

LED LAMP SPECIFICATION

Drawn by	Checked by	Approved by

Rev. 0.0



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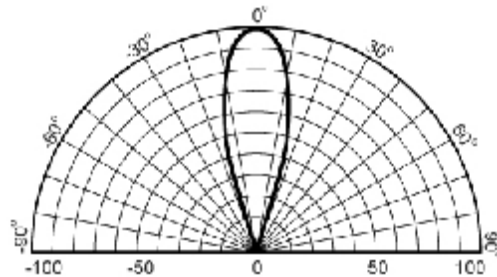


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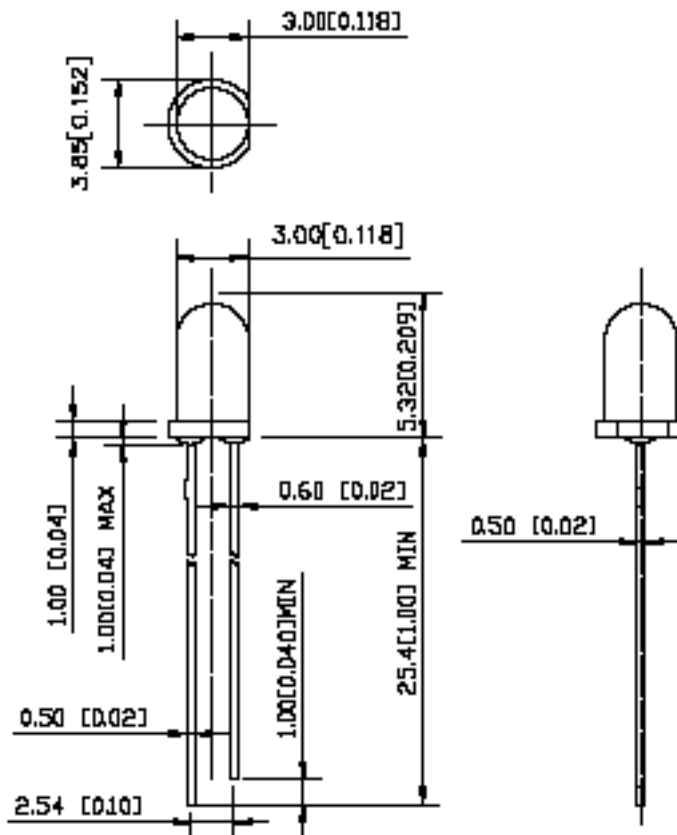
ULP-UPG31AJ-30MB

1. Features

- 3mm round led lamp.
- InGaN High bright pure green.
- Viewing angle 30°.
- Water clear epoxy-molding type.
- High reliability and long life.
- High luminous intensity.



2. Dimension



Unit: mm[inches]

Tolerance : ±0.25mm [0.01]



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3. Absolute Maximum Ratings (Ta=25°C)

Parameter	Sym	Rating	Unit
Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	111	mW
Operation Temp	Topg	-35 ~ + 85	°C
Storage Temp	Tstg	-40 ~ + 100	°C

4. Opto electric Characteristics (Ta=25°C)

Parameter	Sym	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	IF = 20mA	2.90		3.70	V
Reverse Current	IR	VR = 3V		10		μA
Luminous Intensity	L	IF = 20mA		4600		mcd
Peak wave length	λD	"	520		530	nm
Line half width	Δλ	"		35		nm
Capacitance	Co	Vo=0, f=1MHz		50		pF
Response time	T	"		250		nsec

5. Soldering Conditions (at 2mm distance from lead entry)

Soldering Temp ≤ 260°C

Soldering Time : 3 sec at location 2.0mm away from the base of the epoxy bulb.



