

## High Power Laser Diode for X8 Speed CD-R Drive(785nm-85mW)

## ■ Outline Dimensions

- (Unit : mm)

[illegible]

(T<sub>C</sub>=25°C ※<sup>1</sup>)

| Parameter            |                              | Symbol              | Rating     | Unit |
|----------------------|------------------------------|---------------------|------------|------|
| Optical power output |                              | P <sub>O</sub>      | 85         | mW   |
| ※2                   | Optical power output (pulse) | P <sub>P</sub>      | 120        |      |
| Reverse voltage      |                              | V <sub>rl</sub>     | 2          | V    |
| ※1                   | Operating temperature        | T <sub>opc(c)</sub> | -10 to +60 | °C   |
|                      |                              | T <sub>opp(p)</sub> | -10 to +65 | °C   |
| Storage temperature  |                              | T <sub>stg</sub>    | -40 to +85 | °C   |
| ※4                   | Soldering temperature        | T <sub>slid</sub>   | 260        | °C   |

\*4 At the position of 1.6mm or more from the lead base (5s)

■ Electro-optical Characteristics<sup>※1</sup>

(Tc=25°C)

| Parameter                      |                                           | Symbol          | Conditions                                          | MIN. | TYP. | MAX. | Unit    |
|--------------------------------|-------------------------------------------|-----------------|-----------------------------------------------------|------|------|------|---------|
| Threshold current              |                                           | I <sub>th</sub> | —                                                   | -    | 30   | 40   | mA      |
| Operating current              |                                           | I <sub>op</sub> | Po=70mW                                             | -    | 110  | 135  | mA      |
| Operating voltage              |                                           | V <sub>op</sub> |                                                     | -    | 1.95 | 2.5  | V       |
| Wavelength                     |                                           | λ <sub>p</sub>  |                                                     | 780  | 785  | 789  | nm      |
| Half intensity angle           | <sup>※2</sup> <sup>※3</sup> Parallel      | θ//             |                                                     | 8    | 9    | 10   | °       |
|                                | <sup>※2</sup> <sup>※3</sup> Perpendicular | θ⊥              |                                                     | 18   | 21   | 24   |         |
| <sup>※4</sup> Ripple           |                                           | R <sub>i</sub>  |                                                     | -    | -    | ±20  | %       |
| Misalignment angle             | <sup>※3</sup> Parallel                    | Δθ//            |                                                     | -    | -    | ±1.5 | °       |
|                                | <sup>※3</sup> Perpendicular               | Δθ⊥             |                                                     | -    | -    | ±2.5 | °       |
| Differential efficiency        |                                           | η <sub>d</sub>  | $\frac{45\text{mW}}{I(70\text{mW})-I(25\text{mW})}$ | 0.7  | 0.9  | 1.2  | mW / mA |
| Interference pattern intensity |                                           | α               | Po=70mW                                             | -    | -    | 1    | -       |
| <sup>※5</sup> Kink             |                                           | K-LI            | P1=24mW, P2=72mW, P3=120mW                          | -    | -    | 10   | %       |

<sup>※1</sup> Initial value, CW (Continuous Wave) drive

<sup>※2</sup> Angle at 50% peak intensity (full-width at half-maximum)

<sup>※3</sup> Parallel to junction plane (X-Z plane)  
Perpendicular to the junction plane (Y-Z plane)

<sup>※4</sup> R<sub>i</sub>=ΔP / P ΔP : the maximum deviation of the far field pattern from its approximate curve P : the peak of the approximate curve

<sup>※5</sup> Pulse drive (Pulse width : 0.5μs, Duty : 50%)

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