

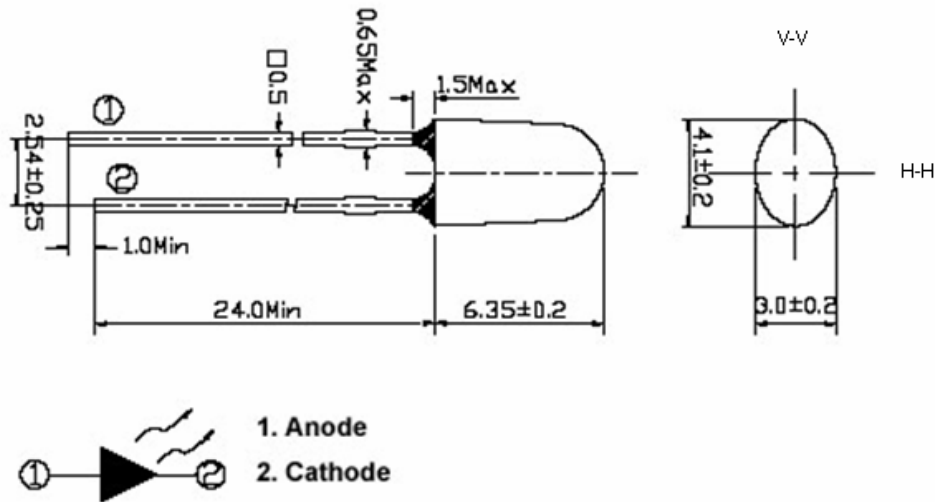
**SPECIFICATIONS FOR UPEC LAMP TYPE WHITE LED**

**MODEL: UE-LD400NW0-4XSI**

## Features

- High Luminous intensity
- Elliptical LED Lamp
- General purpose leads
- Reliable and rugged

## Package Dimensions



Part NO.	Chip Material	Lens Color	Source Color
UE-LD400NW0-4XSI	InGaN	Water Diffused	White

## Notes

- All dimensions are in millimeters .
- Tolerance is  $\pm 0.25$ mm unless otherwise noted.
- Protruded resin under flange is 1.5mm max.
- Lead spacing is measured where the leads emerge from the package.

Mark	Date	Description Approve	Approved	Checked	Symbol	UPEC LED
-	MAR/03/05		Joseph	Stone	Name	UE-LD400NW0-4XSI
					Drawing No	WIENDS438

### Absolute Maximum Ratings at Ta=25

Parameter	Symbol	Max	Unit
Power Dissipation	PD	110	mW
Pulse Forward Current	IPF	100	mA
Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	- 40 to + 80	°C
Storage Temperature Range	Tstg	- 40 to + 80	°C
Lead Soldering Temperature [ 1.6mm (0.063inch) From Body ] 260 °C For 5 Seconds			

### Electrical / Optical Characteristics at Ta=25

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	210	310	---	mcd	IF = 20mA
50% Power Angle	2θ <sub>1/2</sub> H-H	---	50	---	Deg	IF = 20mA
	2θ <sub>1/2</sub> V-V	---	110	---	Deg	IF = 20mA
Forward Voltage	V <sub>F</sub>	---	3.5	4.0	V	IF = 20mA
Reverse Current	I <sub>R</sub>	---	---	100	µA	VR = 5V

BIN	LL	LM	LN	---	---	---
Range	210-310	310-460	460---	---	---	---

Measurement Uncertainty of the Luminous Intensity: ± 15%

Measurement Uncertainty of the Forward Voltage: ±0.1V

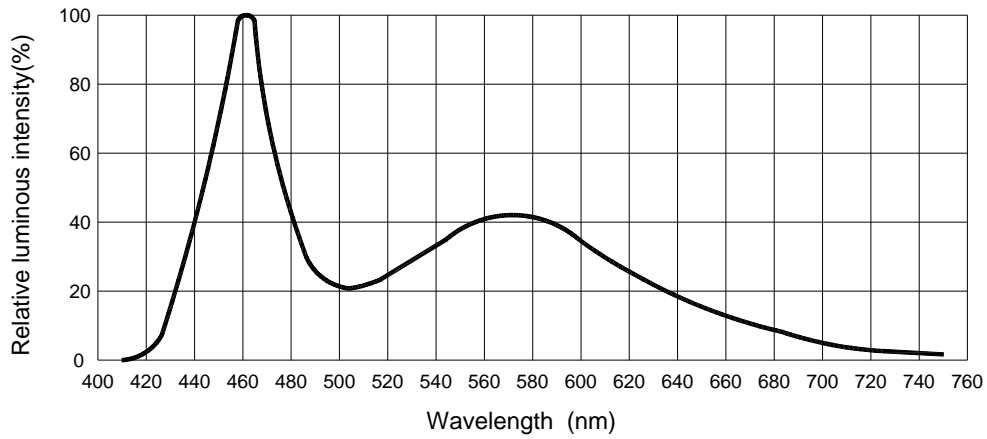
### Color Ranks

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			

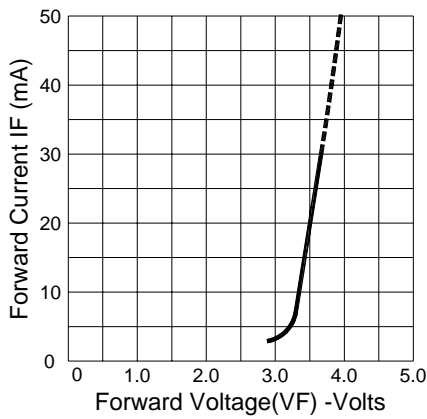
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# Typical Electrical / Optical Characteristics Curves

