



PART NUMBER: ARR187P100  
1-BAR Cs PACKAGE

### FEATURES AND BENEFITS

- Assembled With Hard Solder & Expansion Matched Materials
- Ideal For Long Pulse And/Or High Duty Cycle Applications
- Standard Bar Pitch Options Include 400  $\mu\text{m}$ , 800  $\mu\text{m}$ , & 1200  $\mu\text{m}$
- Available Wavelengths: 790-1550nm
- Multi-wavelength Configurations Available
- Cs Package Also Available With Up To 8 Bars For A Maximum Output Power Of 1.6 kW

### OPTICAL CHARACTERISTICS

| Parameter                     | Conditions             | Typical | Units |
|-------------------------------|------------------------|---------|-------|
| QCW Power Output              | 95A at 25°C Heat Sink  | 100     | W     |
| Operating Current             | 100W at 25°C Heat Sink | 95      | A     |
| Threshold Current             | 25°C Heat Sink         | 15      | A     |
| Slope Efficiency              | 25°C Heat Sink         | 1.25    | W/A   |
| Electrical-Optical Efficiency | 100W at 25°C Heat Sink | 58      | %     |
| Center Wavelength             | 100W at 25°C Heat Sink | 808     | nm    |
| Wavelength Tolerance          | 100W at 25°C Heat Sink | +/-3    | nm    |
| Spectral Width                | 100W at 25°C Heat Sink | 2.0     | nm    |
| Wavelength Shift              | —                      | 0.25    | nm/°C |
| Beam Divergence FWHM          | —                      | 38x7    | x°    |
| Beam Divergence FWHM (Lensed) | —                      | 1x7     | x°    |

### ELECTRICAL CHARACTERISTICS

| Parameter         | Conditions           | Typical | Units    |
|-------------------|----------------------|---------|----------|
| Series Resistance | 25°C Heat Sink       | 0.002   | $\Omega$ |
| Operating Voltage | 25°C Heat Sink, 100W | 1.8     | V        |

### ABSOLUTE MAXIMUM RATINGS

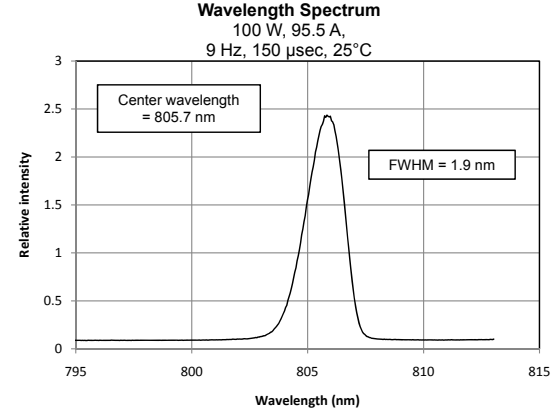
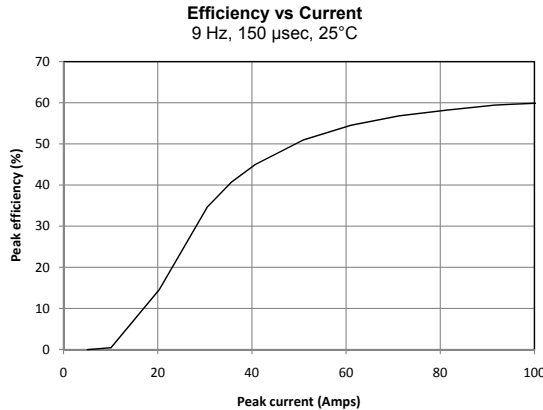
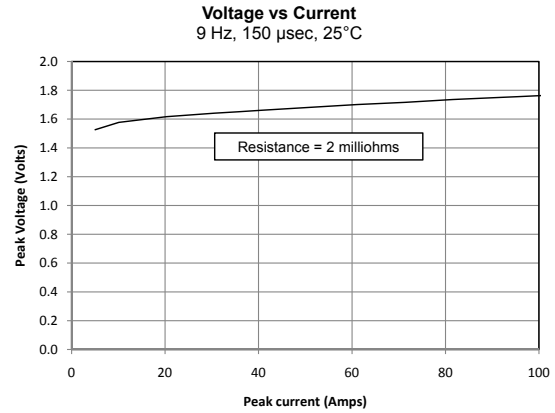
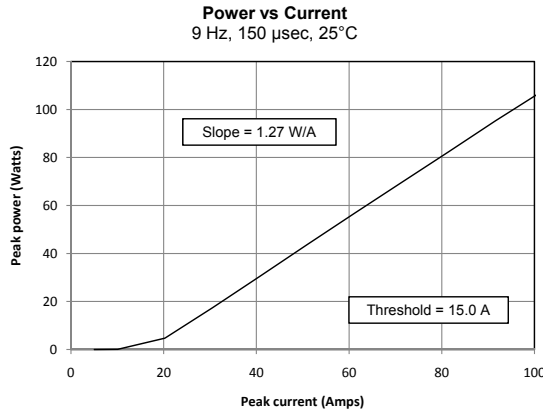
| Parameter                   | Conditions    |
|-----------------------------|---------------|
| Reverse Current             | 0 A           |
| Reverse Voltage             | 0 V           |
| Operating Temperature Range | -40°C to 70°C |
| Storage Temperature Range   | -40°C to 85°C |

### NOTES

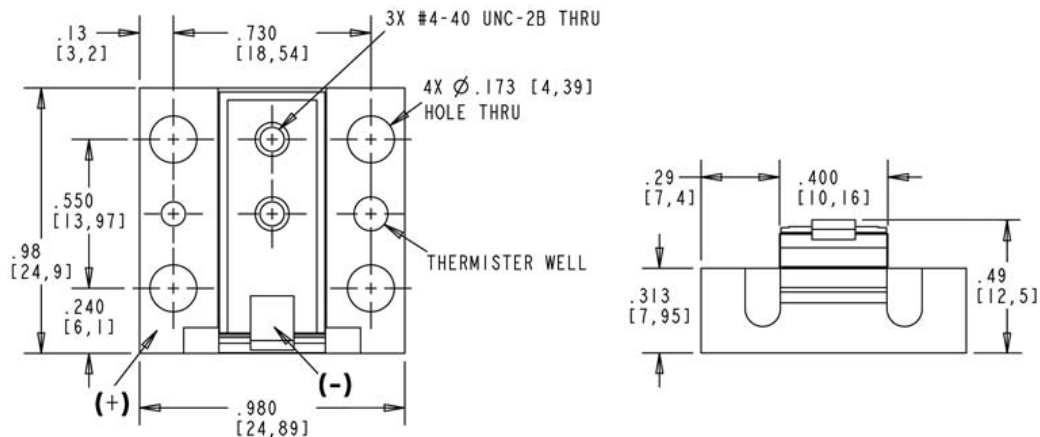
- (1) These specifications apply for operation at 808nm. Other wavelengths available upon request.
- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
- (3) Fast axis and slow axis lensing options are available for most NG-CEO heat exchanger designs.

100W QCW

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



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**WARNING**  
**DANGER**  
 INVISIBLE LASER RADIATION  
 AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.  
 Diode laser  
 5W & up, 780-1560nm  
 CLASS IV  
 ELECTROSTATIC DISCHARGE SENSITIVE DEVICE  
 REQUIRING SPECIAL HANDLING