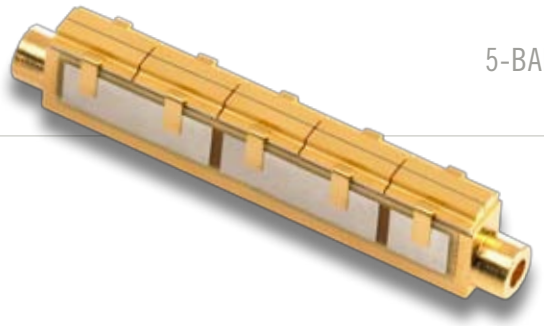
DERRINGER PACKAGE

LASER DIODE ARRAY

1000W QCW

NORTHROP GRUMMAN



PART NUMBER: ARR115P1000

5-BAR X-STRETCH DERRINGER PACKAGE

FEATURES AND BENEFITS

- Assembled With Hard Solder & Expansion Matched Materials
- Ideal For Long Pulse And/Or High Duty Cycle Applications
- Multi-wavelength Configurations Available From 790-1550nm
- Standard Bar Pitch Options Include 400 µm, 800 µm, and 1200 µm
- Small, Compact Water Cooled Design Is Ideal For Side Pumping Or Direct Diode Applications
- Derringer Package Available With Up To 40 Bars And A Maximum Output Power Of 8.0 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	175A at 25˚C Heat Sink	1000	W
Operating Current	1000W at 25˚C Heat Sink	175	A
Threshold Current	25˚C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	6.25	W/A
Electrical-Optical Efficiency	1000W at 25˚C Heat Sink	57	%
Center Wavelength	1000W at 25˚C Heat Sink	808	nm
Wavelength Tolerance	1000W at 25˚C Heat Sink	+/-3	nm
Spectral Width	1000W at 25˚C Heat Sink	3.0	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	0.010	Ω
Operating Voltage	25˚C Heat Sink, 1000W	10.0	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.

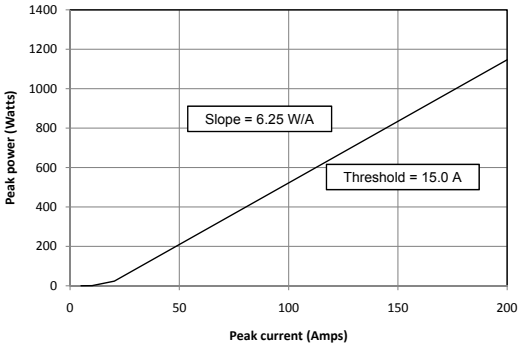
(3) Fast axis and slow axis lensing options are available for most NG-CEO heat exchanger designs.

1000W QCW

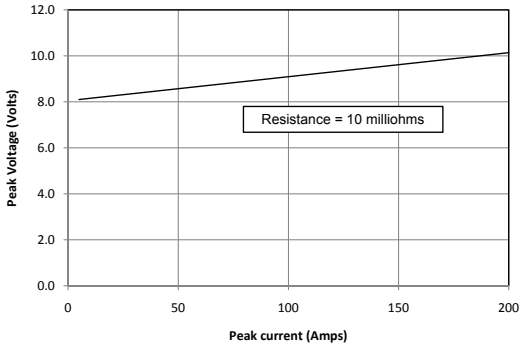
NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)

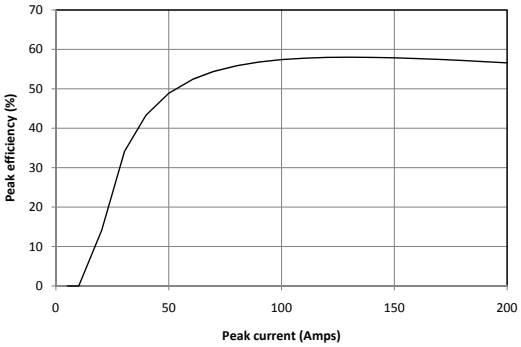
Power vs Current
9 Hz, 150 µsec, 25°C



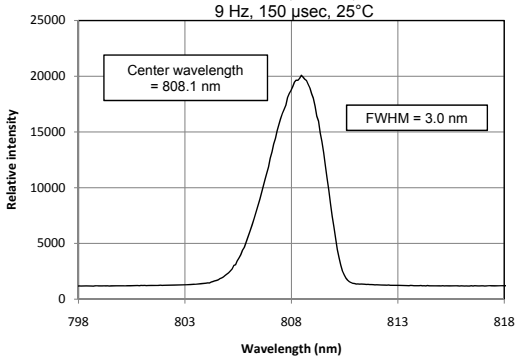
Voltage vs Current
9 Hz, 150 µsec, 25°C



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



Wavelength Spectrum
1000 W, 176.5A,
9 Hz, 150 µsec, 25°C



MECHANICAL CHARACTERISTICS