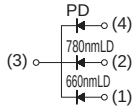
# Laser Diodes

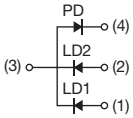
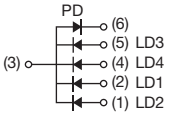
**Datasheet**

## 660nm / 780nm Dual Wavelength Lasers

| Part No. | Wavelength λp (nm) | Absolute maximum ratings (Tc=25°C) | | | Electrical and optical characteristics (Tc=25°C) | | | | | | | Po (mW) | Package | Equivalent circuit | RoHS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $P_O$ (mW) | $V_R$ (V) | Topr Max. (°C) | $I_{TH}$ (mA) | Iop (mA) | η (W/A) | Vop (V) | Im (mA) | θ⊥ (deg) | θ// (deg) | | | | |
| **RLD2WMFV2** | 658 | 7 | 2 | 75 | 20 | 27 | 0.72 | 2.3 | 0.13 | 27 | 8 | 5 |  High radiation 4PIN frame |   | Yes |
| | 782 | 7 | 2 | 75 | 18 | 27 | 0.55 | 1.8 | 0.16 | 32 | 9 | 5 | | | |
| **RLD2WMNL2 (For Car)** | 663 | 7 | 2 | 85 | 18 | 24 | 0.7 | 2.3 | 0.25 | 28 | 10 | 5 |  φ5.6mm (4PIN) | | Yes |
| | 785 | 7 | 2 | 85 | 15 | 20 | 0.7 | 1.8 | 0.25 | 32 | 10 | 5 | | | |
| **RLD2WMFL3 (Operation guarantee at 80℃)** | 658 | 7 | 2 | 80 | 13 | 18 | 0.9 | 2.2 | 0.15 | 27 | 8.5 | 5 |  High radiation 4PIN frame | | Yes |
| | 782 | 7 | 2 | 80 | 12 | 17 | 0.85 | 1.8 | 0.17 | 32 | 10 | 5 | | | |
| **RLD2WMFR1 (Self pulsation)** | 658 | 6 | 2 | 70 | 35 | 45 | 0.75 | 2.3 | 0.13 | 37 | 9 | 5 |  High radiation 4PIN frame | | Yes |
| | 790 | 7 | 2 | 70 | 30 | 45 | 0.5 | 1.9 | 0.26 | 39 | 11 | 5 | | | |

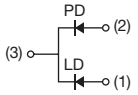
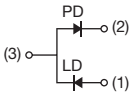
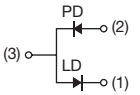
Notes : 1.Unless otherwise specified, the electrical and optical characteristics are typical values.
2.Above characteristics are typical specs. Please contact us for the custom characteristics.

## Multi-beam Lasers

| Part No. | Number of beams | Pitch (μm) | Wavelength λp (nm) | Absolute maximum ratings (Tc=25°C) | | | Electrical and optical characteristics (Tc=25°C) | | | | | | | Po (mW) | Package | Equivalent circuit | RoHS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $P_O$ (mW) | $V_R$ (V) | Topr Max. (°C) | $I_{TH}$ (mA) | Iop (mA) | η (W/A) | Vop (V) | Im (mA) | θ⊥ (deg) | θ// (deg) | | | | |
| **RLD2BPNK4** | 2 | 90 | 792 | 6 | 2 | 60 | 10 | 30 | 0.3 | 1.8 | 3 | 29 | 9.5 | 6 |  φ 5.6mm (4PIN ②) |   | Yes |
| **RLD2BPNK5** | 2 | 28 | 787 | 10 | 2 | 60 | 12 | 23 | 0.55 | 1.8 | 0.9 | 27.5 | 9 | 6 |  φ 5.6mm (4PIN ②) | | Yes |
| **RLD2BPNK2** | 2 | 28 | 787 | 15 | 2 | 60 | 12 | 29 | 0.55 | 1.8 | 1.5 | 27.5 | 9 | 10 |  φ 5.6mm (4PIN ②) | | Yes |
| **☆RLD2BPND1** | 2 | 30 | 660 | 15 | 2 | 60 | 13 | 23 | 0.6 | 2.2 | 0.5 | 20 | 10 | 6 |  φ 5.6mm (4PIN ②) | | Yes |
| **☆RLD4BPMP1** | 4 | 28 | 792 | 10 | 2 | 60 | 10 | 30 | 0.3 | 1.8 | 0.5 | 27 | 9 | 6 |  φ 5.6mm (6PIN) |   | Yes |
| **☆RLD4BPMP2** | 4 | 28 | 792 | 15 | 2 | 60 | 14 | 25 | 0.55 | 1.7 | 1.3 | 27 | 9 | 6 |  φ 5.6mm (6PIN) | | Yes |

