



AL081C200W



TECHNICAL DATA

High Power Linear Infrared Laser Diode Array

Features

- Output Power: 200 W
- 780-830 nm Emission Wavelength
- Spectral Width: ≤ 4 nm
- High Reliability, High Efficiency

Applications

- Laser Pumping
- Medical Usage
- High power laser diode applications

Specifications (25°C)

| Item | Symbol | Value | Unit |
|------------------------------------|--|-------------|-------|
| Optical Specifications | | | |
| CW Output Power | P_O | 200 | W |
| Output Power / Bar | P_S | 40 | W |
| Array Length | L | 57 | mm |
| Center Wavelength | λ_C | 780-830 | nm |
| Wavelength Tolerance | | ± 5 | nm |
| Spectral Width | $\Delta\lambda$ | ≤ 4 | nm |
| Number of Bars | | 5 | |
| Wavelength Temperature Coefficient | | 0.3 | nm/°C |
| Beam Divergence | $\theta_{\perp} \times \theta_{\parallel}$ | 40x8 | deg |
| Electrical Specifications | | | |
| Slope Efficiency | E_S | ≥ 1 | W/A |
| Conversion Efficiency | N_S | $\geq 40\%$ | |
| Threshold Current | I_{TH} | ≤ 12 | A |
| Operating Current | I_F | ≤ 52 | A |
| Operating Voltage | U_F | ≤ 10 | V |
| Absolute Maximum Ratings | | | |
| Reverse Voltage | U_R | 2.5 | V |
| Operating Temperature | T_{OP} | +10 ... +40 | °C |
| Storage Temperature | T_{STG} | -40 ... +85 | °C |





ROITHNER LASERTECHNIK GmbH

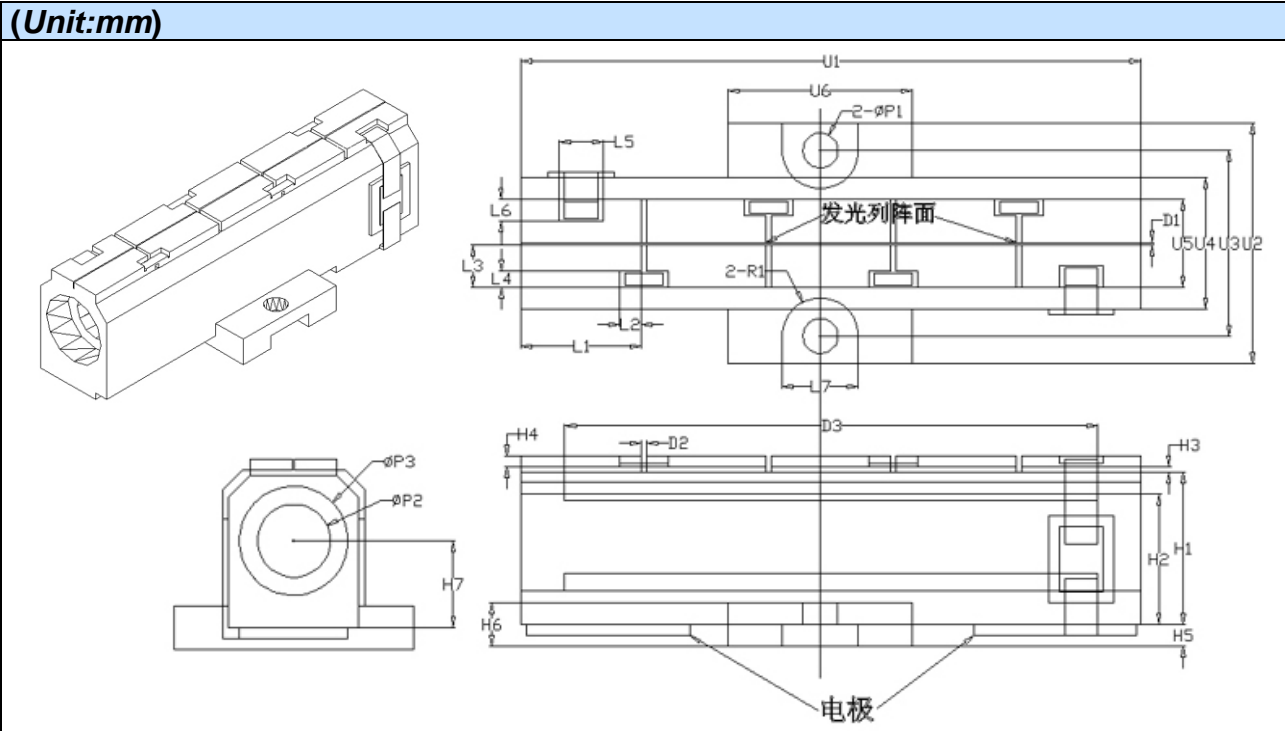
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AUSTRIA