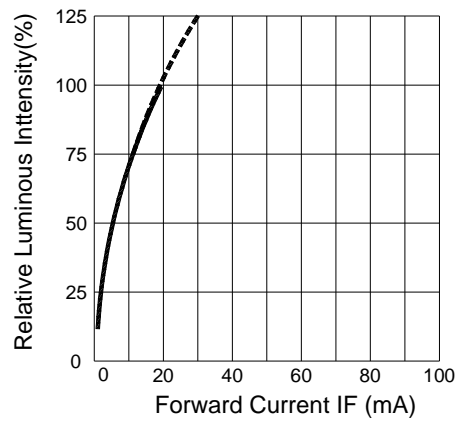
Spectrum Distribution



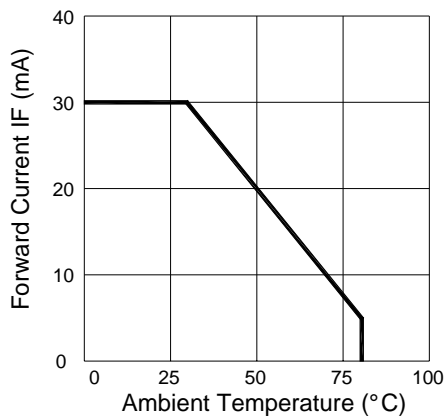
Forward Current VS. Forward Voltage



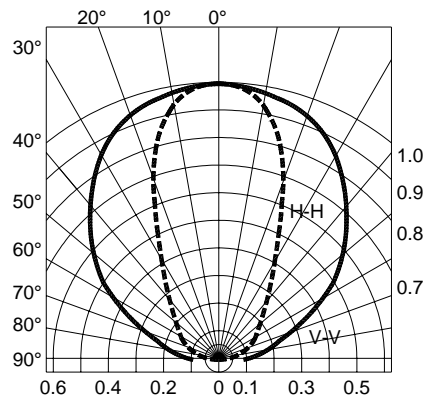
Luminous Intensity VS. Forward Current



Forward Current VS. Ambient Temperature



Radiation Diagram



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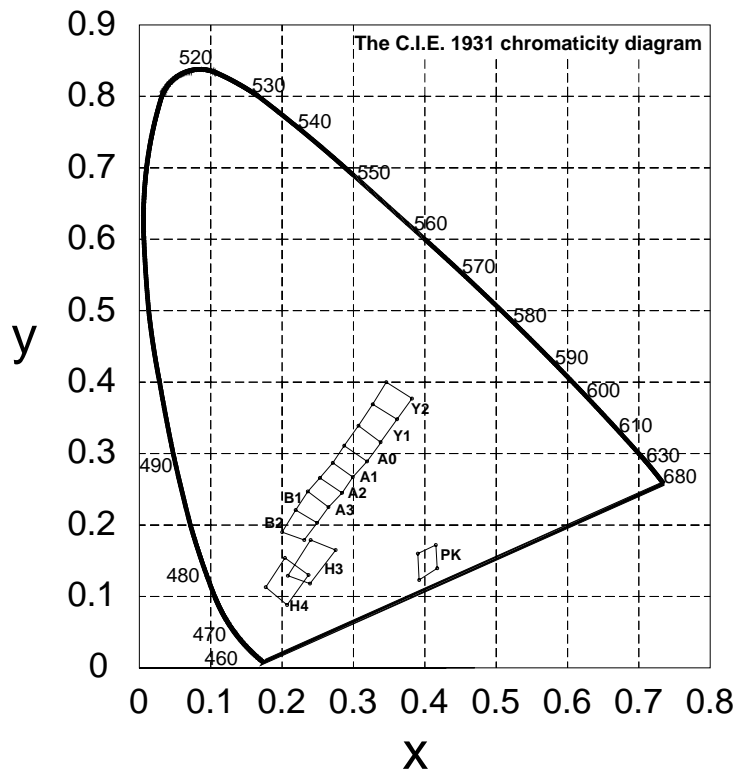
### Reliability Test Items and Conditions

No.	Item	Test Conditions	Test Hours / Cycle	Sample Q'ty	Ac/Re
1	Solder Heat	TEMP : 260 ±5	5 sec	22 pcs	0/1
2	Temperature Cycle	H : +85 30min. ∫ 5min. L : -35 30min.	50 cycle	22 pcs	0/1
3	Thermal Shock	H : +85 ∫ 5min. L : -35 5min.	50 cycle	22 pcs	0/1
4	High Temperature Storage	TEMP : 85	1000 hrs	22 pcs	0/1
5	Low Temperature Storage	TEMP : -35	1000 hrs	22 pcs	0/1
6	DC Operating Life	I <sub>F</sub> = 20mA	1000 hrs	22 pcs	0/1
7	High Temperature / High Humidity	65 / 85 ~ 90% R.H.	1000 hrs	22 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)



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