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6. Reliability Test

1) Result of reliability Test

Test Item	Test Conditions	Note	Number of Damaged
Steady State Operating Life	Ta = 25°C IF=20mA	1000hrs	0/100
Steady State Operating Life of Low Temperature	Ta=30°C, IF=20mA	1000hrs	0/100
Steady State Operating Life of High Temperature	Ta=85°C, IF=20mA	1000hrs	0/100
Steady State Operating Life of High Humidity Heat	60°C, RH=90% IF=15mA	500hrs	0/100
Resistance to Soldering Heat	Tsld=260 ± 5°C, 10sec. 3mm from the base of the epoxy bulb	1 time	0/100
Solder ability	Tsld=260 ± 5°C, 5sec. (using flux)	1 time Over 90%	0/100
Thermal Shock	0°C ~ 100°C 15sec. 15sec.	100 cycles	0/100
Temperature Cycle	40°C ~ 25°C ~ 100°C ~ 25°C 30min. 5min. 30min. 5min.	100 cycles	0/100
Moisture Resistance Cyclic	25°C ~ 65°C ~ 10°C 90%RH 24hrs / 1cycle	10 cycles	0/100
High Temperature Storage	Ta = 100°C,	1000hrs	0/100
Temperature Humidity Storage	Ta = 60°C RH=90%	1000hrs	0/100
Low Temperature Storage	Ta = -40°C	1000hrs	0/100

2) The reliability criteria of Lamp LED

Item	Symbol	Test Conditions	Criteria for Judgement.	
			Min.	Max.
Forward Voltage	VF	IF=20mA	-	U.S.L. *) X 1.1
Reverse Current	IR	VR=5V	-	U.S.L. *) X 2.0
Luminous Intensity	IV	IF=20mA	L.S.L.**)	X 0.7

*) U.S.L. : Upper Standard Level

**) L.S.L. : Lower Standard Level.



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■ Typical Electro-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

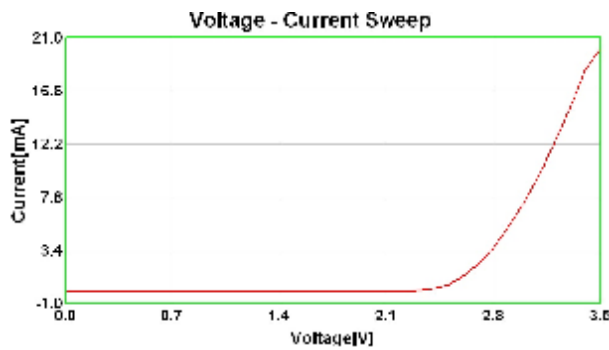


Fig 2. Relative Intensity vs. Forward Current

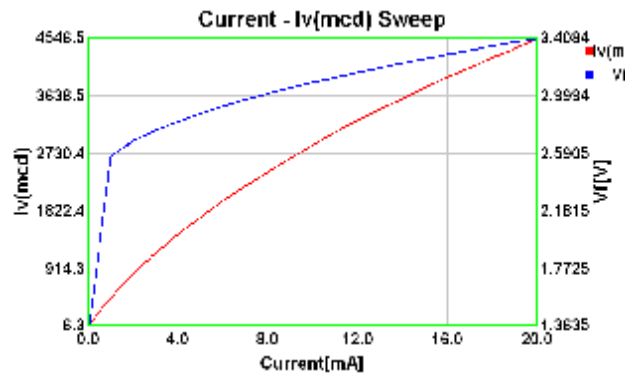


Fig 3. Relative Intensity vs. Wavelength

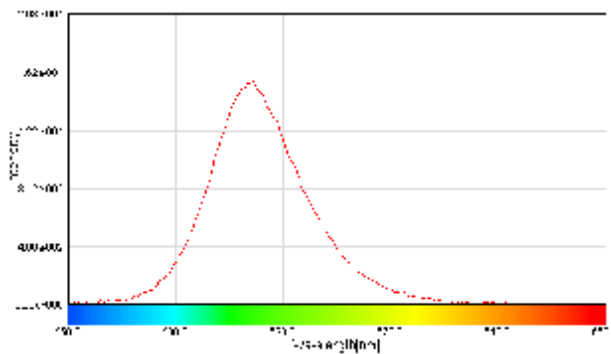


Fig 4. CIE

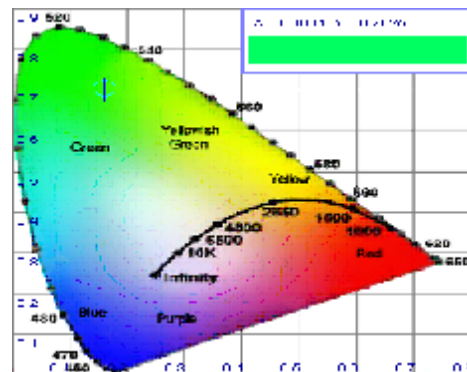


Fig 5. Forward current vs. Temperature

