

**SPECIFICATIONS FOR UPEC LAMP TYPE WHITE LED**

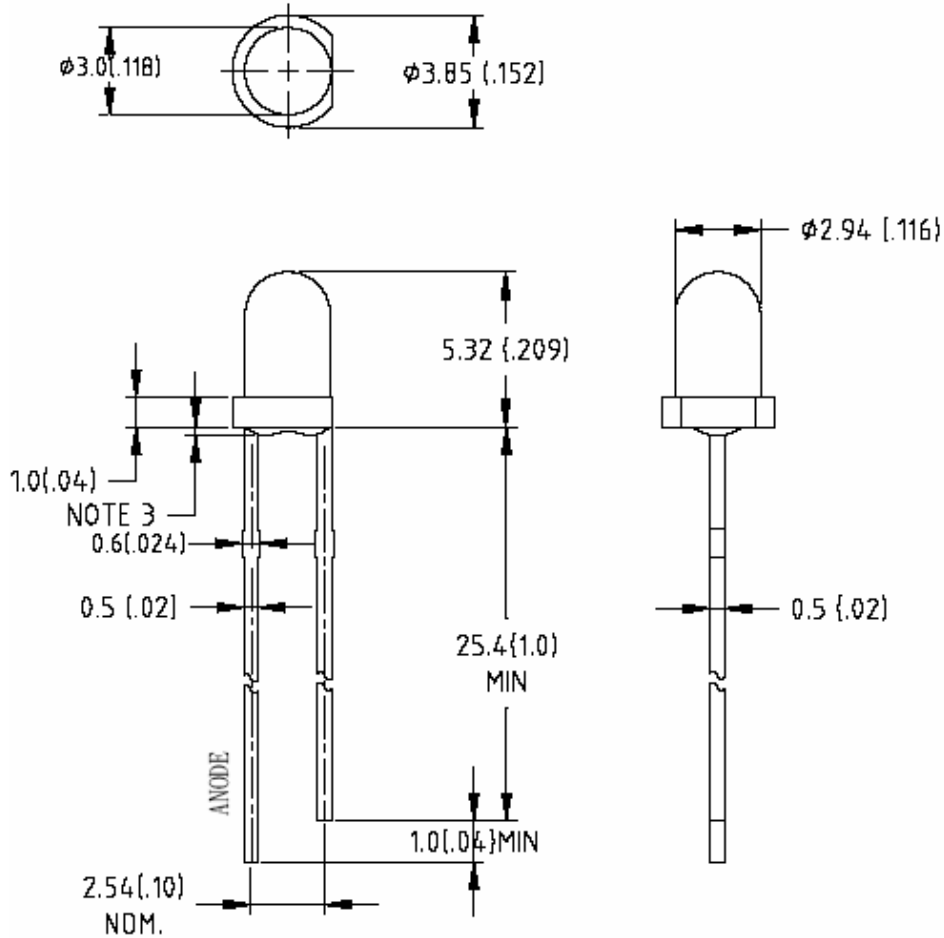
**MODEL: UE-LR300NW0-1XI**

**CONFIDENTIAL**

## Features

- High Luminous intensity
- General purpose leads
- Reliable and rugged

## Package Dimensions



Part NO.	Chip Material	Lens Color	Source Color
UE-LR300NW0-1XI	GaN	Water Clear	White

## Notes

- All dimensions are in millimeters (inches).
- Tolerance is  $\pm 0.25\text{mm}$  (.010") unless otherwise noted.
- Protruded resin under flange is 1.5mm (.06") max.
- Lead spacing is measured where the leads emerge from the package.