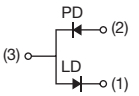
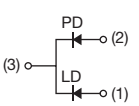
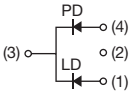
☆ : Under development
Notes : 1.Unless otherwise specified, the electrical and optical characteristics are typical values.
2.Above characteristics are typical specs. Please contact us for the custom characteristics.

## 660nm Lasers

| Part No. | Wavelength λp (nm) | Absolute maximum ratings (Tc=25°C) | | | Electrical and optical characteristics (Tc=25°C) | | | | | | | Po (mW) | Package | Equivalent circuit | RoHS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $P_O$ (mW) | $V_R$ (V) | Topr Max. (°C) | $I_{TH}$ (mA) | Iop (mA) | η (W/A) | Vop (V) | Im (mA) | θ⊥ (deg) | θ// (deg) | | | | |
| **RLD65MZT7** | 655 | 7 | 2 | 70 | 20 | 30 | 0.7 | 2.3 | 0.24 | 27 | 8 | 5 |  ϕ 5.6mm |   | Yes |
| **RLD65MFX1 (Higher ESD)** | 660 | 7 | 2 | 80 | 15 | 21 | 0.85 | 2.3 | 0.15 | 27 | 9 | 5 |  High radiation 4PIN fram | | Yes |
| **New RLD65MQX1 (Higher ESD)** | 660 | 10 | 2 | 70 | 15 | 21 | 0.85 | 2.3 | 0.15 | 27 | 9 | 5 |  ϕ 3.5mm | | Yes |
| **RLD65PZX2 (Higher ESD)** | 655 | 7 | 2 | 70 | 25 | 33 | 0.6 | 2.3 | 0.2 | 28 | 8.5 | 5 |  ϕ 5.6mm |   | Yes |
| **RLD65PZX3 (Higher ESD)** | 655 | 12 | 2 | 70 | 25 | 42 | 0.6 | 2.3 | 0.2 | 28 | 8.5 | 10 |  ϕ 5.6mm | | Yes |
| **RLD65NZX2 (Higher ESD)** | 655 | 7 | 2 | 70 | 25 | 33 | 0.6 | 2.3 | 0.2 | 28 | 8.5 | 5 |  ϕ 5.6mm |   | Yes |

Note: Unless otherwise specified, the electrical and optical characteristics are typical values.

## 780nm Lasers

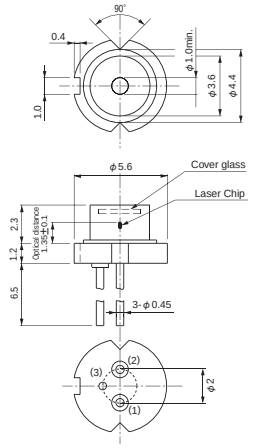
| Part No. | Wavelength λp (nm) | Absolute maximum ratings (Tc=25°C) | | | Electrical and optical characteristics (Tc=25°C) | | | | | | | Po (mW) | Package | Equivalent circuit | RoHS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $P_O$ (mW) | $V_R$ (V) | Topr Max. (°C) | $I_{TH}$ (mA) | Iop (mA) | η (W/A) | Vop (V) | Im (mA) | θ⊥ (deg) | θ// (deg) | | | | |
| **RLD78NZM5** | 793 | 10 | 2 | 60 | 11 | 20 | 0.55 | 1.8 | 1.15 | 28 | 9 | 6 |  ϕ 5.6mm |   | Yes |
| **RLD78MRA6** | 790 | 4.5 | 2 | 70 | 25 | 35 | 0.35 | 1.9 | 0.15 | 37 | 11 | 3 |  ϕ 5.6mm (Compatible frame) |   | Yes |
| **RLD78MZM7** | 792 | 20 | 2 | 60 | 11 | 33 | 0.65 | 1.8 | 0.5 | 24 | 8.5 | 15 |  ϕ 5.6mm | | Yes |
| **New RLD78MFA7** | 790 | 4.5 | 2 | 85 | 25 | 35 | 0.35 | 1.9 | 0.15 | 37 | 11 | 3 |  High radiation 4PIN frame |   | Yes |

Note: Unless otherwise specified, the electrical and optical characteristics are typical values.

