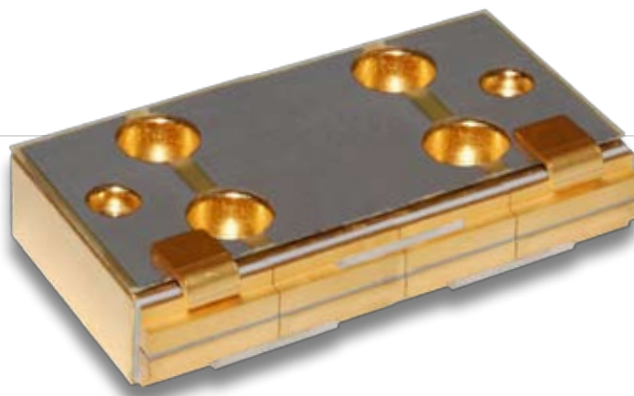


PART NUMBER: ARR191P800
4-BAR AAAA PACKAGE

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
- AAAA Package Also Available With Up To 32 Bars For A Maximum Output Power Of Up To 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	175A at 25°C Heat Sink	800	W
Operating Current	800W at 25°C Heat Sink	175	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	5.00	W/A
Electrical-Optical Efficiency	800W at 25°C Heat Sink	57	%
Center Wavelength	800W at 25°C Heat Sink	808	nm
Wavelength Tolerance	800W at 25°C Heat Sink	+/-3	nm
Spectral Width	800W 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	0.008	Ω
Operating Voltage	25°C Heat Sink, 800W	8.0	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

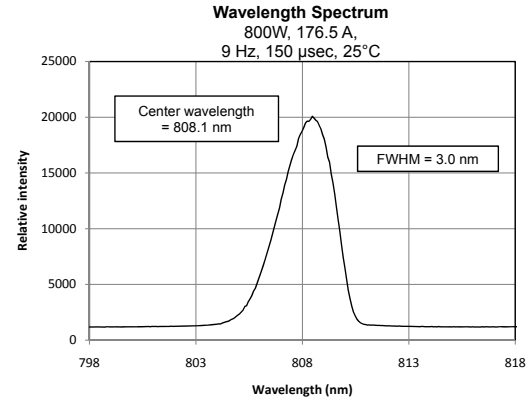
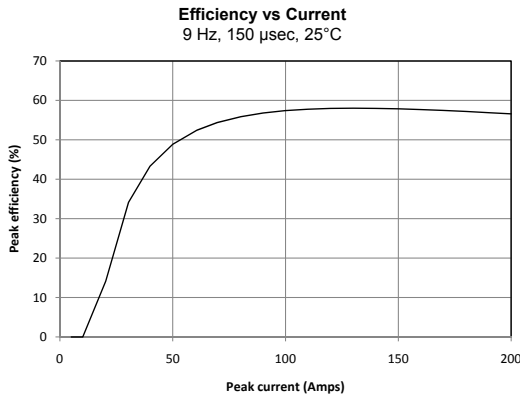
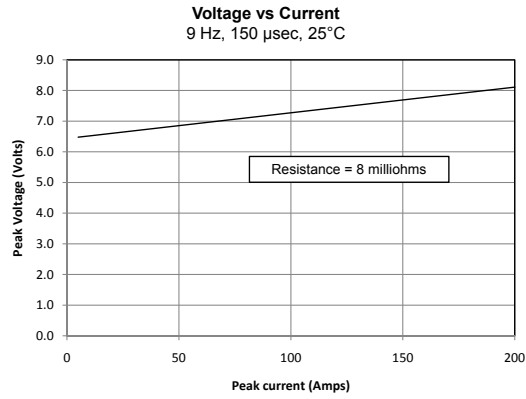
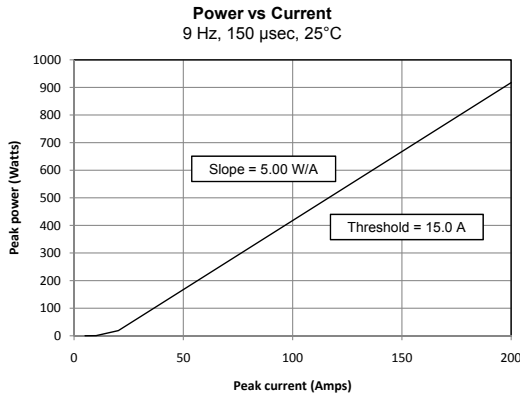
NOTES

- (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.

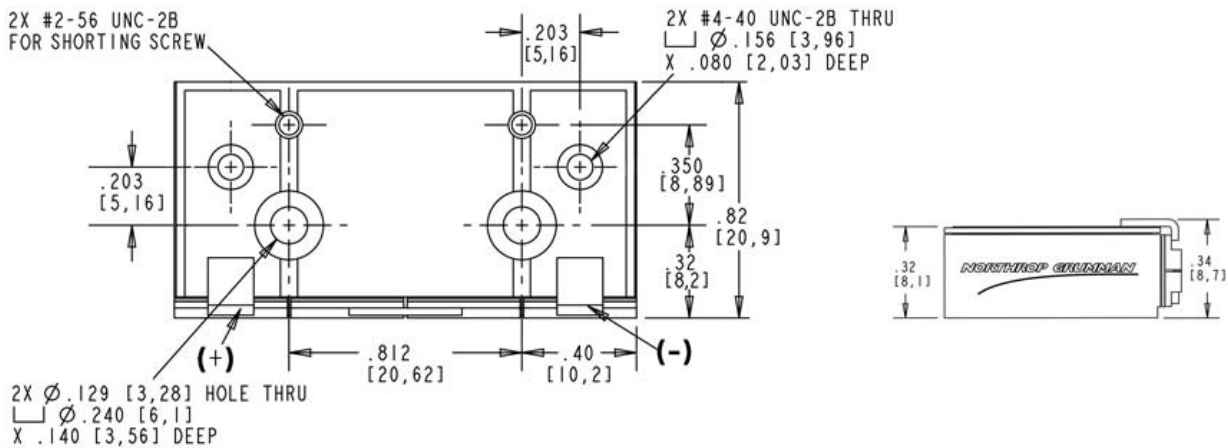
800W QCW

NORTHROP GRUMMAN

> OPTICAL CHARACTERISTICS (SAMPLE)



> MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

⚠ DANGER ⚠

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

* Diode laser
5W & up, 780-1560nm
CLASS IV

⚠ WARNING ⚠

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
REQUIRING SPECIAL HANDLING

REV. A 10/09

PART NUMBER: ARR191P1200
12-BAR AAAA 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
- AAAA Package Also Available With Up To 32 Bars For A Maximum Output Power Of Up To 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	95A at 25°C Heat Sink	1200	W
Operating Current	1200W at 25°C Heat Sink	95	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	15.0	W/A
Electrical-Optical Efficiency	1200W at 25°C Heat Sink	58	%
Center Wavelength	1200W at 25°C Heat Sink	808	nm
Wavelength Tolerance	1200W at 25°C Heat Sink	+/-3	nm
Spectral Width	1200W 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	0.024	Ω
Operating Voltage	25°C Heat Sink, 1200W	21.6	V

ABSOLUTE MAXIMUM RATINGS

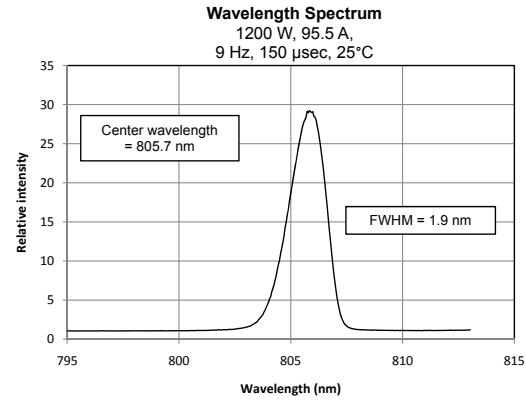
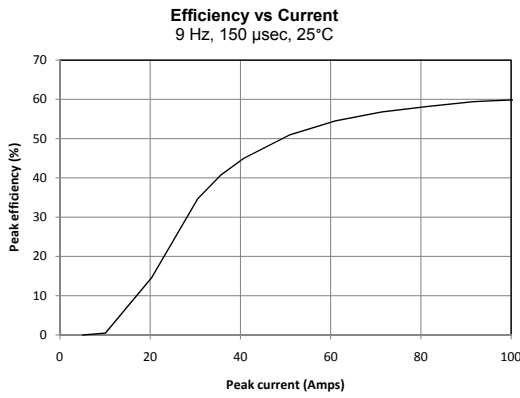
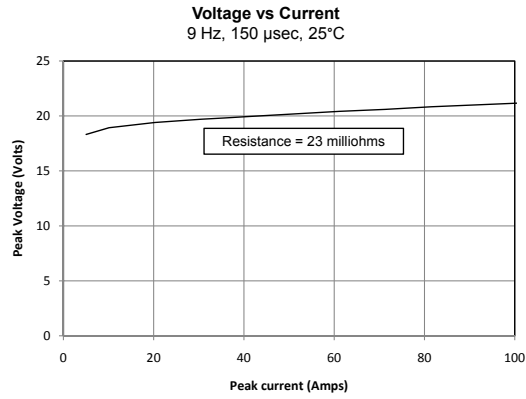
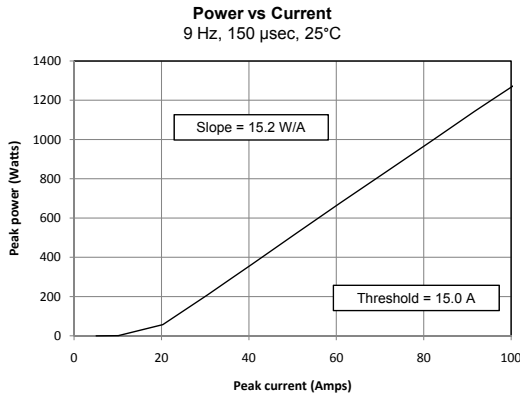
Parameter	Conditions
Reverse Current	0 A
Reverse Voltage	0 V
Operating Temperature Range	-40°C to 70°C
Storage Temperature Range	-40°C to 85°C

