

SPECIFICATION

Product : 5mm UV Can type Lamp

Part No. : IWL-V5L16T-375TNB

Date : 2013. 07. 18 Ver. 0.1

Proposed By	Checked By	Checked By	Checked By	Checked By	Approval
Approved					

Comment



ITSWELL Co., Ltd
58B-4L, 626-3 Gojan-dong, Namdong-gu, Incheon 405-817 KOREA
TEL:+82-32-813-1801, FAX:+82+32-816-1900
URL: <http://www.itswell.com>

1. Features

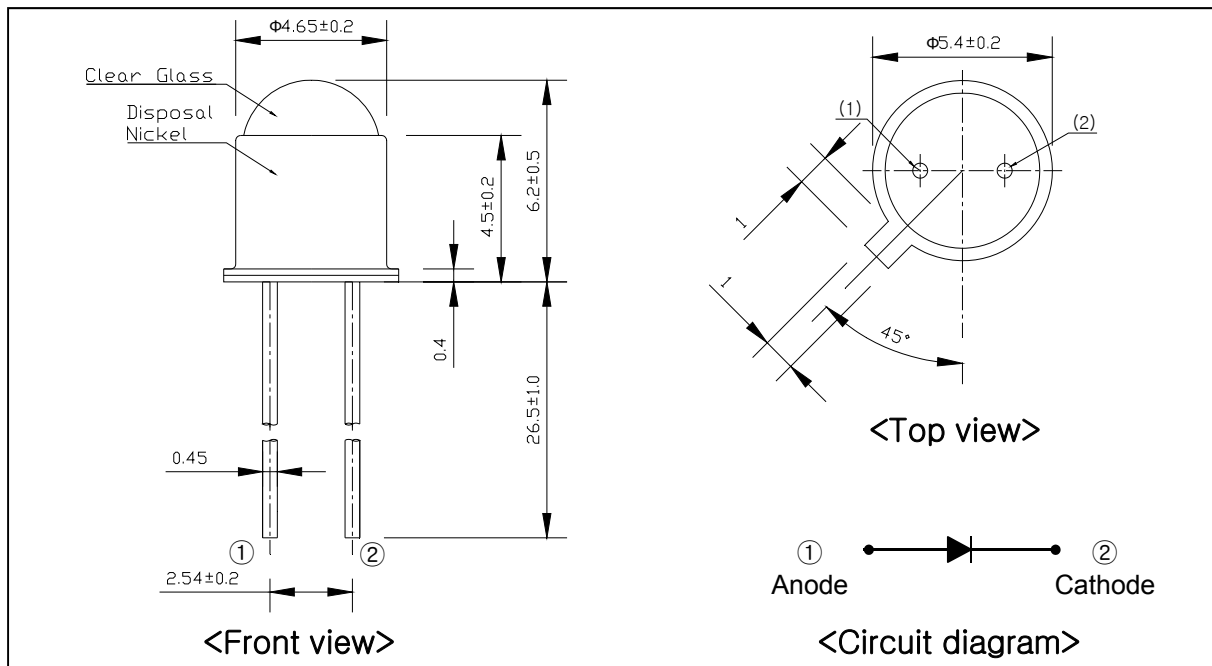
- Can Type Lamp
- TO-18 ball lens package
- Durable, High reliability
- Chip Material Based GaN

2. Applications

- UV light curing
- UV sterilization
- Medicine and Medical Applications
- Biological applications
- General Use

3. Outline Drawing and Dimension

(Unit : mm)



Note

1. All dimensions are in millimeters
2. All dimensions without tolerances are for reference only

4. Absolute Maximum Ratings (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_d	120	mW
Continuous Forward Current	I_F	30	mA
Peak Forward Current *1	I_{FP}	100	mA
Operating Temperature	T_{opr}	-20 ~ 110	°C
Storage Temperature	T_{stg}	-30 ~ 120	°C
Soldering Temperature	T_{sol}	260 (5sec)	°C
Reverse Voltage	V_R	5	V