Mark	Date	Description Approve	Approved	Checked	Symbol	UPECLD
-	Nov/07/06	NEW	FERRE	AFRA	Name	UE-LR300NW0-1XI
					Drawing No	

### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Max	Unit
Power Dissipation	PD	80	mW
Pulse Forward Current	IPF	100	mA
Forward Current	IF	20	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	- 20 to + 80	°C
Storage Temperature Range	Tstg	- 30 to + 100	°C
Lead Soldering Temperature [ 1.6mm (0.063inch) From Body ] 260 °C For 5 Seconds			

### Electrical / Optical Characteristics at Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	2200	4900	---	mcd	IF = 20mA
Viewing Angle	2θ <sub>1/2</sub>	---	50	---	Deg	IF = 20mA
Forward Voltage	V <sub>F</sub>	2.8	3.5	4.0	V	IF = 20mA
Reverse Current	I <sub>R</sub>	---	---	50	μA	VR = 5V

BIN	LR	LS	LT	---	---	---
Range	2200-3300	3300-4900	4900-	---	---	---

Measurement Uncertainty of the Luminous Intensity: ± 15%

Measurement Uncertainty of the Forward Voltage: ±0.1V

### Color Ranks

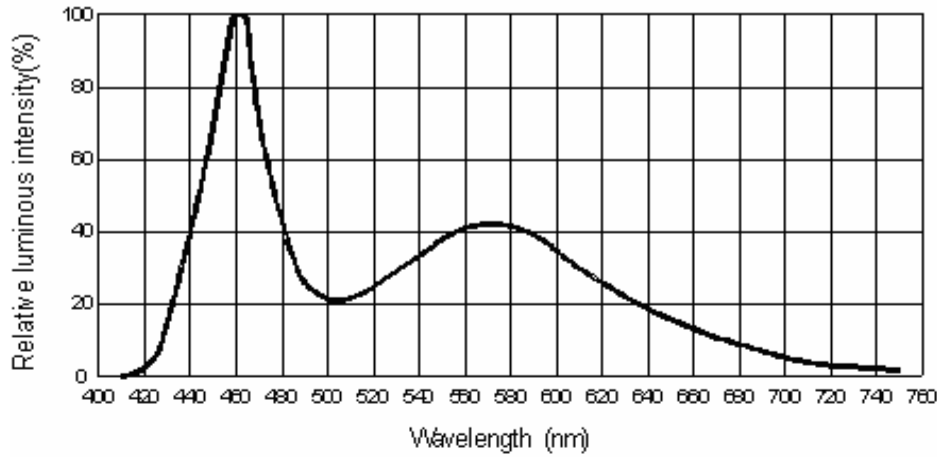
Rank	X1	Y1	X2	Y2	X3	Y3	X4	Y4
A0	0.307	0.339	0.338	0.316	0.319	0.289	0.287	0.311
A1	0.287	0.311	0.319	0.289	0.299	0.267	0.271	0.287
A2	0.271	0.287	0.299	0.267	0.284	0.245	0.253	0.266
A3	0.253	0.266	0.284	0.245	0.265	0.225	0.236	0.247
Tolerance	X=±0.02				Y=±0.02			

### Notes

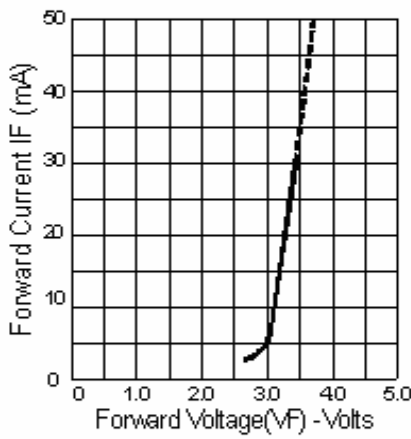
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- θ<sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

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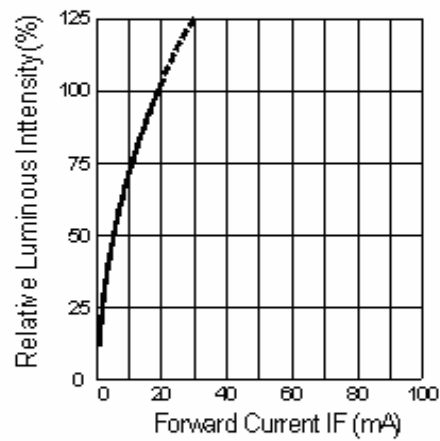
# Typical Electrical / Optical Characteristics Curves