NOTES

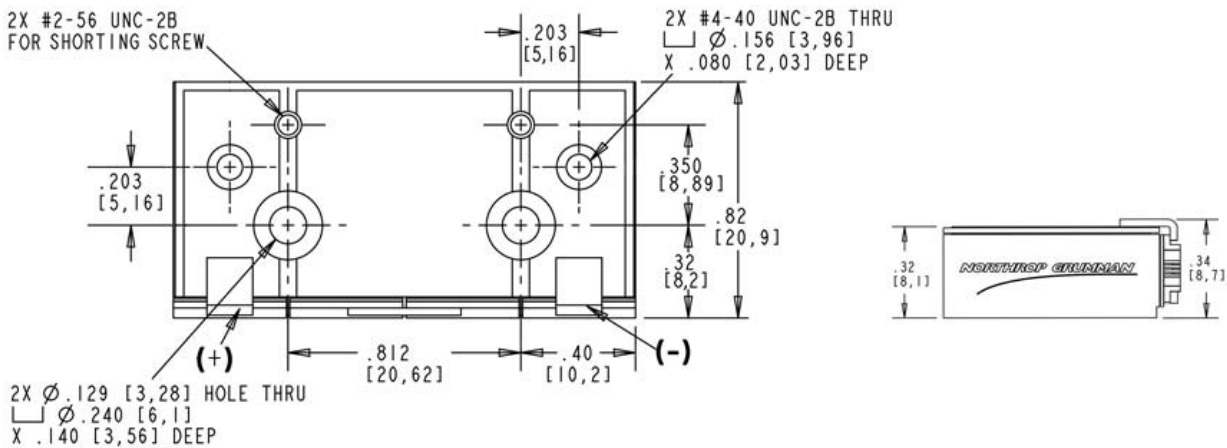
- (1) These specifications apply for operation at 808nm. Other wavelengths available upon request.
- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
- (3) Fast axis and slow axis lensing options are available for most NG-CEO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

1200W QCW

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

DANGER

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

Diode laser
5W & up, 780-1560nm
CLASS IV

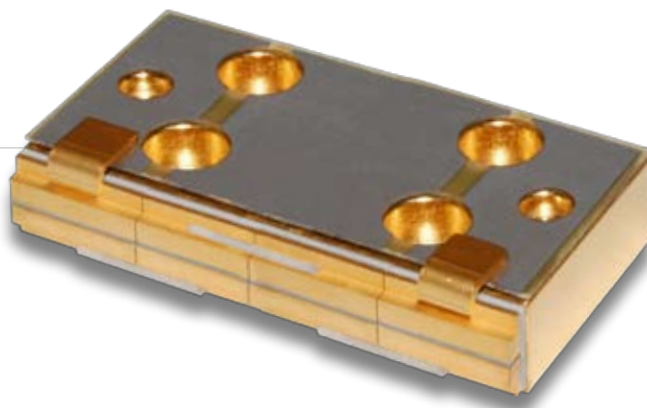
WARNING

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
REQUIRING SPECIAL HANDLING

REV. A 10/09

PART NUMBER: ARR191P1600
16-BAR AAAA 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
- AAAA Package Also Available With Up To 32 Bars For A Maximum Output Power Of Up To 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	95A at 25°C Heat Sink	1600	W
Operating Current	1600W at 25°C Heat Sink	95	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	20.0	W/A
Electrical-Optical Efficiency	1600W at 25°C Heat Sink	58	%
Center Wavelength	1600W at 25°C Heat Sink	808	nm
Wavelength Tolerance	1600W at 25°C Heat Sink	+/-3	nm
Spectral Width	1600W 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	0.032	Ω
Operating Voltage	25°C Heat Sink, 1600W	28.8	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

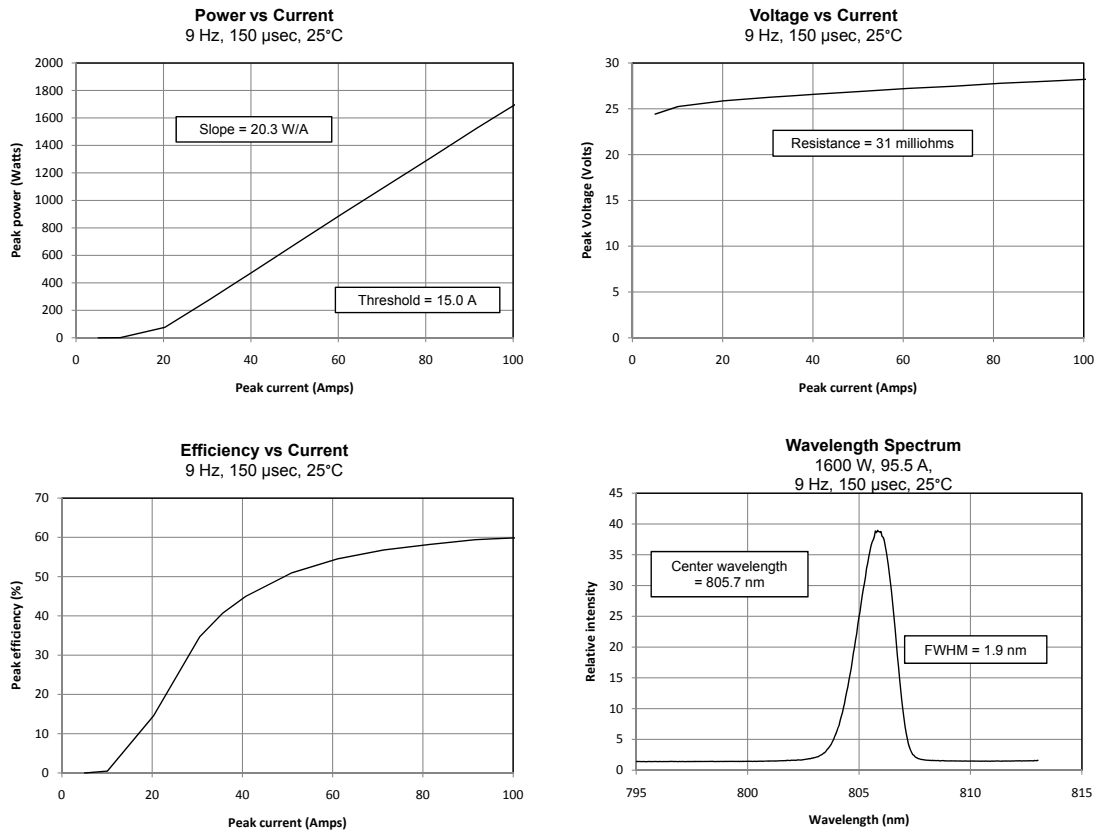
NOTES

- (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.

