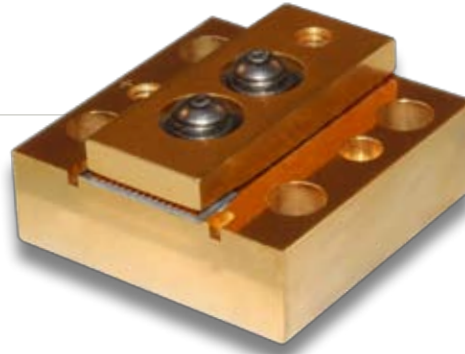


PART NUMBER: ARR97C020  
DIRECTLY BONDED Cs PACKAGE

#### FEATURES AND BENEFITS



- Industry Standard
- Conductively Cooled
- Low Smile Package Design
- Diamond-Turned Heat Exchanger
- Available Wavelengths: 790-1550nm

#### OPTICAL CHARACTERISTICS

| Parameter                     | Conditions            | Typical | Units |
|-------------------------------|-----------------------|---------|-------|
| CW Power Output               | 25A at 25°C Heat Sink | 20      | W     |
| Operating Current             | 20W at 25°C Heat Sink | 25      | A     |
| Threshold Current             | 25°C Heat Sink        | 8       | A     |
| Slope Efficiency              | 25°C Heat Sink        | 1.15    | W/A   |
| Electrical-Optical Efficiency | 20W at 25°C Heat Sink | 47      | %     |
| Center Wavelength             | 20W at 25°C Heat Sink | 808     | nm    |
| Wavelength Tolerance          | 20W at 25°C Heat Sink | +/-3    | nm    |
| Spectral Width                | 20W at 25°C Heat Sink | 1.8     | 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      | 0.004   | Ω     |
| Operating Voltage | 25°C Heat Sink, 20W | 1.7     | V     |

#### ABSOLUTE MAXIMUM RATINGS

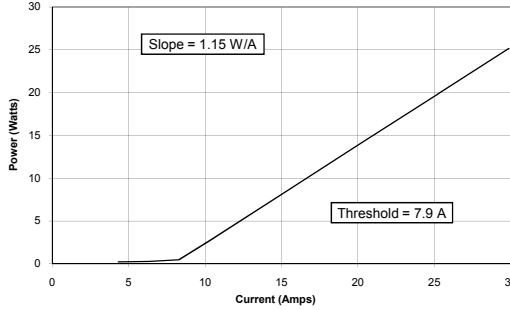
| Parameter                   | Conditions    |
|-----------------------------|---------------|
| Reverse Current             | 0 A           |
| Reverse Voltage             | 0 V           |
| Operating Temperature Range | -40°C to 70°C |
| Storage Temperature Range   | -40°C to 85°C |

#### NOTES

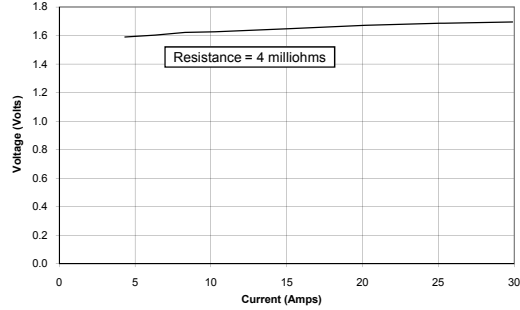
- (1) These specifications apply for operation at 808nm. Other wavelengths available upon request.
- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
- (3) Fast axis and slow axis lensing options are available for most NG-CEO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

OPTICAL CHARACTERISTICS (SAMPLE)

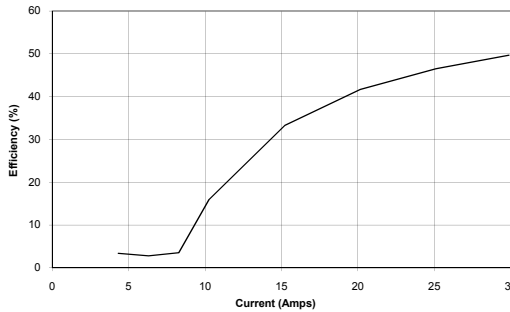
Power vs Current  
25°C



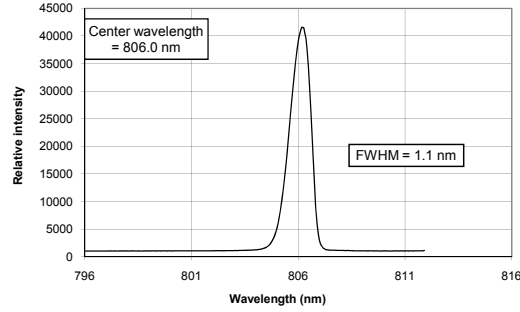
Voltage vs Current  
25°C



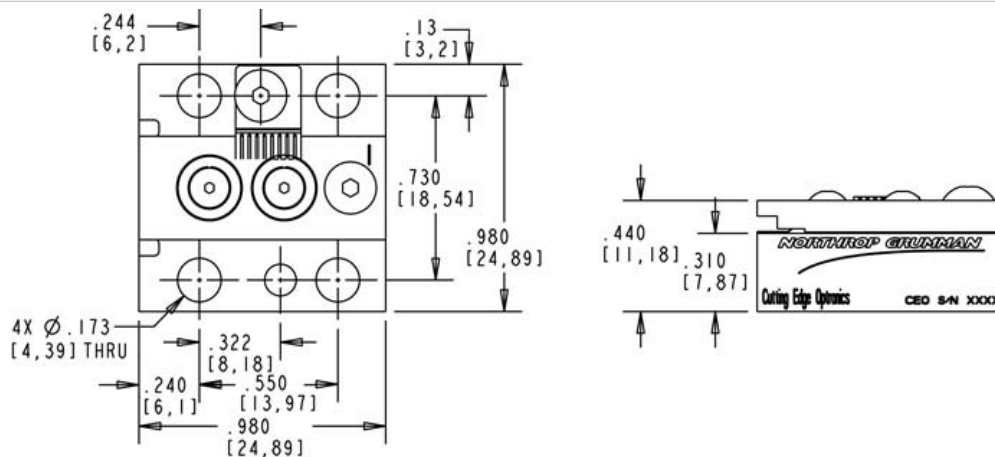
Efficiency vs Current  
25°C



Wavelength Spectrum  
20.0 W, 25.4 A, 25°C



MECHANICAL CHARACTERISTICS



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DANGER

INVISIBLE LASER  
RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT  
OR SCATTERED RADIATION.

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

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WARNING

ELECTROSTATIC DISCHARGE  
SENSITIVE DEVICE  
REQUIRING SPECIAL HANDLING

REV. A 10/09      HW 9001-1000 Rev0000