

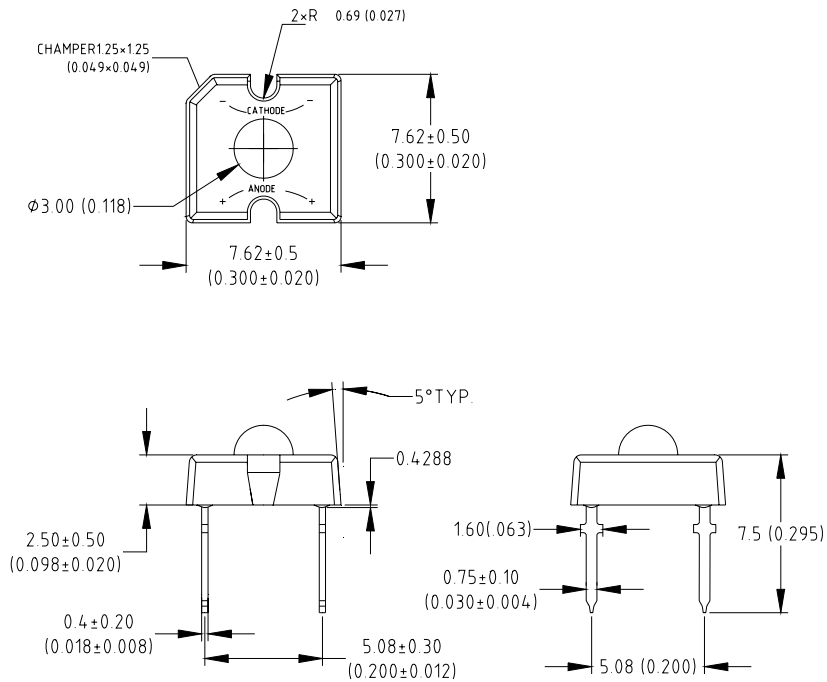
SPECIFICATIONS FOR UPEC FLUX TYPE WHITE LED

MODEL: UE-FR300NW0-1TK

Features

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

Package Dimensions



Part NO.	Chip Material	Lens Color	Source Color
UE-FR300NW0-1TK	InGaN	Water Clear	White

Notes

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

Mark	Date	Description Approve	Approved	Checked	Symbol	UPEC LED
-	MAR/23/05		Joseph	Stone	Name	UE-FR300NW0-1TK
					Drawing No	WIENDS449

Absolute Maximum Ratings at Ta=25

Parameter	Symbol	Max	Unit
Power Dissipation	PD	150	mW
Pulse Forward Current	IPF	120	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 Flux	Φ_v	1500	2200	---	lm	$I_F = 30mA$
Luminous Intensity	Iv	1000	1500	---	mcd	$I_F = 20mA$
Viewing Angle	$2\theta_{1/2}$	---	60	---	Deg	$I_F = 20mA$
Forward Voltage	V_F	2.6	3.2	4.0	V	$I_F = 20mA$
Reverse Current	I_R	---	---	100	μA	$V_R = 5V$

BIN($I_F=30mA$)	LQ	LR	LS	---	---	---
Range(Flux)	1500-2200	2200-3300	3300---	---	---	---

BIN($I_F=20mA$)	LP	LQ	LR	---	---	---
Range(Intensity)	1000-1500	1500-2200	2200---	---	---	---

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

Measurement Uncertainty of the Luminous Flux : $\pm 15\%$

Measurement Uncertainty of the Luminous Intensity: $\pm 15\%$

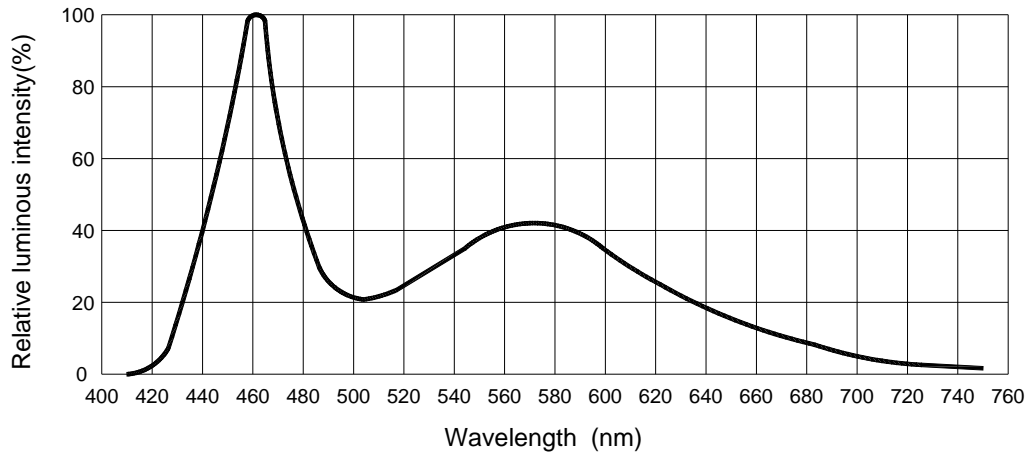
Measurement Uncertainty of the Forward Voltage: $\pm 0.1V$