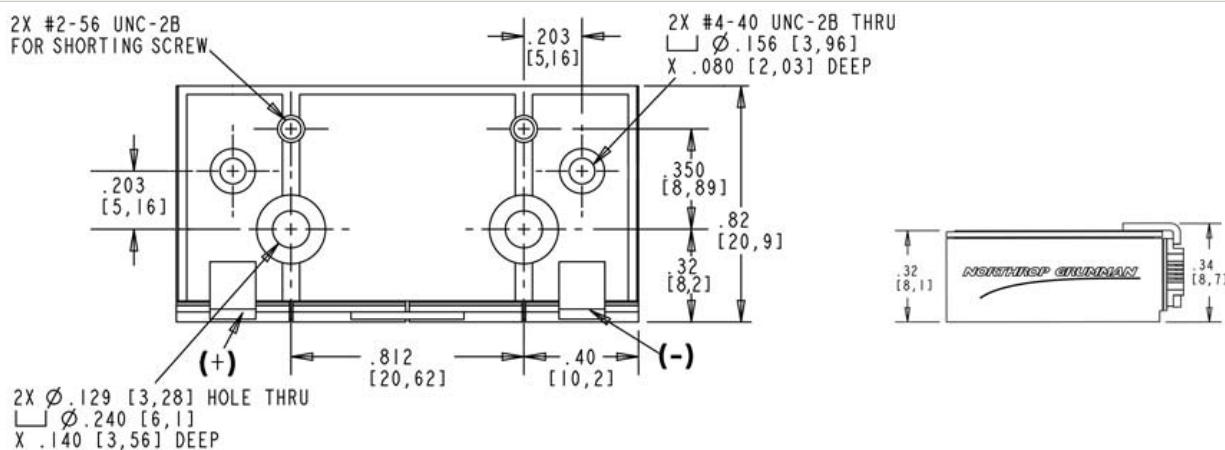
1600W QCW

NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

⚠ DANGER ⚠

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

Diode laser
 5W & up, 780-1560nm
 CLASS IV

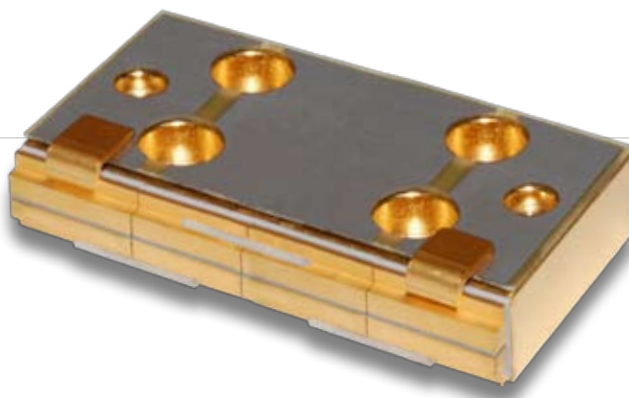
⚠ WARNING ⚠

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
 REQUIRING SPECIAL HANDLING

REV. A 10/09

PART NUMBER: ARR191P2400
24-BAR AAAA 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
- AAAA Package Also Available With Up To 32 Bars For A Maximum Output Power Of Up To 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	95A at 25°C Heat Sink	2400	W
Operating Current	2400W at 25°C Heat Sink	95	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	30.0	W/A
Electrical-Optical Efficiency	2400W at 25°C Heat Sink	58	%
Center Wavelength	2400W at 25°C Heat Sink	808	nm
Wavelength Tolerance	2400W at 25°C Heat Sink	+/-3	nm
Spectral Width	2400W 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	0.048	Ω
Operating Voltage	25°C Heat Sink, 2400W	43.2	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

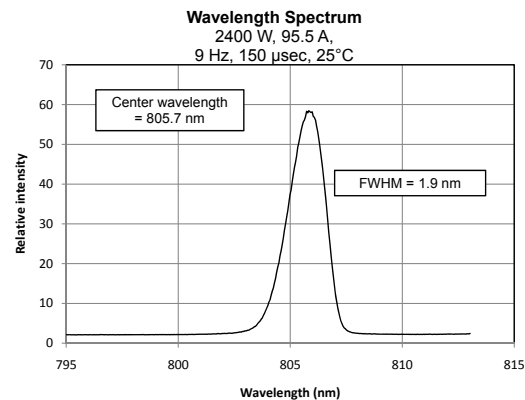
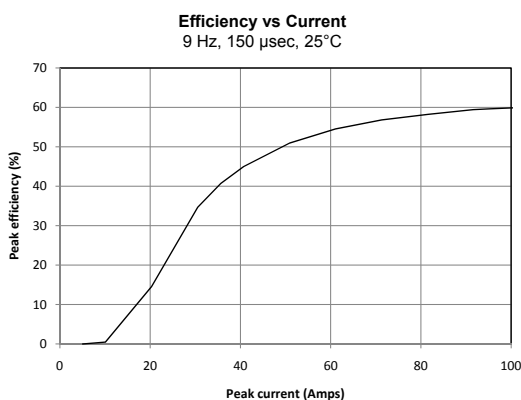
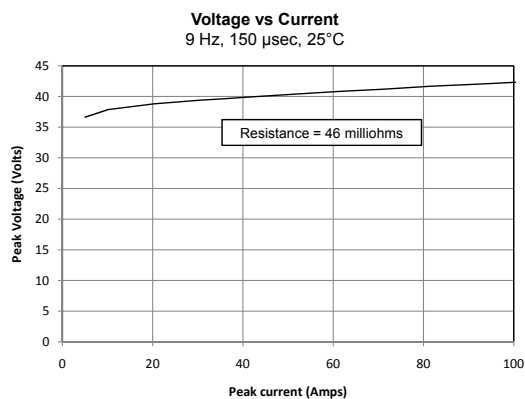
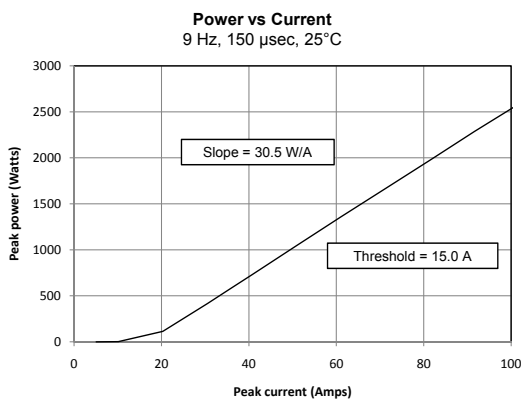
NOTES