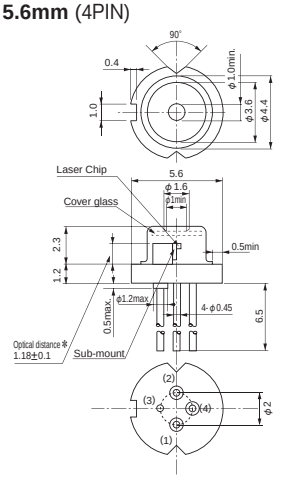
# Packaging Specifications

## ■Dimensions (Unit : mm)

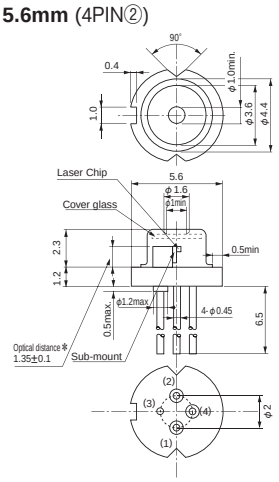
**φ5.6mm**



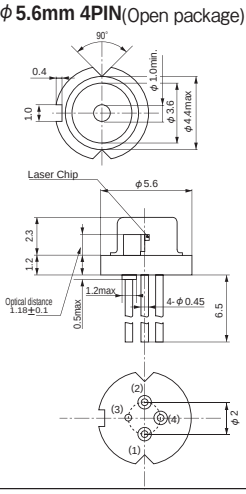

**φ5.6mm** (4PIN)



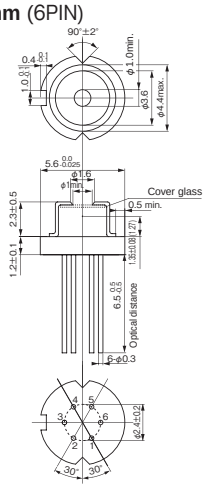

**φ5.6mm** (4PIN②)



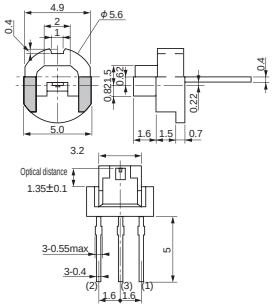

**φ5.6mm 4PIN**(Open package)



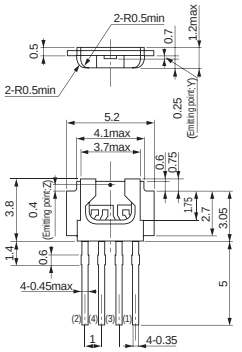

**φ5.6mm** (6PIN)



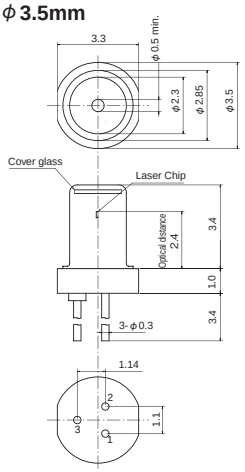

**φ5.6mm** (Compatible frame)




**High radiation 4PIN frame**




**φ3.5mm**

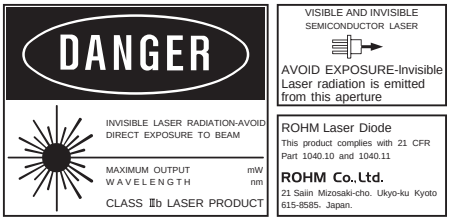



∗ : Please note that differences may exist depending on the part number. Therefore, it is strongly recommended that the customer verify the actual specifications before usage.

## ■Safety

The light emitted from laser diodes, can cause retinal damage if viewed directly. Never look directly into the laser beam or through any lenses or fibers when the system is operating.

For optical axis alignment or other operations, we recommend the use of an infrared-sensitive camera (ITV) or wearing protective goggles.

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