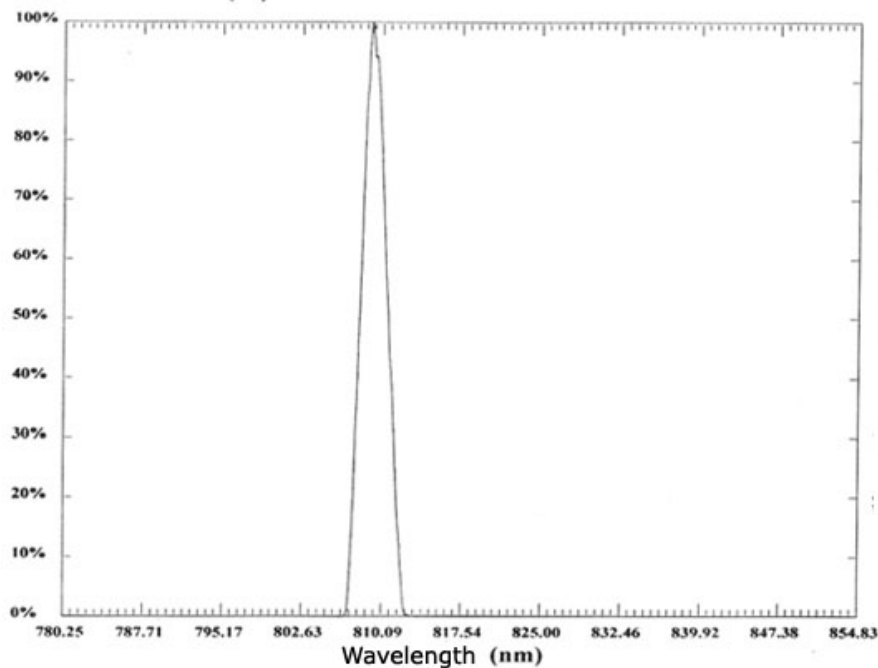


Package Dimensons



Typical Performance Curves

Normalized Power (%)



Peak Wavelength:
809.08nm
Center Wavelength:
809.36nm
Spectral Width:
2.61nm
Output Power:
120.74W



Notes

1. Caution! Don't look at the laser beam directly, because it's harmful to eyes.
2. The storage temperature is between -40 and 85°C.
3. In generally, the lifetime can be shortened by high temperature. So the generated heat must be removed in time when the LD working. The water cooling system, forced air cooling or TEC system are recommended for keeping the LD at a suitable temperature.
4. Constant-current power supply with voltage regulator should be used to avoid surge. To use a laser diode in following sequences: Turn on the power supply; connect to the laser diode; and then increase the current gradually to the specified operating value. To shut down the laser diode, please decrease the current to zero gradually, and then turn off the power. Please make sure that the power supply has no current overshoot at any time. The current overshoot can damage the laser diodes permanently.
5. The high power laser diode arrays are very sensitive to electrostatic. Please wear anti-static bracelet during operating with the laser diode arrays.
6. Be sure that the operating current does not exceed the specified operating current. Otherwise, it will accelerate laser aging, shorten lifetime or even damage devices permanently.
7. A clean, dry and ventilated environment should be available when storing and operating laser diode arrays. Dust may degrade the laser diode arrays.