SPECIFICATIONS FOR UPEC FLUX TYPE **RED** LED

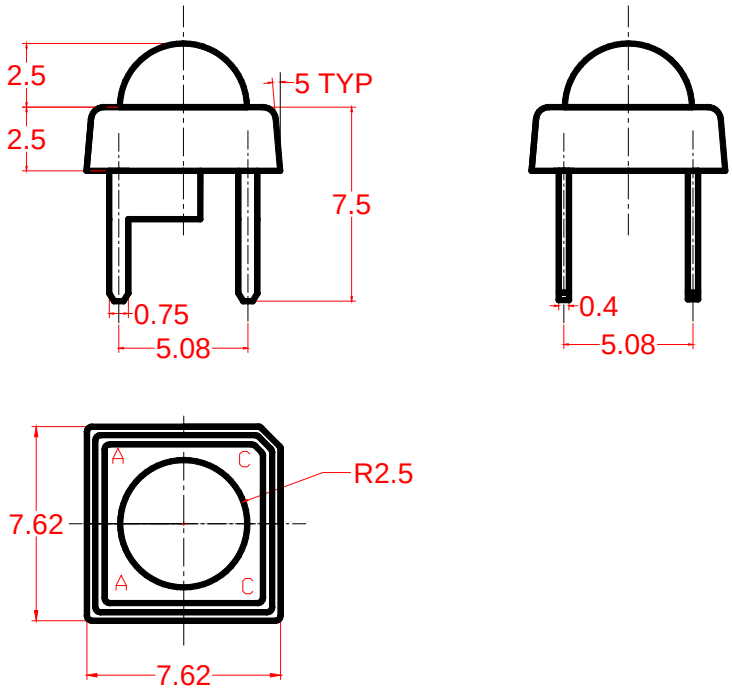
MODEL: **UE-FR300NR0-1HP**

UPEC ELECTRONICS CORPORATION

Features

- High intensity
- General purpose leads
- Reliable and rugged

Package Dimensions



Part NO.	Chip Material	Lens Color	Source Color
UE-FR300NR0-1HP	AlGaInP	Water Clear	Red

Notes

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.010”) unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04”) max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. Precautions for ESD:
   STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
7. This data-sheet only valid for six months.

			Approved	Checked	Symbol	UPEC LED
			Denny	Jerry	Name	UE-FR300NR0-1HP
-	DEC/17/04				Drawing No	WIENDS349
Mark	Date	Description Approve				

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Max	Unit
Power Dissipation	P_D	200	mW
Pulse Forward Current	I_{PF}	500	mA
Forward Current	I_F	70	mA
Reverse Voltage	V_R	6	V
Operating Temperature Range	T_{opr}	- 25 to + 85	℃
Storage Temperature Range	T_{stg}	- 40 to + 100	℃
Lead Soldering Temperature [1.6mm (0.063inch) From Body] 260 ℃ For 5 Seconds			

Electrical / Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	---	1300	--	mcd	I_f=70mA (Note 1)
Viewing Angle	$2\theta_{1/2}$	---	80	---	Deg	(Note 2)
Dominant Wavelength	λ d	---	621	---	nm	I_f=70mA (Note 3)
Forward Voltage	V_F	---	2.0	2.5	V	I_F = 70mA
Reverse Current	I_R	---	---	50	μA	V_R = 5V

