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LED

RND components

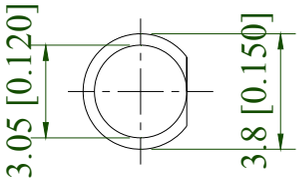
Features:

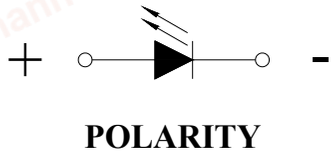
- Low power consumption.
- General purpose leads.
- High efficiency.
- Versatile mounting on p.c. board or panel.
- I.C. compatible/low current requirement.

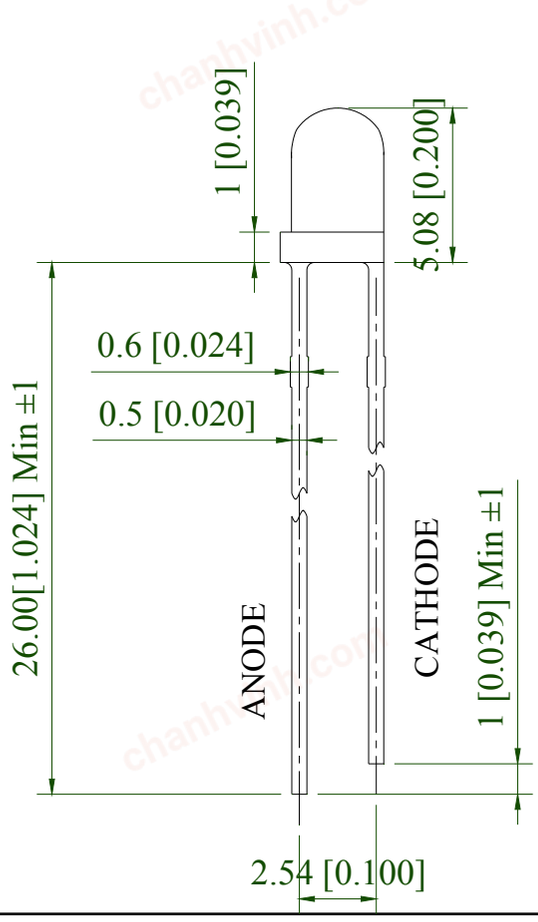
Applications:

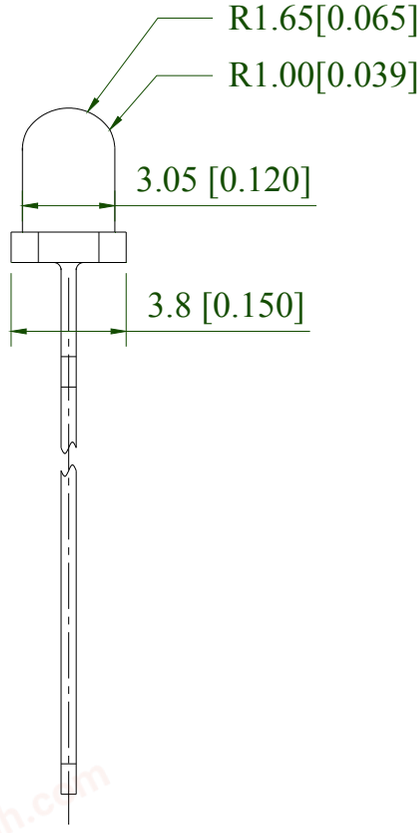
- Message panels.
- Optical indicators.
- Backlighting.
- Marker lights.
- Home appliance.

Part No.	Emitting Color	Lens Color(LED)
RND 135-00162	Cool White	Water Clear









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Absolute Maximum Ratings at Ta=25℃

Parameters	Symbol	Max.	Unit
Power Dissipation	P_d	85	mW
Peak Forward Current [a]	I_{FP}	100	mA
DC Forward Current [b]	I_F	25	mA
Reverse Voltage [c]	V_R	5	V
Operating Temperature Range	T_{opr}	-40℃ to +80℃	
Storage Temperature Range	T_{stg}	-40℃ to +85℃	
Soldering Temperature	T_{sld}	260℃ for 5 Seconds	

Notes:
a. Derate linearly as shown in derating curve.
b. Duty Factor = 10%, Frequency = 1 kHz.
c. Reverse voltage (VR) condition is applied for IR test only. The device is not designed for reverse operation.

