Round LED
5mm, Blue

multicomp PRO

RoHS Compliant

Features

- Low power consumption
- Excellent product quality and reliability
- Lead-free device

Applications

- Electronic signs and signals
- Bright ambient lighting conditions
- Backlight
- General purpose indicatiors

Device Selection Guide

Part No.	Chip		Lens color
MP008539	Material	Emitted color	Blue Diffuse
	InGaN	Blue	

Absolute Maximum Ratings: (T_A = 25°C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	120	mW
Forward Current	I_F	30	mA
Peak Forward Current[*1]	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{OPR}	-40 to +85	°C
Storage Temperature	T_{STG}	-40 to +85	°C
Soldering Temperature[*2]	T_{SOL}	260°C For 5 Seconds	

Notes:
*1: Pulse width≤0.1ms, Duty cycle≤1/10
*2: 1.66mm below package base.

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Electrical / Optical Characterisitics at T$_A$ = 25°C

Parameter	Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	V$_F$	2.7	3.2	3.5	V	IF=20mA
Reverse Current	I$_R$	—	—	10	µA	VR=5V
Dominant Wavelength	λd	464	470	474	nm	IF=20mA
Peak Wavelength	λP	—	465	—	nm	
Spectral line Half-width	Δλ	—	25	—	nm	
Luminous Intensity	Iv	600	1000	1700	mcd	
Power Angle	2θ1/2	—	30	—	Deg.	

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or dominant wavelength), the typical accuracy of the sorting process is as follows:

1. Dominant Wavelength: +/-1nm

2. Chromatic Coordinates: +/-0.01

3. Luminous Intensity: +/-15%

4. Forward Voltage: +/-0.1V

5. The design and working current for LED is not less than 2mA.

Dimensions
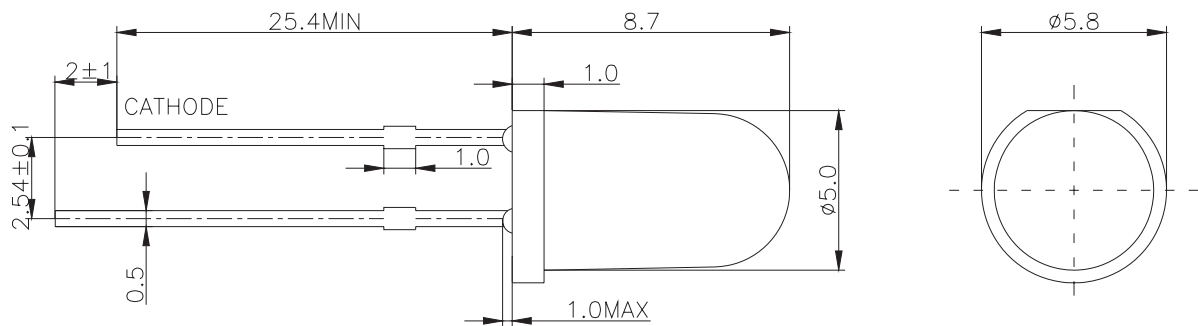
Dimensions : Millimetres

Notes:

1. Tolerance is ±0.25 unless otherwise noted.

2. Lead spacing is measured where the leads emerge from the package.

3. Specifications are subject to change without notice.

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VF Rank

Rank	VF(V)		Condition
	Min	Max	
F1F2	2.7	2.9	
G1G2	2.9	3.1	IF=20mA
H1H2	3.1	3.3	
I1I2	3.3	3.5	

Tolerance : ±0.1V

λD Rank

Rank	λD (nm)		Condition
	Min	Max	
B8	464	466	
B9	466	468	
BA	468	470	IF=20mA
BB	470	472	
BC	472	474	

