AAA PACKAGE

LASER DIODE ARRAY

3600W QCW

NORTHROP GRUMMAN

PART NUMBER: ARR190P3600

18-BAR AAA 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 µm, 800 µm, & 1200 µm
- Available Wavelengths: 790-1550nm
- Multi-wavelength Configurations Available
- AAA Package Also Available With Up To 24 Bars For A Maximum Output Power Of 4.8 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	175A at 25°C Heat Sink	3600	W
Operating Current	3600W at 25°C Heat Sink	175	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	22.5	W/A
Electrical-Optical Efficiency	3600W at 25°C Heat Sink	57	%
Center Wavelength	3600W at 25°C Heat Sink	808	nm
Wavelength Tolerance	3600W at 25°C Heat Sink	+/-3	nm
Spectral Width	3600W at 25°C Heat Sink	2.5	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	0.036	Ω
Operating Voltage	25°C Heat Sink, 3600W	36.0	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.

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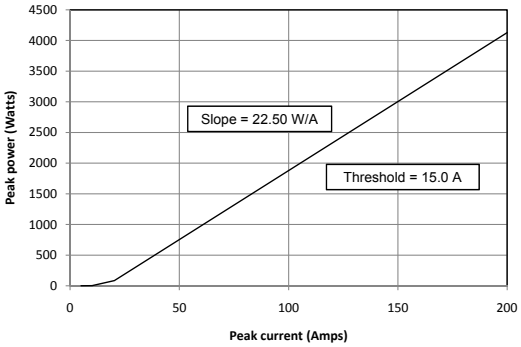
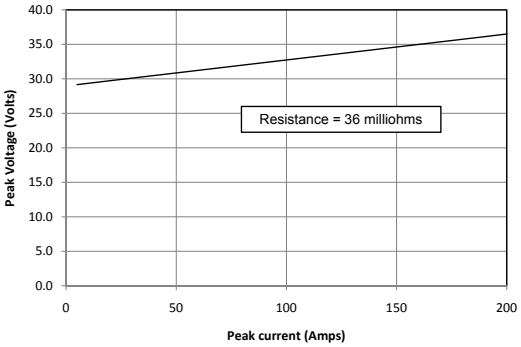
OPTICAL CHARACTERISTICS (SAMPLE)

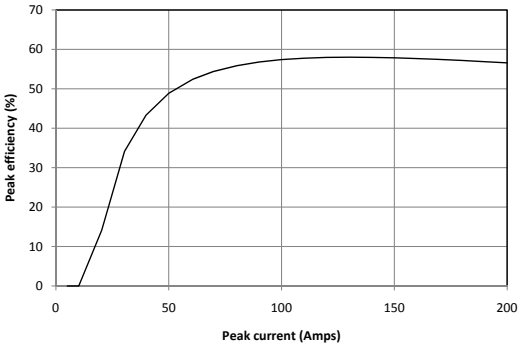
Power vs Current
9 Hz, 150 µsec, 25°C



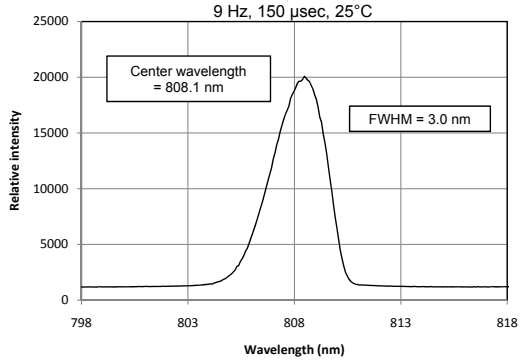
Voltage vs Current
9 Hz, 150 µsec, 25°C



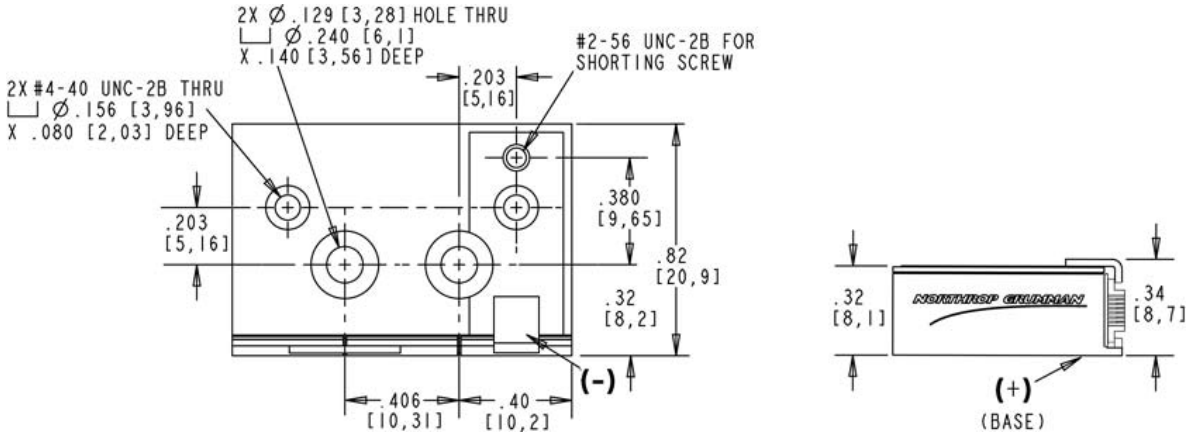
Efficiency vs Current
9 Hz, 150 µsec, 25°C



Wavelength Spectrum
3600 W, 176.5 A,
9 Hz, 150 µsec, 25°C



MECHANICAL CHARACTERISTICS



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