LIGHTHOUSE LEDs

Technical Data Sheet

Product Name:	5mm Diffused Flat Top Wide Angle UV / Purple LED - Wide Angle
Part Number:	5MMFLATTOPDIFFUSEDLEDUV
SKU:	5MMFLATTOPDIFFUSEDLEDUV
Package:	5mm Flat Top
Date:	2026-03-30

Document Control		
Prepared by	Checked by	Approved by

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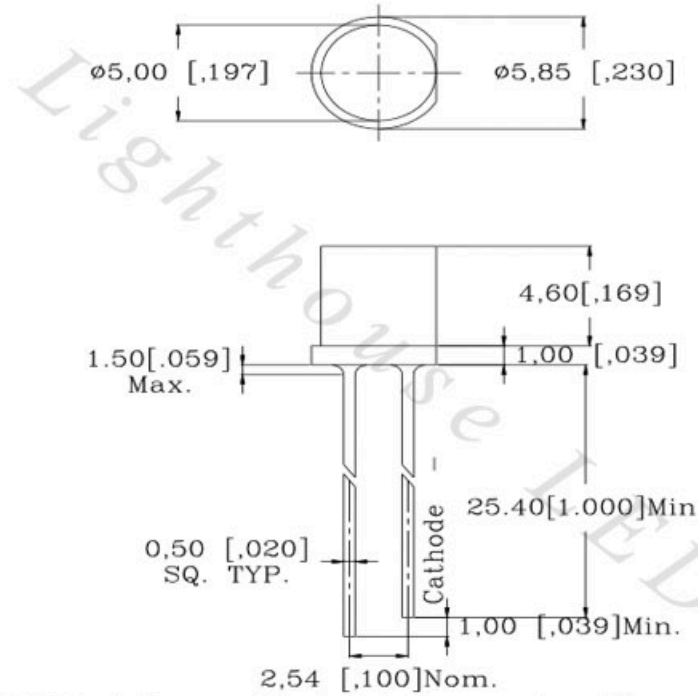
1. Features

- Package: 5mm Flat Top
- Color: Ultra Bright UV/Purple
- Lens: Diffused In Emitting Color
- Die Material: InGaN
- RoHS Compliant, Lead-Free

2. Outline Dimensions



**LED leads for a specific size/color/type may be a different length than shown,but will be the same consistency in size for that specific size/shape/color LED.*

Unit	Tolerance	Die Material	Lens Color	Emission Color
mm	±0.2mm	InGaN	Diffused In Emitting Color	UV/Purple

3. Electrical / Optical Characteristics (Ta = 25°C, RH 60%)

Parameter	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward Voltage	VF	IF = 20mA	3.0	—	3.4	V
Reverse Current	IR	VR = 5V	—	—	5	μA
Luminous Intensity	IV	IF = 20mA	1000	—	1500	mcd
Viewing Angle	2θ1/2	IF = 20mA	—	120	—	°
Dominant Wavelength	λd	IF = 20mA	395	—	400	nm
Spectral Line Half-Width	Δλ	IF = 20mA	—	20	—	nm

Remark: Tolerance of intensity ±15%, wavelength ±1nm, forward voltage ±0.05V. For reference only.

4. Absolute Maximum Ratings (Ta = 25°C, RH 60%)

Parameter	Symbol	Value	Unit	Remark
Forward Current	IF	20	mA	—
Peak Forward Current	IFM	75	mA	F=1kHz, duty cycle 1/10
Reverse Voltage	VRP	15	V	—
Power Dissipation	Pd	85	mW	—
Operating Temperature	Tamb	-25 to +80	°C	—
Storage Temperature	Tstg	-35 to +85	°C	—
Soldering Temperature	Tsol	320°C wave, 3mm from body, ≤5s		

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5. Typical Electrical / Optical Characteristic Curves