Tolerance : ±0.1nm

IV Rank

Rank	IV(mcd)		Condition
	Min	Max	
M	600	1000	IF=20mA
N	1000	1700	

Tolerance : ±15%

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Typical Electrical/Optical Characteristics Curves
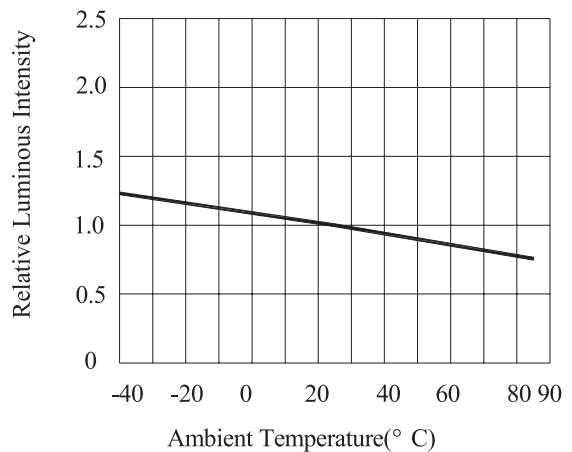### (Ta=25°C Unless Otherwise Noted)
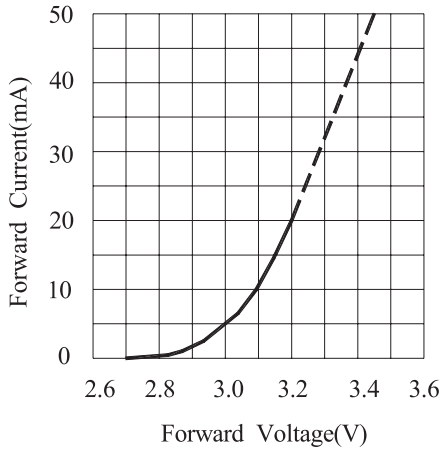
FORWARD CURRENT Vs.
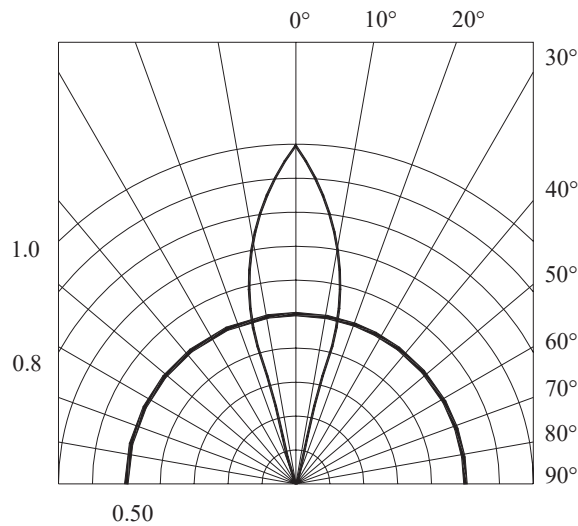FORWARD VOLTAGE
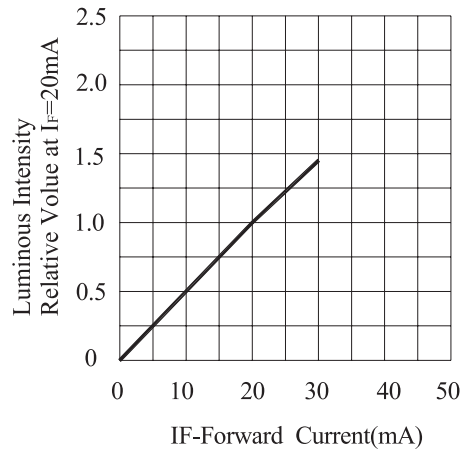
LUMINOUS INTENSITY Vs.
FORWARD CURRENT
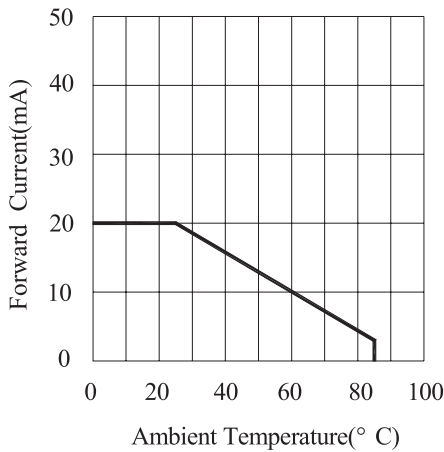
FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPARATURE

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Relative Luminous Intensity vs Wavelength(nm)
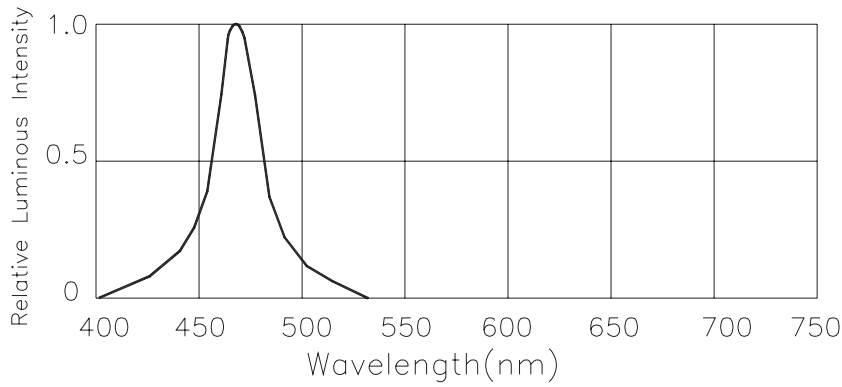
SPATIAL DISTRIBUTION

Part Number Table

Description	Part Number
Round LED, Blue, 465nm, 30°, 1000mcd, Through hole	MP008539

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