- (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.

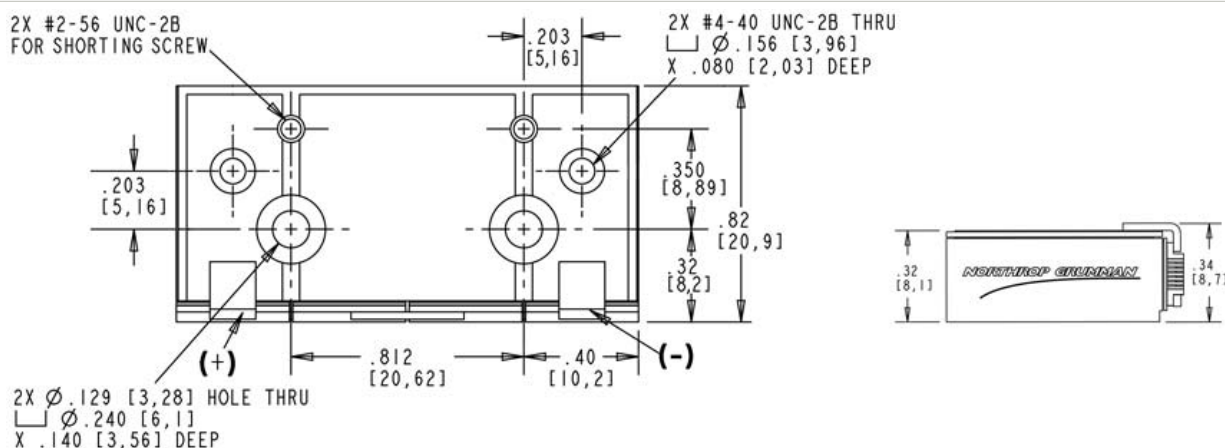
2400W QCW

NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

⚠ DANGER ⚠

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

* Diode laser
5W & up, 780-1560nm
CLASS IV

⚠ WARNING ⚠

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
REQUIRING SPECIAL HANDLING

REV: A 10/09 805 0010 10000 Rev0000

PART NUMBER: ARR191P3200
16-BAR AAAA 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
- AAAA Package Also Available With Up To 32 Bars For A Maximum Output Power Of Up To 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	175A at 25°C Heat Sink	3200	W
Operating Current	3200W at 25°C Heat Sink	175	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	20.0	W/A
Electrical-Optical Efficiency	3200W at 25°C Heat Sink	57	%
Center Wavelength	3200W at 25°C Heat Sink	808	nm
Wavelength Tolerance	3200W at 25°C Heat Sink	+/-3	nm
Spectral Width	3200W 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	0.032	Ω
Operating Voltage	25°C Heat Sink, 3200W	32.0	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

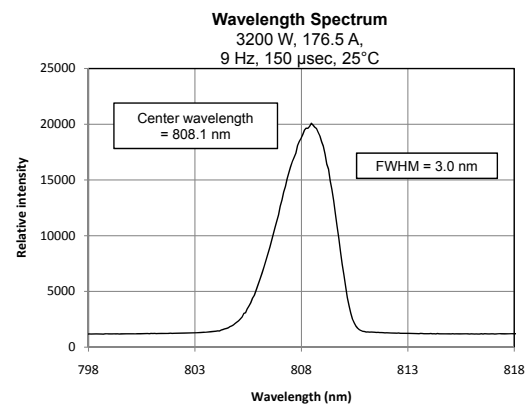
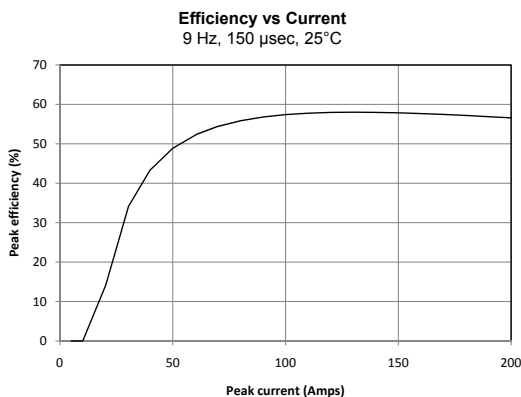
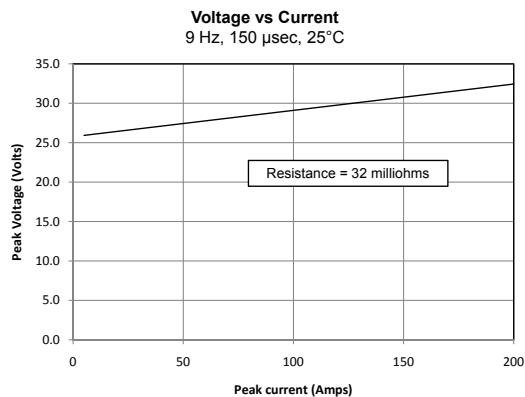
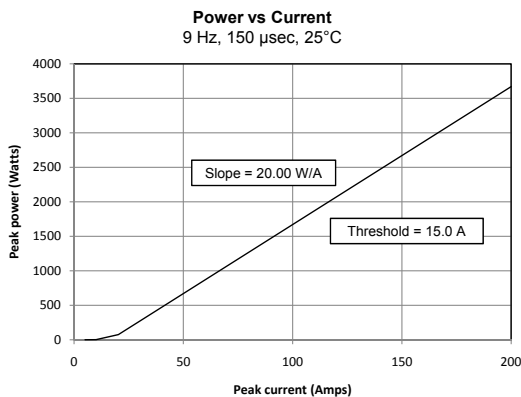
NOTES

