

PA-2 Series Conduction Cooled Polygonal Diode Laser Array

The PA-2 series of conductive cooled polygonal diode laser array is a high peak power product developed by RealLight for use at high temperatures of 60°C. The PA-2 series is composed of twelve hexagonally arranged stacks, with 1 ~ 4 bars in each stack, and each bar has a power of 100W/200W. Other wavelengths and packaging forms can be customized.

Key Features

- ◆ AuSn solder for packaging
- ◆ High temperature application
- ◆ High peak power
- ◆ High reliability

Applications

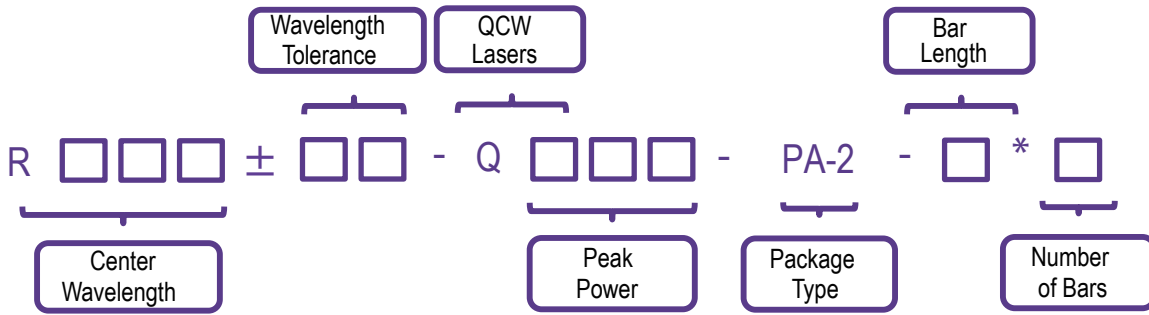
- Pumping source
- Illumination
- Laser processing
- Scientific research

Technical Specifications

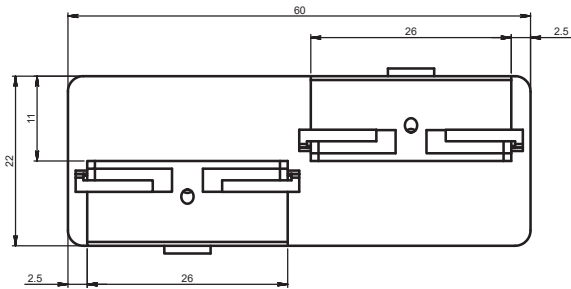
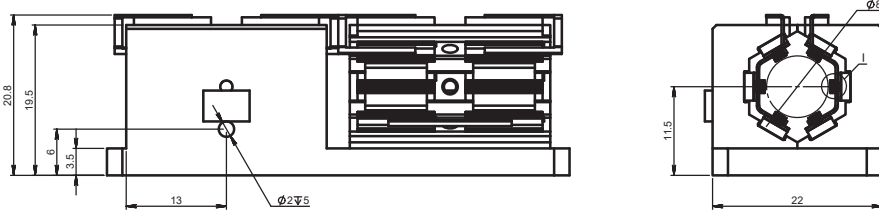
Optical Parameters	
Center Wavelength λ_c (nm)	790-812
Wavelength Tolerance $\delta\lambda_c$ (nm)	± 3
Output Power per Bar (W)	100 200
Number of Horizontal Arrays	2
Array-to-Array Pitch	3
Number of Bars per Stack	1-4 1-3
Bar-to-Bar Pitch (mm)	0.43 0.55
Spectral Width (FWHM) (nm)	<6
Fast Axis Divergence Angle (FWHM) (°)	≤ 40
Slow Axis Divergence Angle (FWHM) (°)	≤ 10
Wavelength Temperature Coefficient (nm/°C)	~ 0.3
Electrical Parameters	
EO Conversion Efficiency (%)	≥ 50
Threshold Current I_{th} (A)	≤ 20 ≤ 30
Operating Current I_{op} (A)	100 220
Operating Voltage V_{op} of each Bar (V)	≤ 2.1
Duty Cycle (%)	$\leq 0.8\% @ 4800W$ $\leq 0.6\% @ 7200W$
Pulse Width (μs)	≤ 300
Repetition Rate (Hz)	≤ 25 ≤ 20
Environment Parameters	
Operating Temperature (°C)	-40~65
Storage Temperature (°C)	-45~85

1. Wavelengths from 940nm to 960nm available upon request.
2. Custom number of bars, bar-to-bar pitch, and stack-to-stack pitch are available upon request.
3. The installation and wiring can be customized to meet the customer's requirements.
4. All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

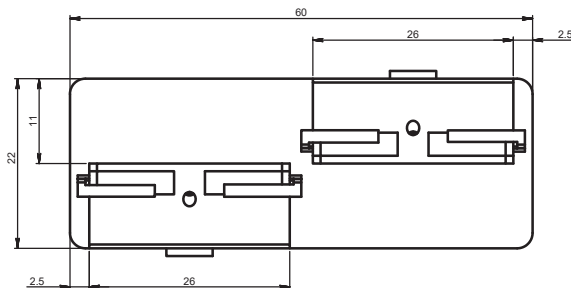
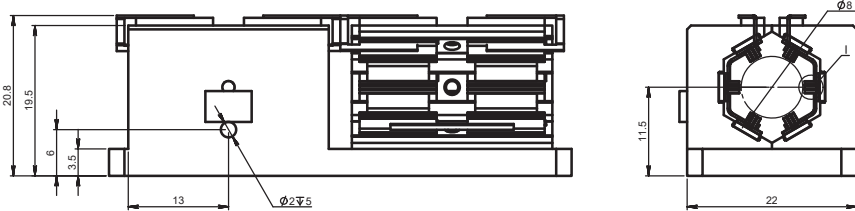
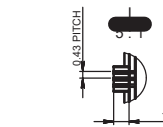
Part Numbering Schema



Mechanical Drawings (in mm)



PA-2_0.43_100W



PA-2_0.55_200W

