

CERAMIC LED SPECIFICATION

Drawn by	Checked by	Approved by

Rev. 0.0

U-JINLED
Lighting Your Imagination

Head Office : 48-40, Gamnae-gil, Ilsandong-gu, Goyang-si,
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Overseas Factory : Plot#61, Sector#7 Export Processing Zone,
Chittagong, Bangladesh.

TEL : (880)31-74-0050 FAX : (880)31-74-0038

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ULP-UPG02A-EL

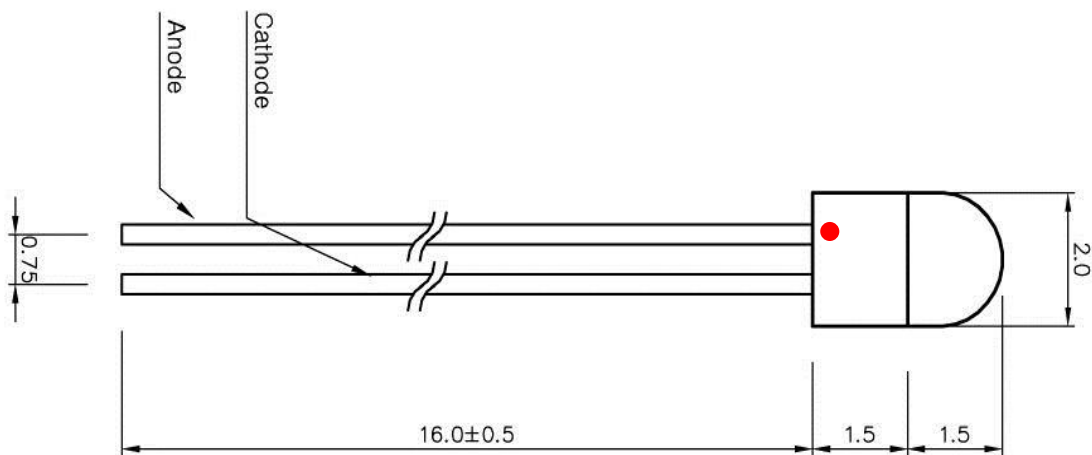
1. Features

- 2mm ceramic type LED lamp.
- InGaN/GaN LED Super bright pure green
- Water clear epoxy-molding type.
- High reliability and long life.
- High luminous intensity.
- Lead free(RoHs compliant).
- Viewing angle 150 deg

2. Applications

- Analytical Instruments.
- Medical Instrument.
- Toy Instrument.
- Panel Indications.
- Fishing float.
- Color printers and Scanners

3. Dimension



Unit :mm Tolerance ± 0.2

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4. Absolute Maximum Ratings (Ta=25°C)

Parameter	Sym	Rating	Unit
Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	84	mW
Operation Temp	Topg	-35 ~ + 85	°C
Storage Temp	Tstg	-40 ~ + 100	°C

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

Parameter	Sym	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	IF = 20mA	2.60		3.2	V
Reverse Current	IR	VR = 3V		10		μA
Luminous Intensity	L	IF = 20mA	900		1100	mcd
Dominant 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

6. 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.

7. Caution in ESD

Static Electricity and surge damages the LEDs, It is recommended to use a wrist band or anti-electrostatic Glove when handling the LEDs. All devices, Equipment and machinery must be properly grounded.

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8. 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

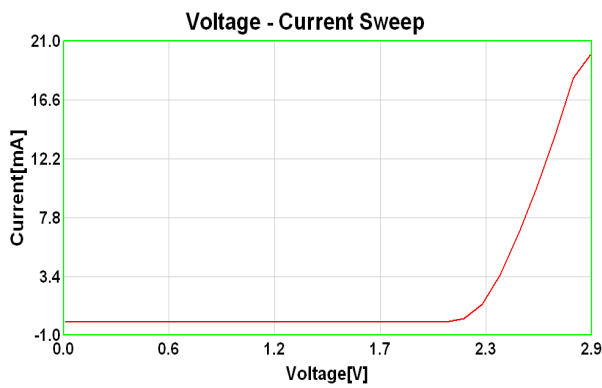


Fig 2. Relative Intensity vs. Forward Current

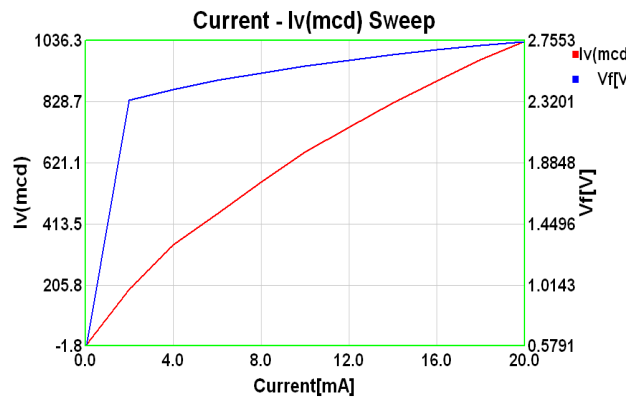


Fig 3. Relative Intensity vs. Wavelength

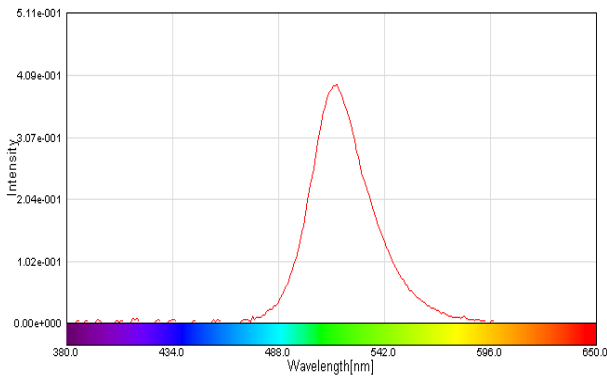


Fig 4. Forward current vs. Temperature