- (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.

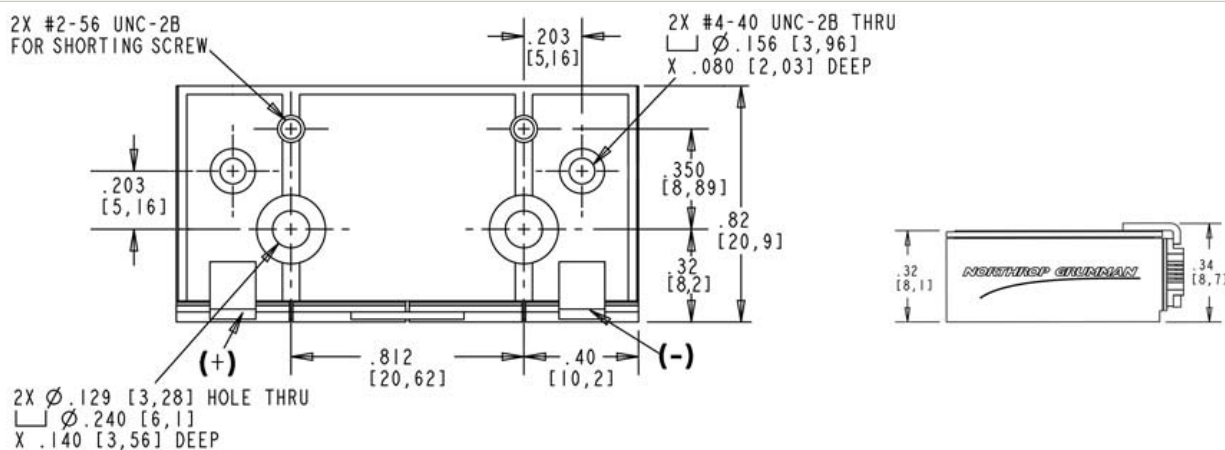
3200W QCW

NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

⚠ DANGER ⚠

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

* Diode laser
5W & up, 780-1560nm
CLASS IV

⚠ WARNING ⚠

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
REQUIRING SPECIAL HANDLING

REV: 10/09 REV: 0011-1000 (Rev.0001)

PART NUMBER: ARR191P4800
24-BAR AAAA 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
- AAAA Package Also Available With Up To 32 Bars For A Maximum Output Power Of Up To 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	175A at 25°C Heat Sink	4800	W
Operating Current	4800W at 25°C Heat Sink	175	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	30.0	W/A
Electrical-Optical Efficiency	4800W at 25°C Heat Sink	57	%
Center Wavelength	4800W at 25°C Heat Sink	808	nm
Wavelength Tolerance	4800W at 25°C Heat Sink	+/-3	nm
Spectral Width	4800W 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	0.048	Ω
Operating Voltage	25°C Heat Sink, 4800W	48.0	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

