

# NICHIA

## LD Receptacle Module

# NUV203E

Product Guide(UTZ-SC0107\_3)  
2011/01/24

Engineering Sample

### Specifications

- Optical Fiber Output Power: 420mW
- Ferrule Type: SC

### Absolute Maximum Ratings

| Item                        | Symbol  | Absolute Maximum Ratings | Unit |
|-----------------------------|---------|--------------------------|------|
| Optical Fiber Output Power* | Po      | 500                      | mW   |
| LD Reverse Voltage          | Vr (LD) | 5                        | V    |
| Storage Temperature         | Tstg    | -40 ~ 85                 | °C   |
| Operating Case Temperature  | Tc      | 15 ~ 30                  | °C   |

\* Core Diameter=40μm, NA=0.20, Fiber Length=1.0m

### Initial Electrical/Optical Characteristics

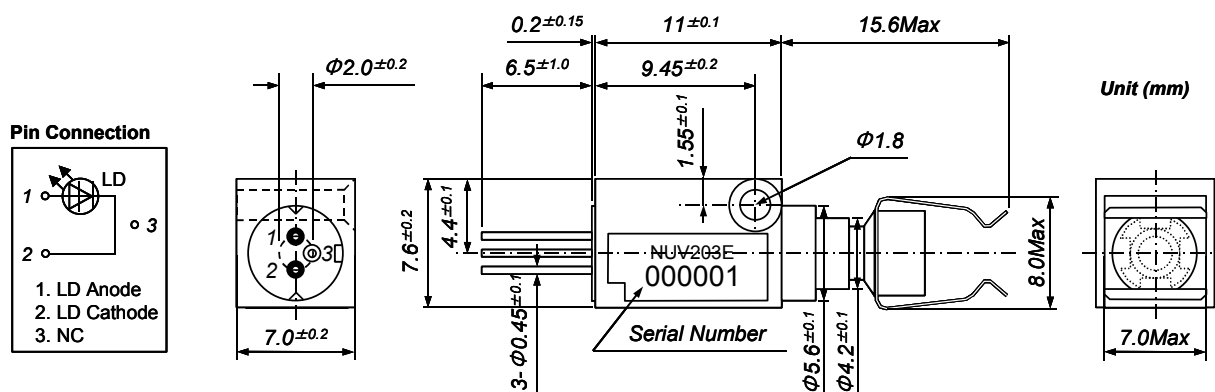
(Tc=25°C)

| Item                                            | Symbol           | Test Condition | Min | Typ. | Max | Unit |
|-------------------------------------------------|------------------|----------------|-----|------|-----|------|
| Optical Fiber Output Power*                     | Po               | CW Operation   | -   | -    | 420 | mW   |
| Peak Wavelength                                 | λp               | Po=420mW       | 400 | -    | 406 | nm   |
| Threshold Current*                              | Ith              | CW Operation   | -   | 140  | 180 | mA   |
| Operating Current*                              | Iop              | Po=420mW       | -   | 450  | 550 | mA   |
| Slope Efficiency*                               | η                | CW 210-420mW   | 0.7 | 1.3  | 1.8 | W/A  |
| Operating Voltage*                              | Vop              | Po=420mW       | -   | 4.1  | 4.6 | V    |
| Beam Divergence Full Angle (1/e <sup>2</sup> )* | 1/e <sup>2</sup> | Po=420mW       | 7   | 9    | 11  | deg. |

\* Core Diameter=40μm, NA=0.20, Fiber Length=1.0m

All figures in this specification are measured by Nichia's method and may contain measurement deviations.  
The above specifications are for reference purpose only and subjected to change without prior notice.

### Outline Dimension



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## ■Cautions

### (1) Safety of Laser light

- **Laser light can damage the human eyes and skin.** Do not expose the eye or skin to any laser light directly and/or through optical lens. When handling the LD Receptacle Modules, wear appropriate safety glasses to prevent laser light, even any reflections from entering to the eye. Focused laser beam through optical instruments will increase the chance of eye hazard.
- These LD Receptacle Modules are classified in **Class 3b of the IEC60825-1 and 21 CFR Part 1040.10 Safety Standards**. It is absolutely necessary to take overall safety measures against User's modules, equipment and systems into which Nichia LD Receptacle Modules are incorporated and/or integrated.



### (2) Operating method

- The LD Receptacle Module shall change its forward voltage requirement and optical output power according to temperature change. Also, the LD Receptacle Module will require more operation current to maintain same output power as it degrades. In order to maintain output power, use of APC (Automatic Power Control) is recommended, which use monitor feedback to adjust the operation current.
- Confirm that electrical spike current generated by switching on and off does not exceed the maximum operating current level specified herein above as absolute max rating. Also, employ appropriate countermeasures to reduce chattering and/or overshooting in the Circuit.

### (3) Static Electricity

- Static electricity or electrical surges will reduce and degrade the reliability of the LD Receptacle Modules. It is recommended to use a wrist strap or anti-electrostatic glove when handling the Product.

### (4) Absolute Maximum Rating

- Active layer of LD Receptacle Modules shall have high current density and generate high electric field during its operation. In order to prevent excessive damage, the LD Receptacle Module must be operated strictly below Absolute Max Rating.

### (5) Others

- Nichia LD Receptacle Modules described in this brochure are intended to be used for ordinary electronic equipment (such as office equipment, communications equipment, measurement instruments and household appliances). Consult Nichia's sales staff in advance for information on the applications in which exceptional quality and reliability are required, particularly when the failure or malfunction of the LD Receptacle Modules may directly jeopardize life or health (such as for airplanes, aerospace, submersible repeaters, nuclear reactor control systems, automobiles, traffic control equipment, life support systems and safety devices).
- Nichia prohibit Purchaser from reverse engineering, disassembling, or taking any other steps to derive the structure or design of the LD Receptacle Module.
- The appearance and specifications of the product may be modified for improvement without notice. The formal specifications must be exchanged and signed by both parties before large volume purchase begins.