Measurement Uncertainty of the Color Coordinate: $\pm 2\%$

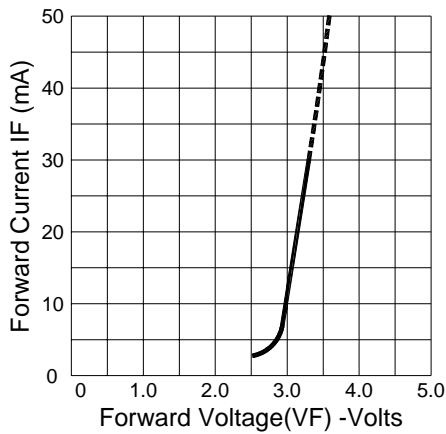
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Typical Electrical / Optical Characteristics Curves

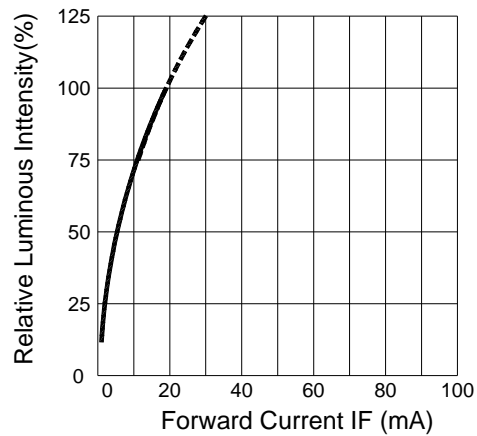
Spectrum Distribution



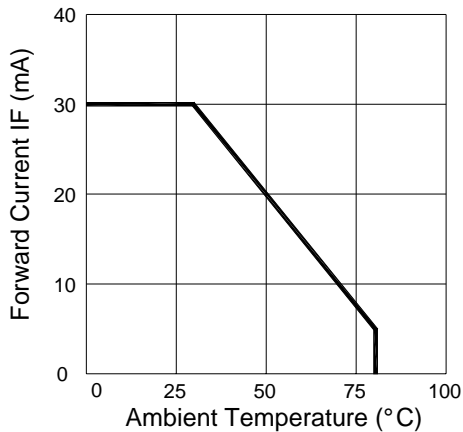
Forward Current VS. Forward Voltage



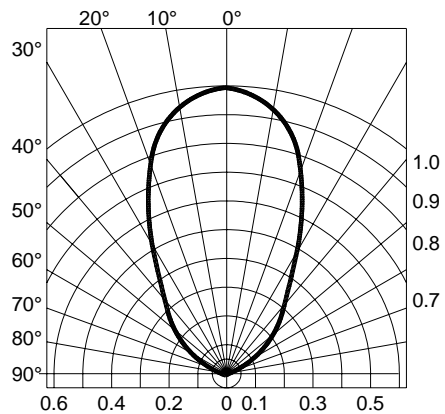
Luminous Intensity VS. Forward Current



Forward Current VS. Ambient Temperature



Radiation Diagram



			Approved	Checked	Symbol	UPEC LED
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-	MAR/23/05				Drawing No	WIENDS449
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Reliability Test Items and Conditions

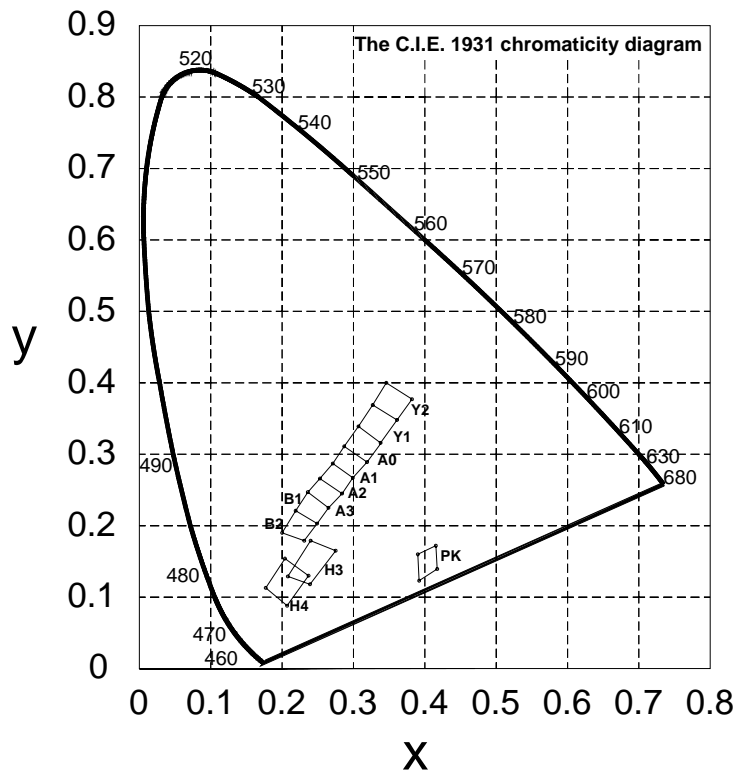
No.	Item	Test Conditions	Test Hours / Cycle	Sample Q'ty	Ac/Re
1	Solder Heat	TEMP : 260 ±5	5 sec	22 pcs	0/1
2	Temperature Cycle	H : +85 30min. ∫ 5min. L : -35 30min.	50 cycle	22 pcs	0/1
3	Thermal Shock	H : +85 ∫ 5min. L : -35 5min.	50 cycle	22 pcs	0/1
4	High Temperature Storage	TEMP : 85	1000 hrs	22 pcs	0/1
5	Low Temperature Storage	TEMP : -35	1000 hrs	22 pcs	0/1
6	DC Operating Life	I _F = 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 V _f	V _{fmax} Increase < 1.2x
Reverse Current I _r	I _{rmax} Increase < 2x
Luminous Intensity I _v	I _v 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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