*1 Duty ratio = 1/10, Pulse width = 0.1ms

5. Electrical & Optical Characteristics (Ta = 25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage *2	V_F	$I_F = 20 \text{ mA}$	-	3.5	4.0	V
Reverse Current	I_R	$V_R = 5 \text{ V}$	10	-	-	μA
Radiant Intensity *3	I_e	$I_F = 20 \text{ mA}$	12	14	-	mW/sr
Peak Wavelength *4	λ_p	$I_F = 20 \text{ mA}$	370	375	380	Nm
Viewing Angle *5	$2\theta_{\frac{1}{2}}$	$I_F = 20 \text{ mA}$	-	16	-	deg.
Full Width at Half Maximum	λ_{BW}	$I_F = 20 \text{ mA}$	-	20	-	nm

*2 Forward Voltage has a tolerance of $\pm 0.05 \text{ V}$.

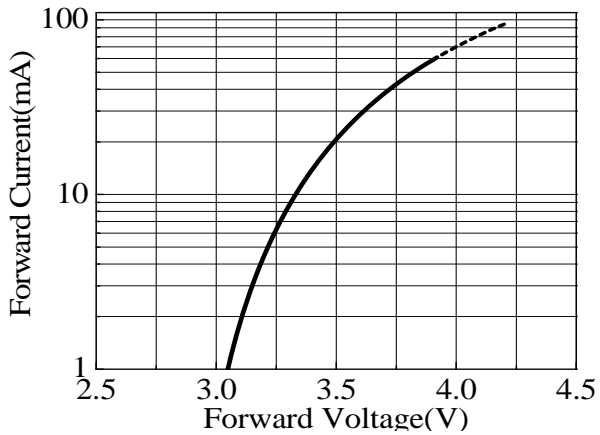
*3 Radiant Intensity is tested by a tester calibrated by CAS 140B(CIE LED_B) and has an accuracy of 10%

*4 Peak Wavelength has an accuracy of $\pm 2 \text{ nm}$

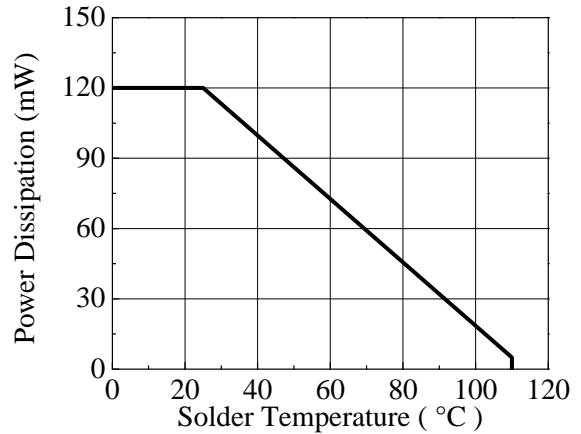
*5 Viewing Angle is the angle until 50% of brightness measured from the front part of LED.