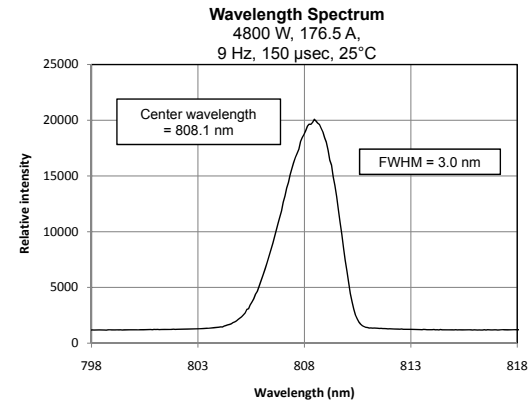
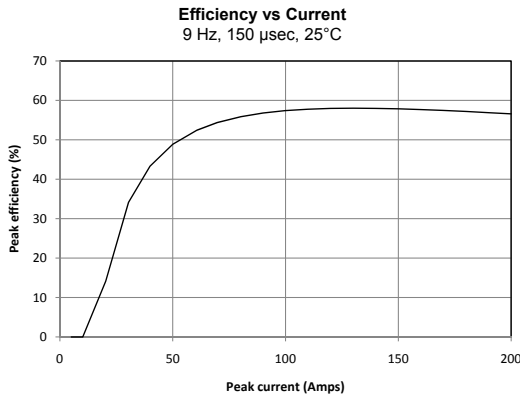
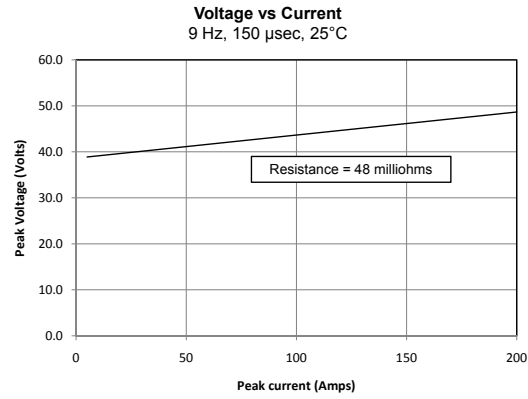
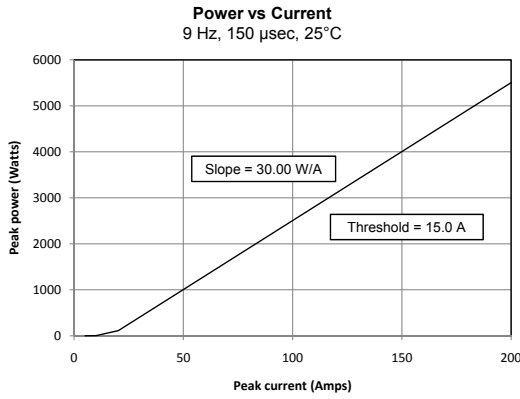
NOTES

- (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.

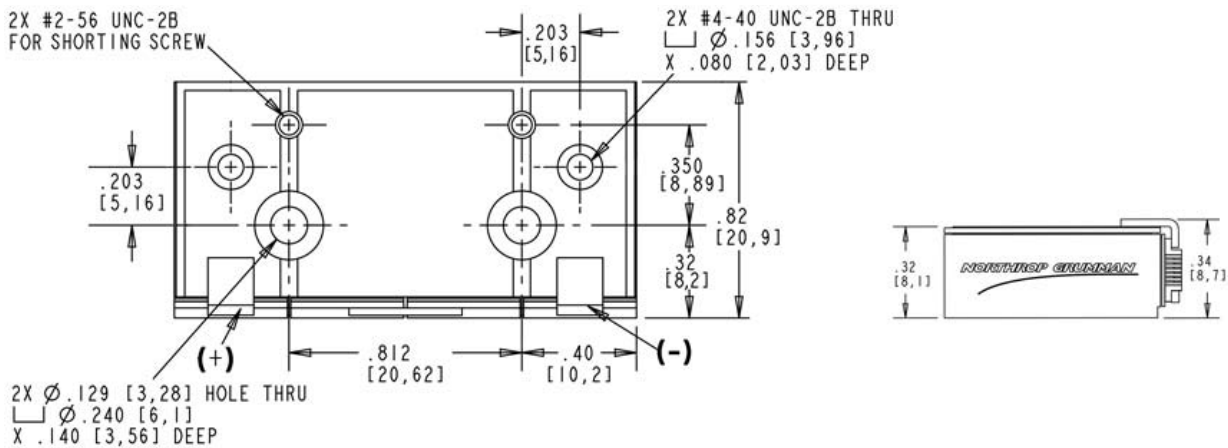
4800W QCW

NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

⚠ DANGER ⚠

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

* Diode laser
5W & up, 780-1560nm
CLASS IV

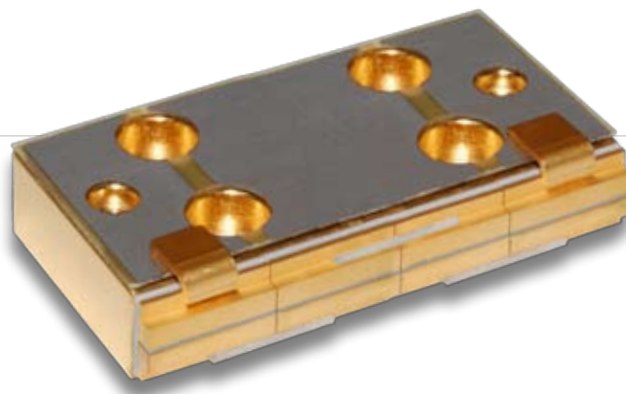
⚠ WARNING ⚠

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
REQUIRING SPECIAL HANDLING

REV: A 10/09 4800W-1760-0000

PART NUMBER: ARR191P6400
32-BAR AAAA 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
- AAAA Package Available With Up To 32 Bars And A Maximum Output Power Of 6.4 kW

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	175A at 25°C Heat Sink	6400	W
Operating Current	6400W at 25°C Heat Sink	175	A
Threshold Current	25°C Heat Sink	15	A
Slope Efficiency	25°C Heat Sink	40.0	W/A
Electrical-Optical Efficiency	6400W at 25°C Heat Sink	57	%
Center Wavelength	6400W at 25°C Heat Sink	808	nm
Wavelength Tolerance	6400W at 25°C Heat Sink	+/-3	nm
Spectral Width	6400W 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	0.064	Ω
Operating Voltage	25°C Heat Sink, 6400W	64.0	V