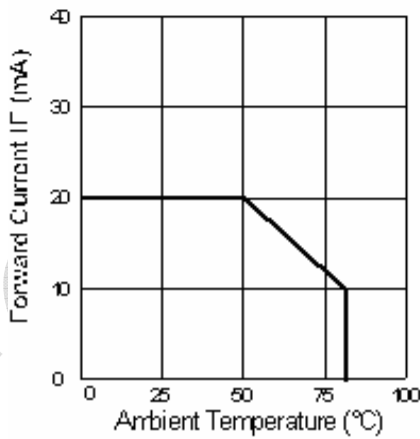
Forward Current VS. Forward Voltage



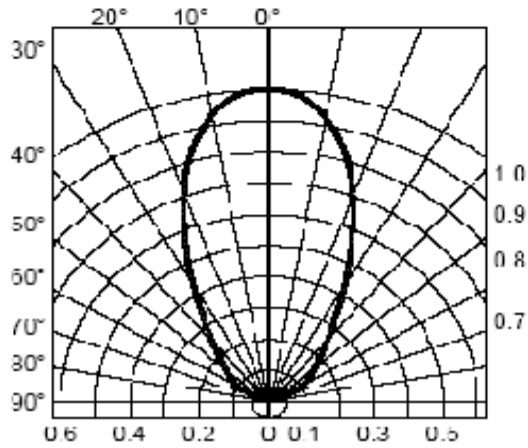
Luminous Intensity VS. Forward Current



Forward Current VS. Ambient Temperature



Radiation Diagram



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## Reliability Test Items and Conditions

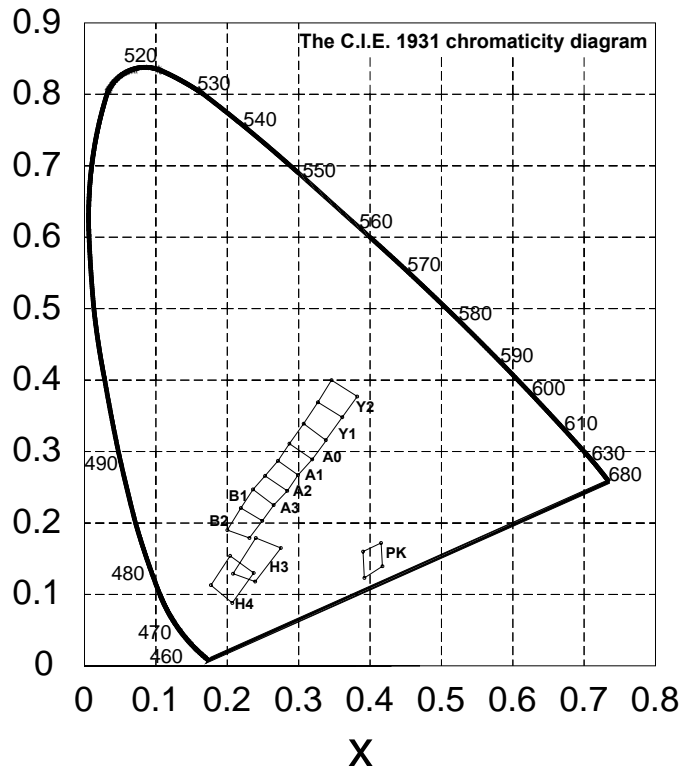
No.	Item	Test Conditions	Test Hours / Cycle	Sample Q'ty	Ac/Re
1	Solder Heat	TEMP : 260°C±5°C	5 sec	30 pcs	0/1
2	Temperature Cycle	H : +85°C 30min. ∫ 5min. L : -35°C 30min.	50 cycle	30 pcs	0/1
3	Thermal Shock	H : +85°C ∫ 5min. L : -35°C 5min.	50 cycle	30 pcs	0/1
4	DC Operating Life	I <sub>F</sub> = 20mA	1000 hrs	30 pcs	0/1
5	High Temperature / High Humidity	65°C/85~90%R.H.	1000 hrs	30 pcs	0/1

### Judgment Criteria

Forward Voltage Vf	V <sub>fmax</sub> Increase <1.2x
Reverse Current Ir	I <sub>rmax</sub> Increase <2x
Luminous Intensity Iv	Iv Decay < 50%

Note : Measurement shall be taken after the tested samples have been returned to normal ambient conditions (generally after two hours)

The C.I.E. 1931 color rank (Tolerance ±0.02)



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