6. Typical Characteristics Curves

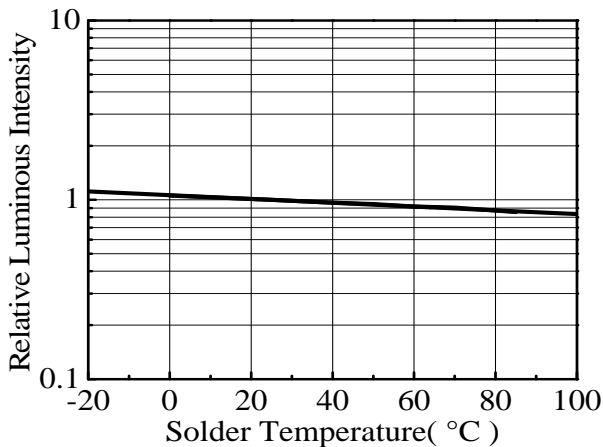
Forward Current vs. Forward Voltage



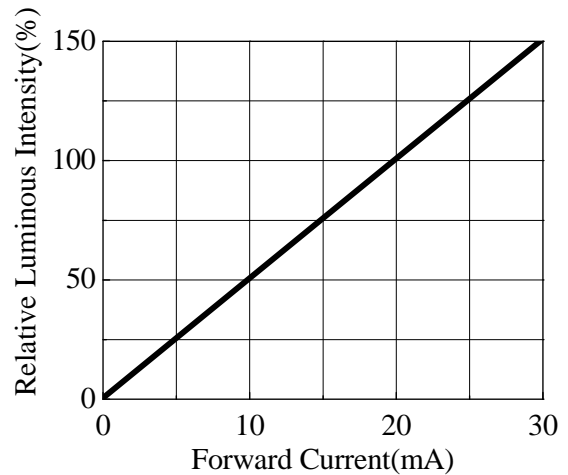
Power Dissipation vs. Solder Temperature



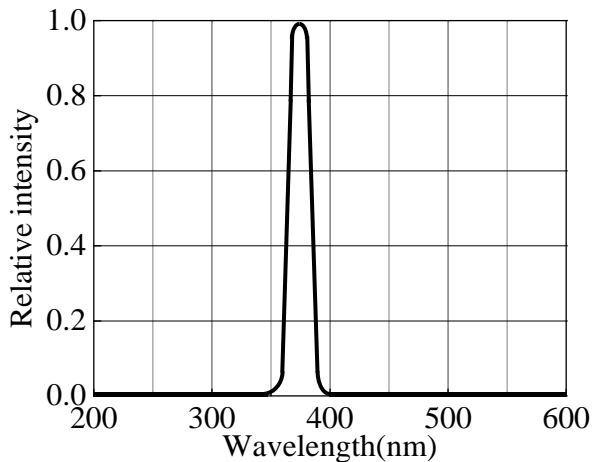
Relative Luminous Intensity vs. Solder Temperature



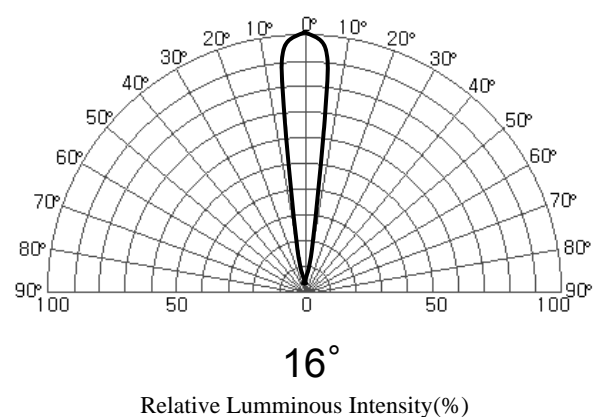
Relative Luminous Intensity vs. Forward Current



Relative Intensity vs. Wavelength



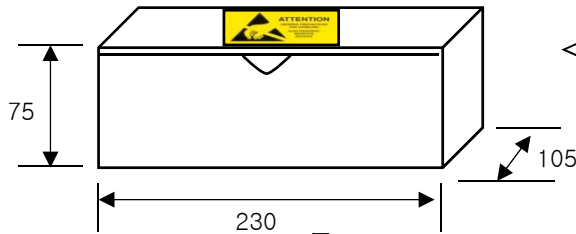
Radiation Diagram



7. Packing

- Bulk Packing

Inner Box



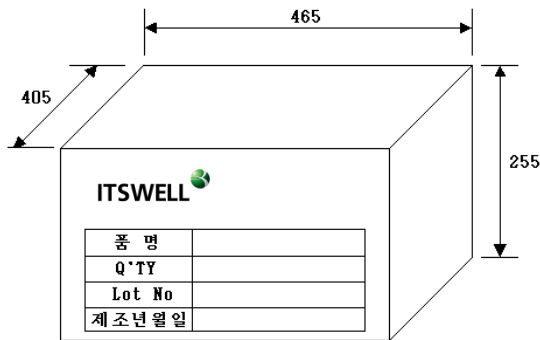
Bag packing



Label

ITSWELL PACKING SLIP	
Product:	
Type No:	
Q'ty:	
Lot No:	
Notice:	