ABSOLUTE MAXIMUM RATINGS

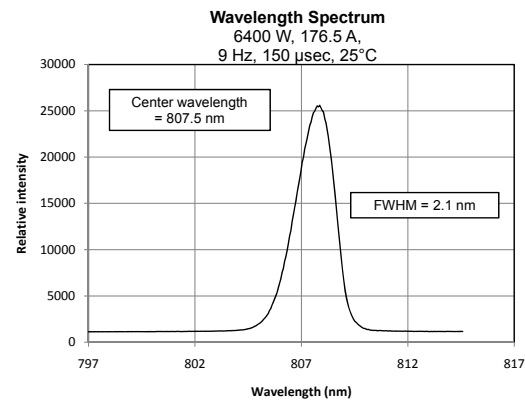
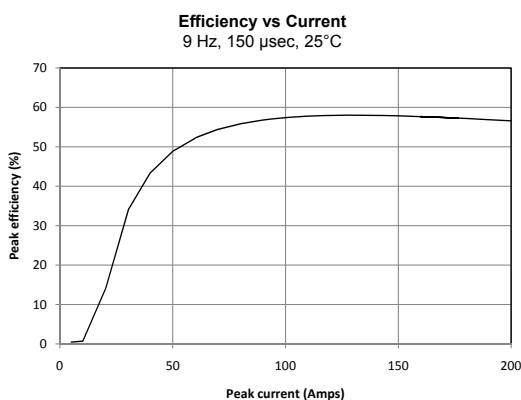
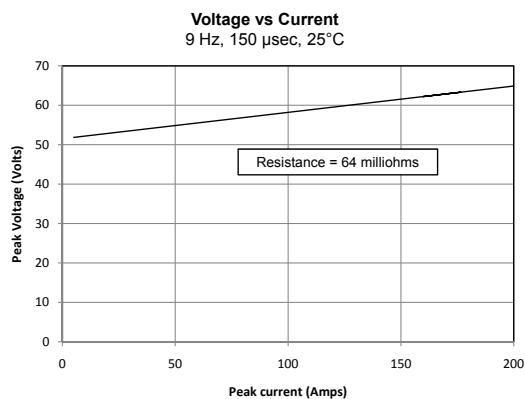
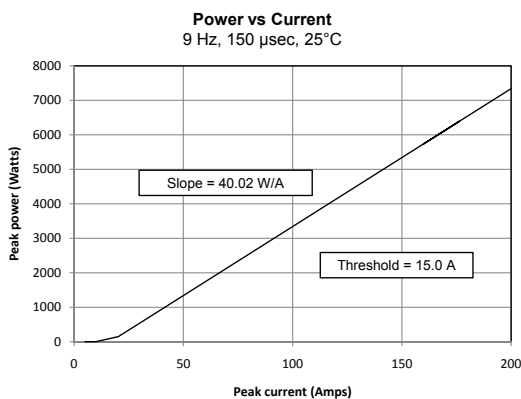
Parameter	Conditions
Reverse Current	0 A
Reverse Voltage	0 V
Operating Temperature Range	-40°C to 70°C
Storage Temperature Range	-40°C to 85°C

NOTES

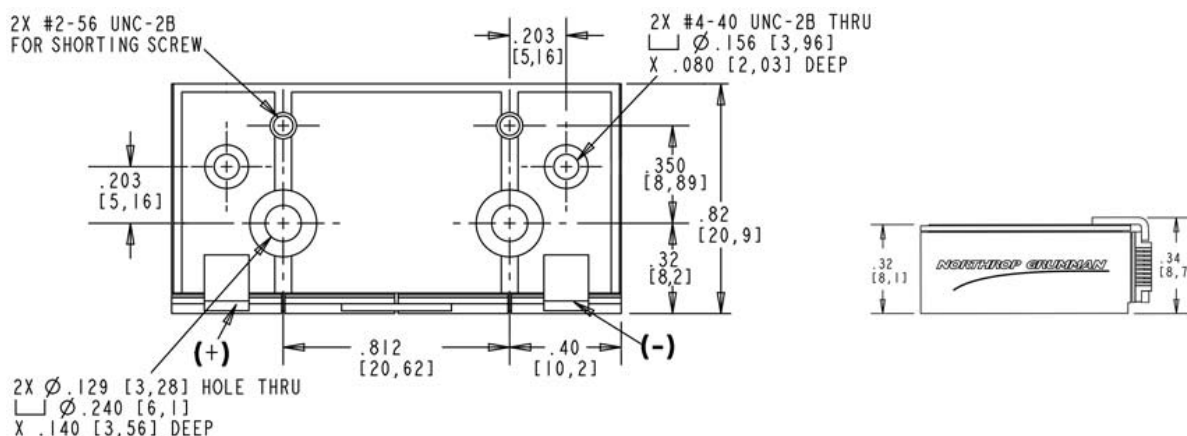
- (1) These specifications apply for operation at 808nm. Other wavelengths available upon request.
- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
- (3) Fast axis and slow axis lensing options are available for most NG-CEO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

6400W QCW

OPTICAL CHARACTERISTICS (SAMPLE)



MECHANICAL CHARACTERISTICS



Copyright © 2008 Northrop Grumman Cutting Edge Optronics All Rights Reserved. Northrop Grumman Cutting Edge Optronics reserves the right to change product design and specifications at any time without notice. No license is granted by implication or otherwise under any patents or patent rights of Northrop Grumman Cutting Edge Optronics or others. No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products. Information contained herein is believed to be reliable and accurate. Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eyewear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear proper eye protection when operating. This Product is covered by one or more of the following Patents: 5,898,211 | 5,985,684 | 5,913,108 | 6,310,900 | Other US and Foreign Patents Pending. 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.

⚠ DANGER ⚠

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.

Diode laser
5W & up, 780-1560nm
CLASS IV

⚠ WARNING ⚠

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE
REQUIRING SPECIAL HANDLING

REV: A 10/09