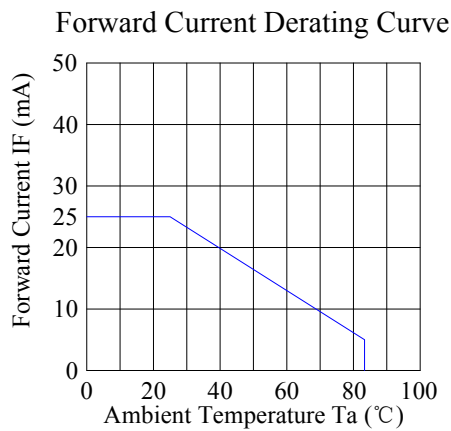
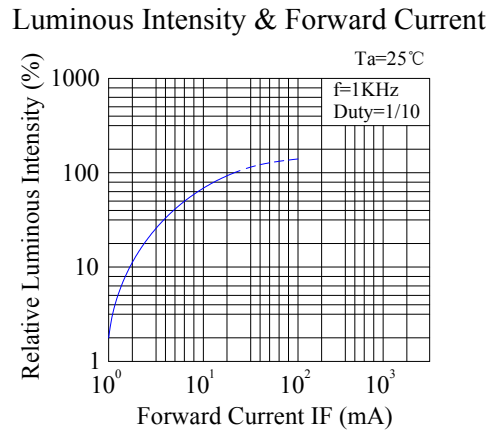
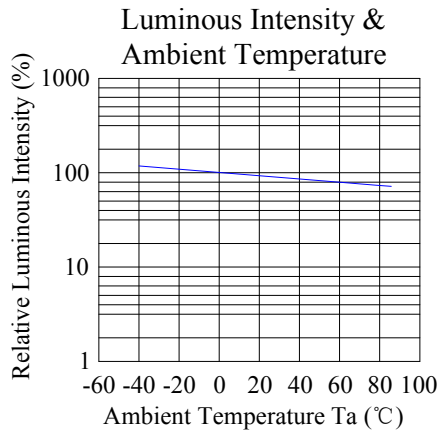
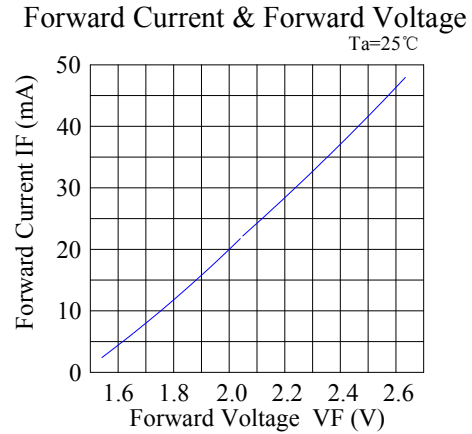
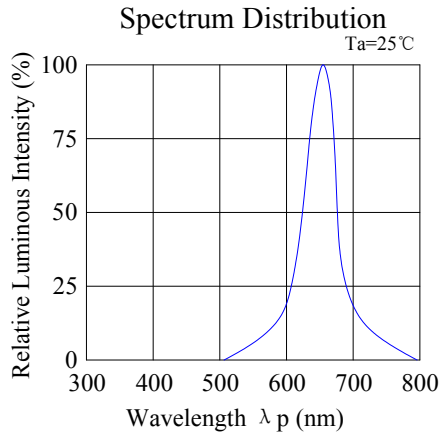
Parameters	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity ^(a)	I _v	Red	30	70	---	mcd	IF=20mA
		Yellow	20	45	---		
		Yellow Green	20	45	---		
Viewing Angle ^(b)	2θ _{1/2}	Red	---	60	---	deg.	IF=20mA
		Yellow	---	60	---		
		Yellow Green	---	60	---		
Peak Emission Wavelength	λ _p	Red	---	660	---	nm	IF=20mA
		Yellow	---	590	---		
		Yellow Green	---	565	---		
Dominant Wavelength ^(c)	λ _d	Red	---	640	---	nm	IF=20mA
		Yellow	---	588	---		
		Yellow Green	---	571	---		
Spectral Line Half-Width	Δλ	Red	---	45	---	nm	IF=20mA
		Yellow	---	35	---		
		Yellow Green	---	20	---		
Forward Voltage	V _F	Red	1.6	2.0	2.6	V	IF=20mA
		Yellow	1.6	2.0	2.6		
		Yellow Green	1.6	2.2	2.6		
Reverse Current	I _R	Red	---	---	10	μA	V _R =5V
		Yellow	---	---	10		
		Yellow Green	---	---	10		

Notes:

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- 2θ_{1/2} is the o-axis angle where the luminous intensity is 1/2 the peak intensity.
- The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