BIN	---	---	---	---	---	---
Range	---	---	---	---	---	---

Measurement Uncertainty of the Luminous Intensity: ± 15%

Notes

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

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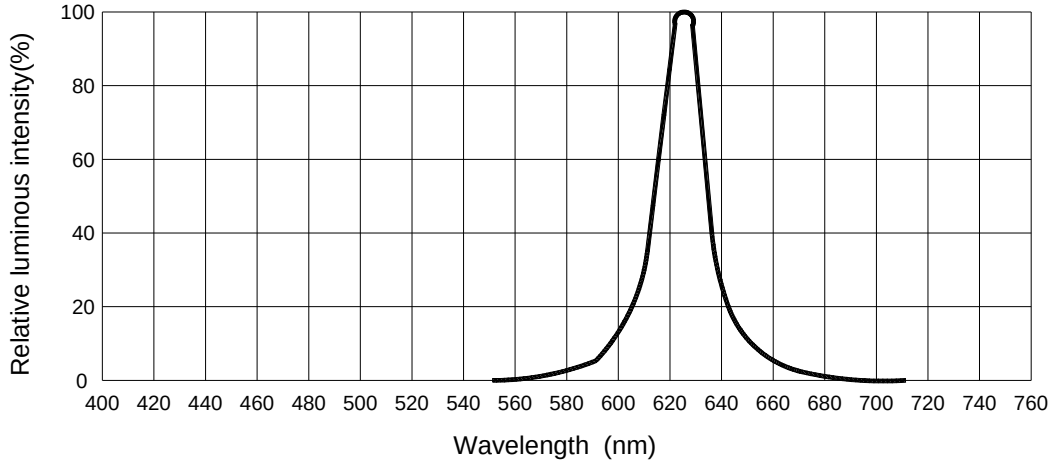
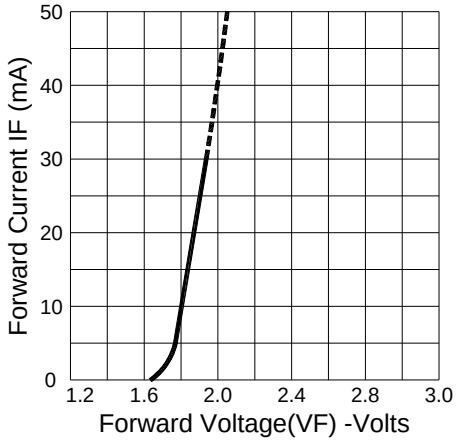
Typical Electrical / Optical Characteristics Curves

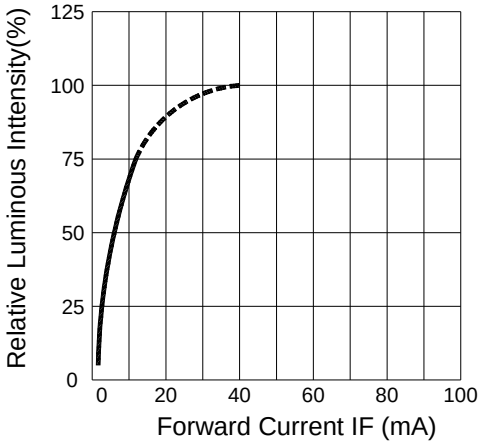
Spectrum Distribution



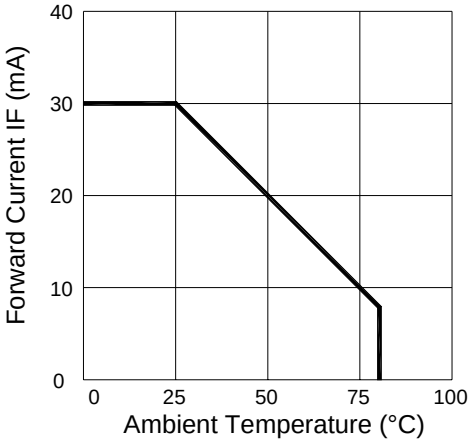
Forward Current VS. Forward Voltage



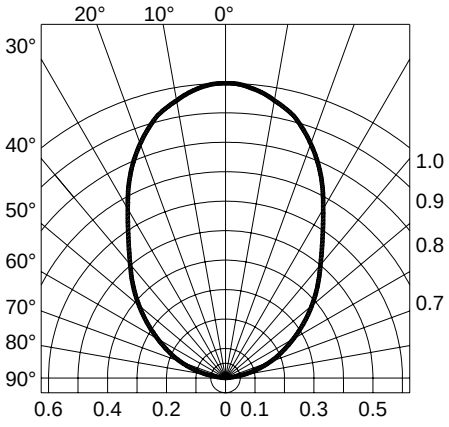
Luminous Intensity VS. Forward Current



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_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 Vf	Vf_{max} Increase <1.2x
Reverse Current Ir	Ir_{max} 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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