

JENOPTIK

High-power single emitter diode lasers

100 μm , 808 nm, 6 W cw

JDL-BAE-25-100-808-TM-6-4.0

Features

- High laser power
- High efficiency
- Long lifetime, high reliability
- Excellent beam characteristics

Applications

- Pumping of solid-state lasers and fiber lasers
- Industrial, scientific and medical systems
- Printing industry
- Defense and security
- Recommended fields of application: medicine

High-power single emitter diode lasers | 100 μm , 808 nm, 6 W cw

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Specifications

JDL-BAE-25-100-808-TM-6-4.0

| Operation* | Symbol | Min | Nom | Max | Unit |
|------------------------------------|----------------------|------|--------------|------|------------------|
| Wavelength (cw) | λ | 805 | 808 | 811 | nm |
| Optical Output Power | P_{opt} | | 6 | | W |
| Operation Mode | | | cw, switched | | |
| Power Modulation | | | 100 | | % |
| Geometrical | | | | | |
| Number of Emitters | | | 1 | | |
| Emitter Width | W | 95 | 100 | 105 | μm |
| Width | B | 380 | 400 | 420 | μm |
| Cavity Length | L | 3980 | 4000 | 4020 | μm |
| Thickness | D | 115 | 120 | 125 | μm |
| Electro Optical Data* | | | | | |
| Fast Axis Divergence (FWHM) | θ_{\perp} | | 27 | 30 | $^{\circ}$ |
| Fast Axis Divergence** | θ_{\perp} | | 46 | 50 | $^{\circ}$ |
| Slow Axis Divergence at 6 W (FWHM) | θ_{\parallel} | | 6 | 8 | $^{\circ}$ |
| Slow Axis Divergence at 6 W** | θ_{\parallel} | | 8 | 10 | $^{\circ}$ |
| Pulse Wavelength | λ | 802 | 805 | 808 | nm |
| Spectral Bandwidth (FWHM) | $\Delta\lambda$ | | 2 | 3 | nm |
| Slope Efficiency*** | η | 1.0 | 1.1 | | W/A |
| Threshold Current | I_{th} | | 0.8 | 1.0 | A |
| Operating Current | I_{op} | | 6.5 | 7.5 | A |
| Operating Voltage | V_{op} | | 1.75 | 1.85 | V |
| Series Resistance | R_s | | 30 | 35 | $\text{m}\Omega$ |
| Degree of TM Polarization | α | 97 | | | % |
| EO Conversion Efficiency*** | η_{tot} | 51 | 55 | | % |

* Mounted on a heat sink with $R_{th} = 2.1 \text{ K/W}$, coolant temperature $25 \text{ }^{\circ}\text{C}$, operating at nominal power

** Full width at 95 % power content

*** Item may change upon notice and acceptance by JENOPTIK Diode Lab GmbH, due to future improvements of technology or processing

Note:

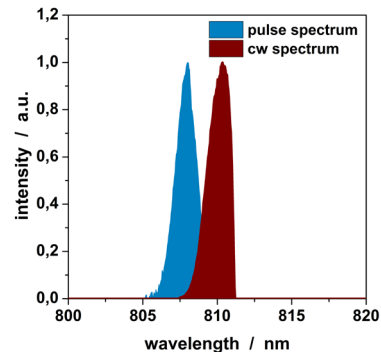
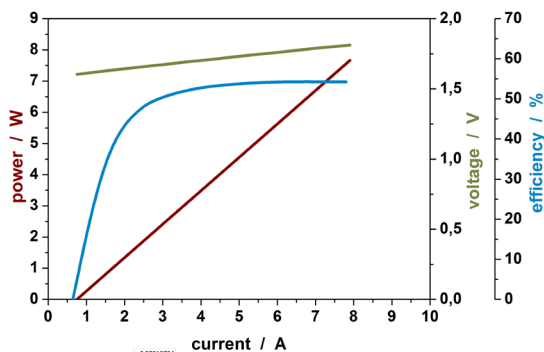
Nominal data represents typical values.

Safety Advices:

Single emitter diode lasers are the active components in high-power diode lasers in accordance to IEC standard class 4 laser products. As delivered, single emitter diode lasers cannot emit any laser beam. The laser beam can only be released if the single emitter diode lasers are connected to a source of electrical energy. In this case, IEC-Standard 60825-1 describes the safety regulations to be taken to avoid personal injury.

Power - Current - Voltage - Characteristics*

Spectral Characteristics*



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