

Vossloh Schwabe Optoelectronic GmbH & Co. KG

47475 Kamp-Lintfort

TEL: 02842-980-0 FAX: 02842-980-297

Http://www.vs-optoelectronic.com

SPECIFICATION

PART NO.: WU-2-53ND

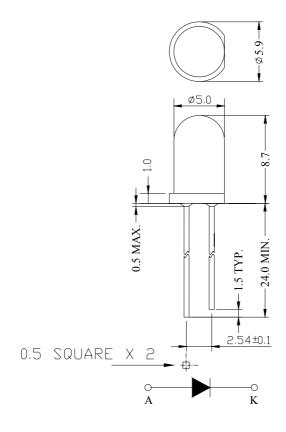
5.0mm ROUND LED LAMP



| Approved by | Checked by | Prepared by | | |
|---------------|------------|-------------|--|--|
| : Y ńg | Yang | HUQING | | |

Description

This amber lamp is made with GaAsP/GaP chip and amber diffused epoxy resin.



Notes:

- 1. All dimensions are in mm.
- 2. Tolerance is±0.25mm unless otherwise noted.

Description

| Part No. | LED Chip | | | |
|------------|-------------|--------------|----------------|--|
| | Material Em | itting Color | Description | |
| LWU-2-53ND | GaAsP/GaP | Amber | Amber diffused | |

VER.: 01 Date: 2007/03/23 Page: 4/5

Y W4/75PF"""

Absolute Maximum Ratings at Ta=25

| Parameter Sym | bol | Rating | Unit |
|---|----------|-------------|----------|
| Power Dissipation | PD 78 | | mW |
| Reverse Voltage | Vr 5 | | V |
| D.C. Forward Current | If | 30 | mA |
| Reverse (Leakage) Current | Ir 100 | | μA |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | If(Peak) | 100 | mA |
| Operating Temperature Range | Topr. | -25 to +85 | |
| Storage Temperature Range | Tstg. | -40 to +100 | |
| Soldering Temperature(1.6mm from body) | Tsol. | | r 5 sec. |

Electrical and Optical Characteristics:

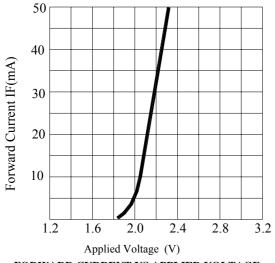
| Parameter Sym | bol | Condition | Min. | Тур. | Max. | Unit |
|---------------------------|----------|-----------|------|------|------|------|
| Luminous Intensity | Iv If=20 |)m A | 42.9 | 110 | | mcd |
| Forward Voltage | Vf | If=20mA | | 2.1 | 2.6 | V |
| Peak Wavelength | λр | If=20mA | 610 | | | nm |
| Dominant Wavelength | λd | If=20mA | 605 | | | nm |
| Reverse (Leakage) Current | Ir | Vr=5V | | | 100 | μΑ |
| Viewing Angle | 2 1/2 | If=20mA | 35 | | | deg |
| Spectrum Line Halfwidth | Δλ | If=20mA | 35 | | | nm |

Notes:1. The datas tested by IS tester.

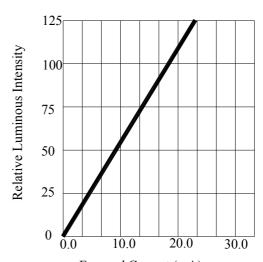
2. Customer's special requirements are also welcome.

VER.: 01 Date: 2007/03/23 Page: 5/5

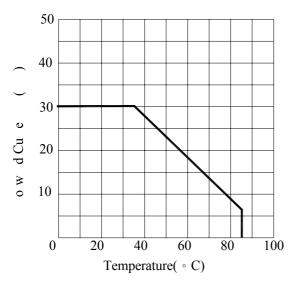
Typical Electrical / Optical Characteristics Curves:



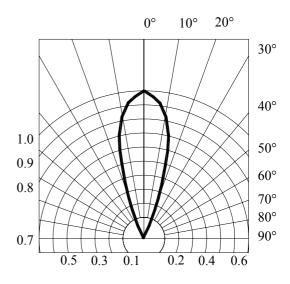
FORWARD CURRENT VS.APPLIED VOLTAGE



Forward Current (mA) FORWARD CURRENT VS. LUMINOUS INTENSITY



FORWARD CURRENT VS. AMBIENT TEMPERATURE



RADIATION DIAGRAM

VER.: 01 Date: 2007/03/23 Page: 6/5

Y W4/75PF """""""

''5.0mm ROUND LED LAMP

Precautions:

TAKE NOTE OF THE FOLLOWING IN USE OF LED

1. Tem perature in use

Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel, etc) which are used for semiconductor products such as transistors cannot be added to the resin.

Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use.

Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approxi mately 120-130 .

At a temperature exceeding this limit, the coefficient of liner expansion of the resin doubles or ore compared to that at normal temperature and the resin is softened.

If external force or stress is applied at that time, it may cause a wire rupture.

2. Sol dering

Please be careful on the following at soldering.

After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

(1) Soldering measurements:

Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

(2) Dip soldering:

Pre-heat: 90 max. (Backside of PCB), Within 60 seconds.

Solder bath: 260±5 (Solder temperature), Within 5 seconds.

- (3) Hand soldering: 350 max. (Temperature of soldering iron tip), Within 3 seconds.
- 3. Insert ion

Pitch of the LED leads and pitch of mounting holes need to be same

4. Ot hers

Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

B aking temperature: 120 max. Baking time: Within 60 seconds

If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.

VER.: 01 Date: 2007/03/23 Page: 7/5