Fig.1 Relative Intensity vs. Wavelength

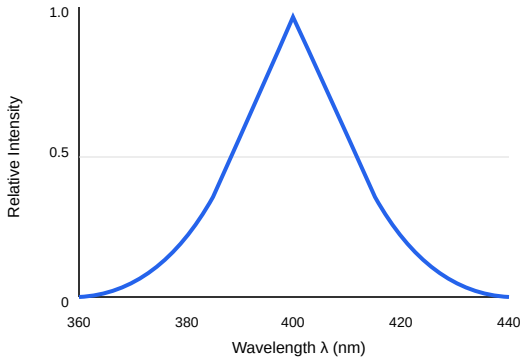


Fig.2 Forward Current Derating vs. Temperature

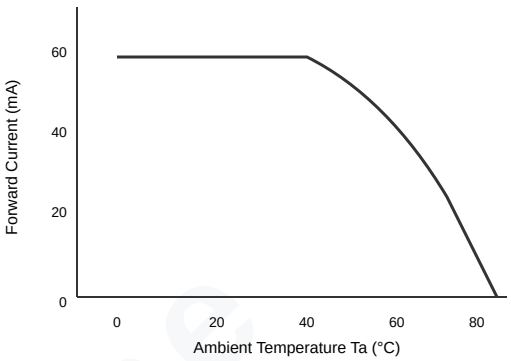


Fig.4 Relative Intensity vs. Forward Current

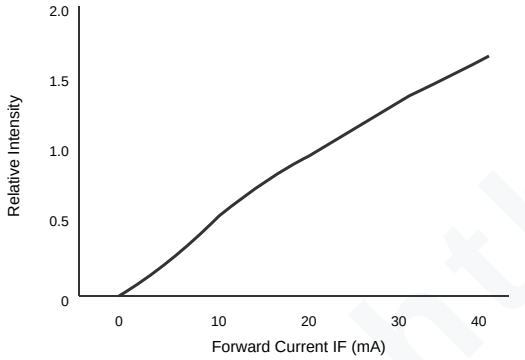


Fig.5 Intensity vs. Ambient Temperature

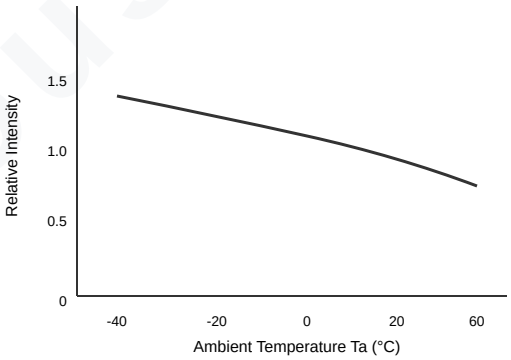
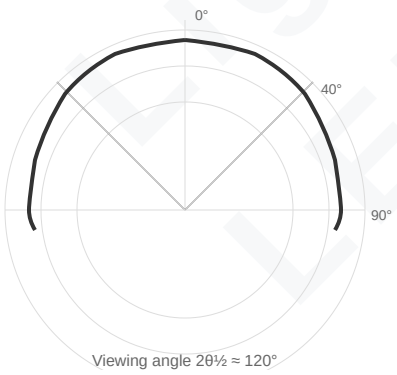


Fig.6 Spatial Distribution (Radiation Pattern)



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6. Reliability Test Data

Test	Standard	Conditions	Duration	Qty	Failures
Life Test (room temp)	JIS7021:B4	Ta = 25°C ±5°C, IF = 30mA	100 hrs	22	0
High Temperature Storage	JIS7021:B10 / MIL-STD-202:210A	Ta = 85°C ±5°C	1000 hrs	22	0
Low Temperature Storage	JIS7021:B12	Ta = -35°C ±5°C	1000 hrs	22	0
High Temp / Humidity	JIS7021:B11 / MIL-STD-202:103D	Ta = 85°C ±5°C, RH = 85%	1000 hrs	22	0
Thermal Shock	JIS7021:B4 / MIL-STD-202:107D	-10°C ↔ +100°C, 5min each	50 cycles	22	0
Temperature Cycling	JIS7021:A3 / MIL-STD-705:105E	-35°C ~ -25°C ~ 85°C ~ -35°C	50 cycles	22	0

7. Application Notes

- Always use a current-limiting resistor. See **lighthouseleds.com/blog/led-resistor-calculator.html**
- For AC or DCC power, add a bridge rectifier. See **lighthouseleds.com/blog/bridge-rectifier-led-ac-dcc-landscape-lighting.html**
- Observe polarity: longer lead = anode (+), shorter lead with flat = cathode (−).
- Do not exceed maximum forward current (20mA continuous).

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Specifications subject to change without notice. Data is for reference only.