Electrical Optical Characteristics at Ta=25℃

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity [a]	Iv	5000	8500	---	mcd	IF=20mA
Viewing Angle [b]	$2\theta_{1/2}$	---	30	---	deg.	IF=20mA
Chromaticity Coordinates [c]	x	---	0.28	---		IF=20mA
	y	---	0.28	---		IF=20mA
Color Temperature	CCT	---	11000	---	K	IF=20mA
Color Rendering Index	CRI	---	80	---	Ra	IF=20mA
Forward Voltage	VF	2.60	3.00	3.40	V	IF=20mA
Reverse Current [d]	IR	---	---	10	μA	VR=5V

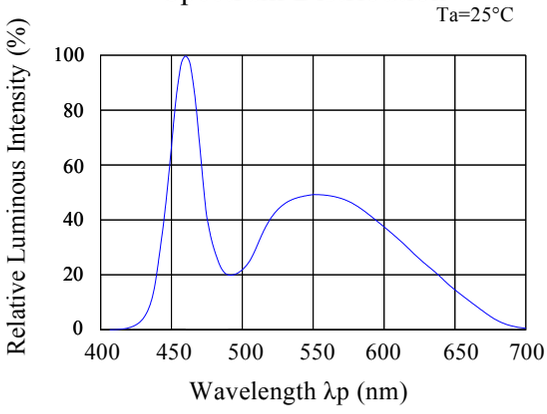
Notes:
a. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve. The Iv guarantee must be included with ±15% testing tolerance.
b. $2\theta_{1/2}$ is the o -axis angle where the luminous intensity is 1⁄2 the peak intensity.
c. The chromaticity coordinates (x, y) is derived from the 1931 CIE chromaticity diagram.
d. Reverse current (IR) condition is applied for VR test only. The device is not designed for reverse operation.

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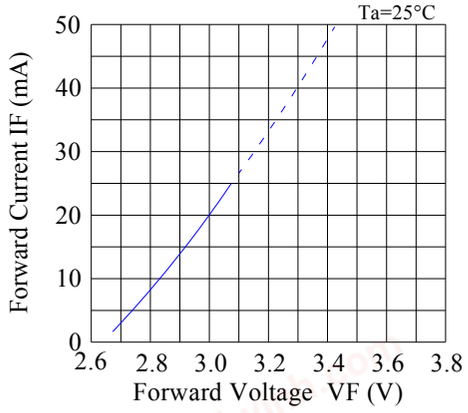
LED

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

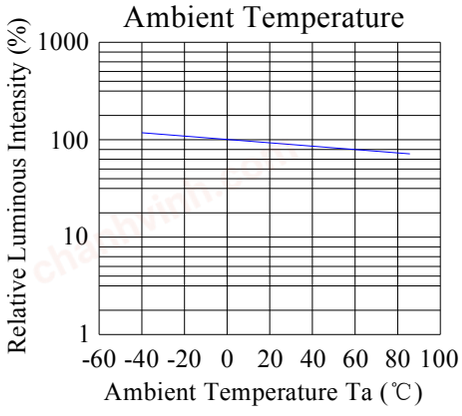
Spectrum Distribution



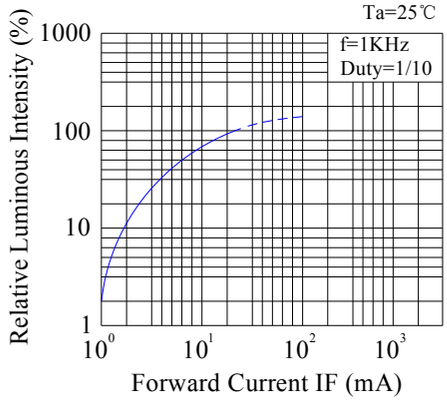
Forward Current & Forward Voltage



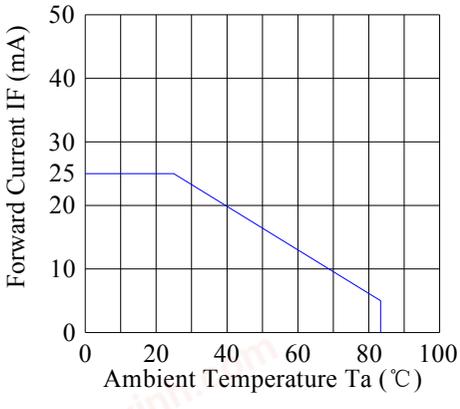
Luminous Intensity & Ambient Temperature



Luminous Intensity & Forward Current



Forward Current Derating Curve



Radiation Diagram