Out Packing

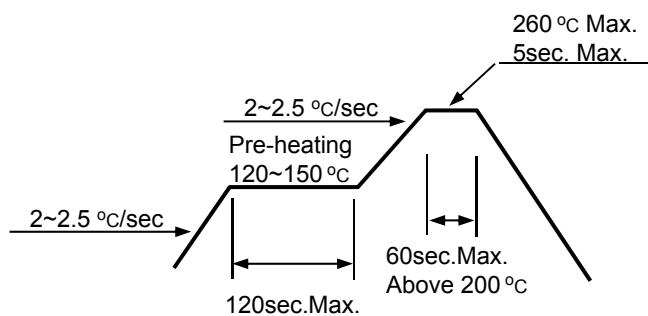


- Maximum Inner Box 20 / 1 Box
40,000 pcs/ 1 Box
- Out box material : Carton

8. Precaution in use

8.1 Soldering Conditions

- When soldering Dome LED , Heat may affect the electrical and optical characteristics of the LEDs.
- In soldering, do not stress the lead frame and the resin part under the high temperature.
- The epoxy part should be protected from mechanical stress or vibration until the Dome LEDs return to room temperature after soldering.
- Preliminary heating to be at 180 °C max. for 120 Seconds max.
- Soldering heat to be at 260 °C max. for 5sec. Max.
- For manual Soldering is Not more than 3sec @MAX350 °C, under soldering iron



8.2 Storage

- Use within 7 days after opening packing. Store in 10 to 30 °C. Dome LED lead frames are plated silver. The silver surface may be affected by environment which contains corrosive gases and so on. Please avoid conditions which may cause the Dome LED to corrode, tarnish or discolor.

8.3 Static Electricity

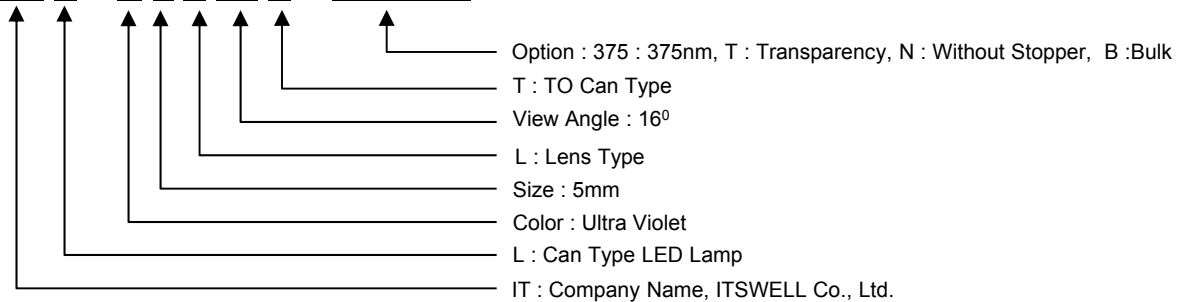
- Static electricity or surge voltage damages the Dome LEDs. It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- A tip soldering iron is requested to be grounded. An ionizer should also be installed where there is a risk of static.
- All devices, equipment and machinery must be properly grounded (via 1MΩ). It is recommended that measures be taken against surge voltage to the equipment that mounts the Dome LEDs.

8.4 Cleaning

- Isopropyl Alcohol or Ethylene Alcohol is recommended for 5 minutes at room temperature. Don't use unspecified chemicals as they may cause cracks or haze on the surface of the epoxy resin.
- Before cleaning, a pre-test should be done to confirm whether any damage to the Dome LED will occur.
- Freon solvents should not be used to clean the Dome LEDs because of worldwide regulations.

9. Part Name Description

I W L - V 5 L 16 T - 375 T N B



10. ATTENTION : Electric Static Discharge (ESD) Protection



The symbol shown on the page herein to introduce 'Electro-Optical Characteristics'. ESD protection for GaP and AlGaAs is based chips is still Necessary even though they are safe in low static-electric discharge. Material in AlInGaP, GaP, or/and InGaN based chips are static sensitive devices. ESD protection has to considered and taken in the initial design stage. If manual work/process is needed, please ensure the device is well protective From ESD during all the process.