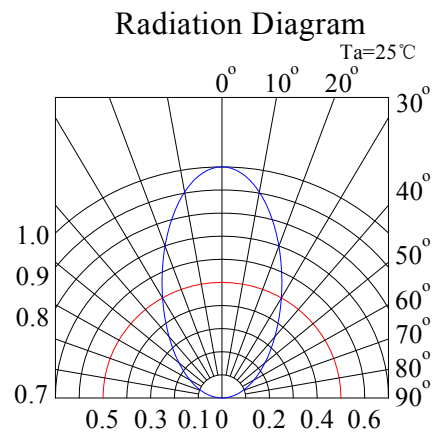
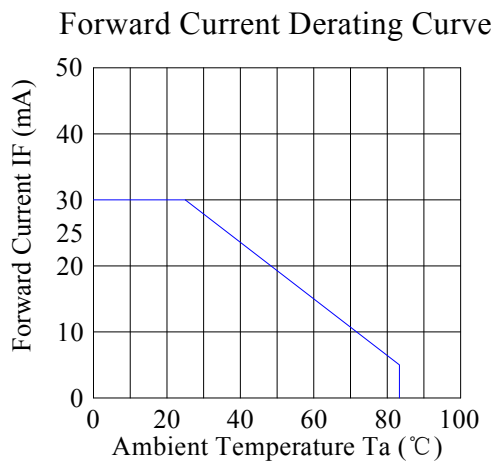
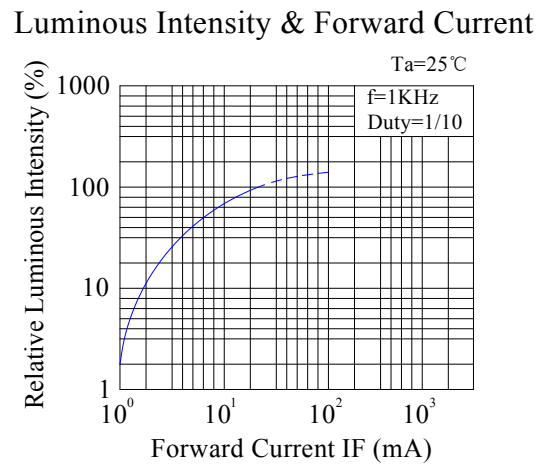
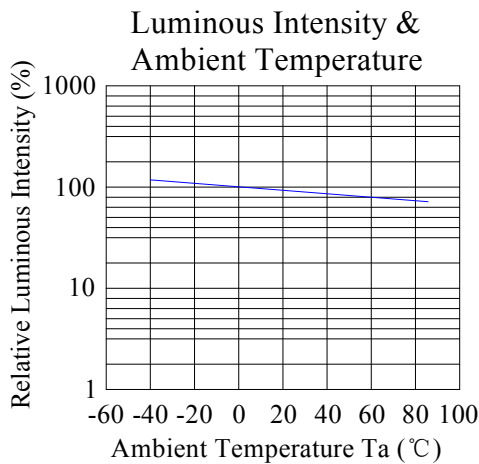
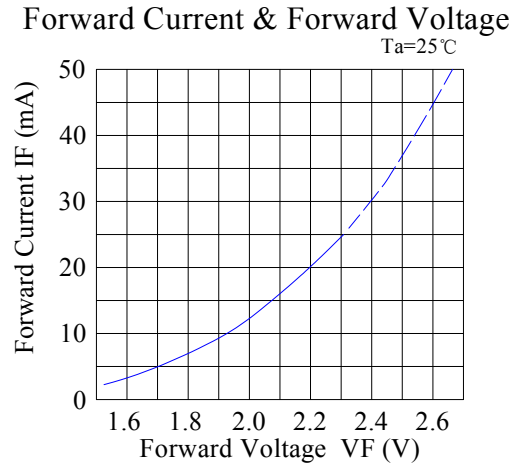
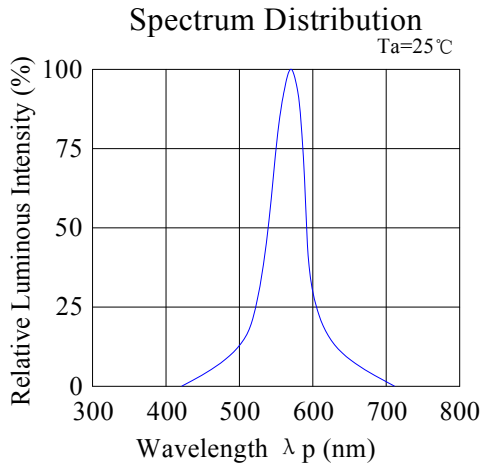
Typical Electrical / Optical Characteristics Curves (25°C Ambient Temperature Unless Otherwise Noted)

Red:



Typical Electrical / Optical Characteristics Curves (25°C Ambient Temperature Unless Otherwise Noted)

Yellow:



Typical Electrical / Optical Characteristics Curves (25°C Ambient Temperature Unless Otherwise Noted)

Yellow/Green:

