

PART NUMBER: MCS056C060  
1-BAR MCC PACKAGE

#### FEATURES AND BENEFITS



- Micro-Channel Cooled Arrays
- Can Be Packaged With Copper Or ICECUBED™ Ceramic Coolers
- Highest Average Power Available & Is Ideal For High Brightness Applications
- Available Wavelengths: 790-1550nm
- Multi-Wavelength Configurations Available
- Single & Multi-Dimensional MCC Stacks Are Available From 1 To 64 Bars Per Stack With Output Powers Up To 100W CW Per Bar
- MCC Arrays Can Be Lensed Upon Request, With A Typical FAC Of 0.25° (FWHM)

#### OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
CW Power Output	68A at 25°C Heat Sink	60	W
Operating Current	60W at 25°C Heat Sink	68	A
Threshold Current	25°C Heat Sink	18	A
Slope Efficiency	25°C Heat Sink	1.20	W/A
Electrical-Optical Efficiency	60W at 25°C Heat Sink	52	%
Center Wavelength	60W at 25°C Heat Sink	808	nm
Wavelength Tolerance	60W at 25°C Heat Sink	+/-3	nm
Spectral Width	60W at 25°C Heat Sink	1.8	nm
Wavelength Shift	—	0.25	nm/°C
Beam Divergence FWHM	—	38 x 7	x°
Beam Divergence FWHM (Lensed)	—	0.25 x 7	x°

#### ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
Series Resistance	25°C Heat Sink	0.002	Ω
Operating Voltage	25°C Heat Sink, 60W	1.7	V

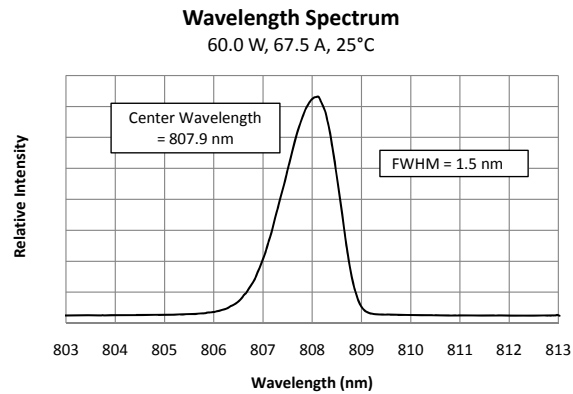
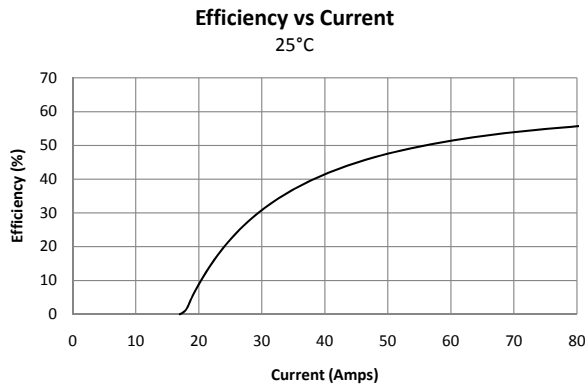
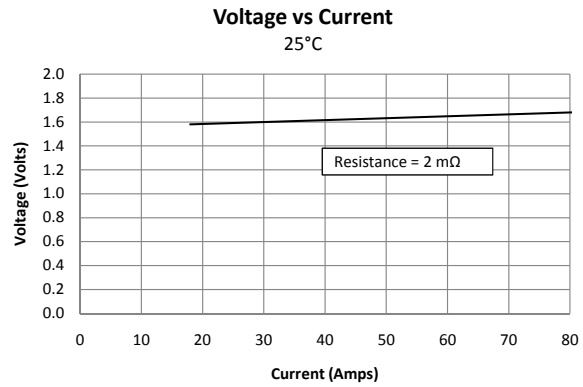
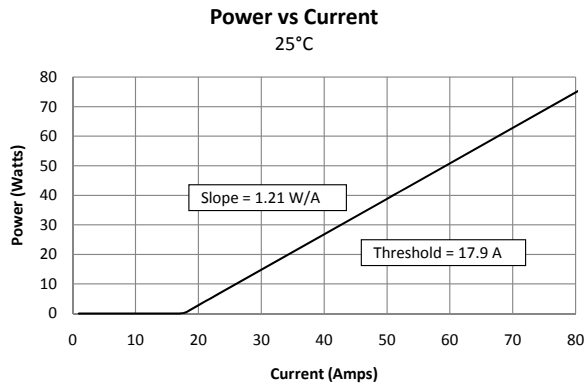
#### ABSOLUTE MAXIMUM RATINGS

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

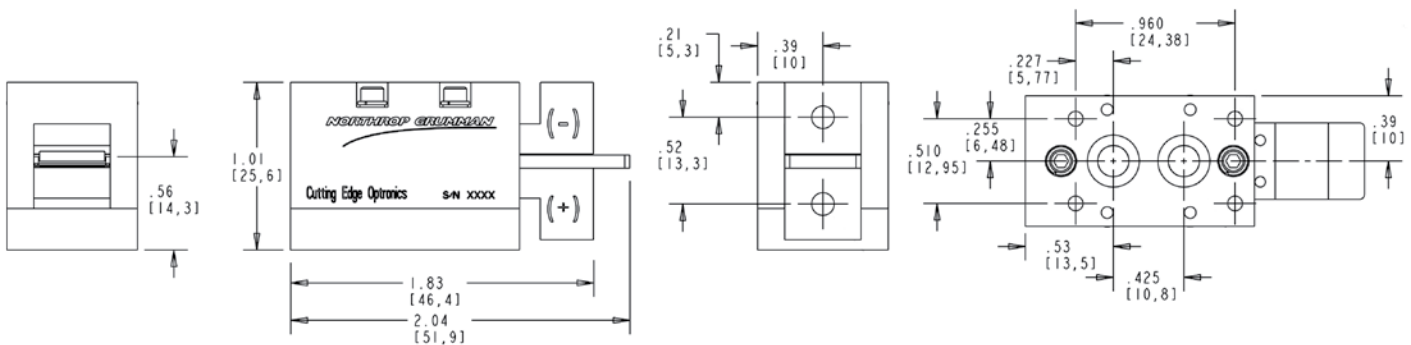
#### NOTES

- (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)



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

**WARNING**  
 ELECTROSTATIC DISCHARGE SENSITIVE DEVICE  
 REQUIRING SPECIAL HANDLING

Rev: B 5/10

PART NUMBER: MCS056C080  
1-BAR MCC PACKAGE

#### FEATURES AND BENEFITS



- Micro-Channel Cooled Arrays
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- Available Wavelengths: 790-1550nm
- Multi-Wavelength Configurations Available
- Single & Multi-Dimensional MCC Stacks Are Available From 1 To 64 Bars Per Stack With Output Powers Up To 100W CW Per Bar
- MCC Arrays Can Be Lensed Upon Request, With A Typical FAC Of 0.25° (FWHM)

#### OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
CW Power Output	85A at 25°C Heat Sink	80	W
Operating Current	80W at 25°C Heat Sink	85	A
Threshold Current	25°C Heat Sink	18	A
Slope Efficiency	25°C Heat Sink	1.20	W/A
Electrical-Optical Efficiency	80W at 25°C Heat Sink	55	%
Center Wavelength	80W at 25°C Heat Sink	808	nm
Wavelength Tolerance	80W at 25°C Heat Sink	+/-3	nm
Spectral Width	80W at 25°C Heat Sink	1.8	nm
Wavelength Shift	—	0.25	nm/°C
Beam Divergence FWHM	—	38 x 7	x°
Beam Divergence FWHM (Lensed)	—	0.25 x 7	x°

#### ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
Series Resistance	25°C Heat Sink	0.002	Ω
Operating Voltage	25°C Heat Sink, 80W	1.7	V

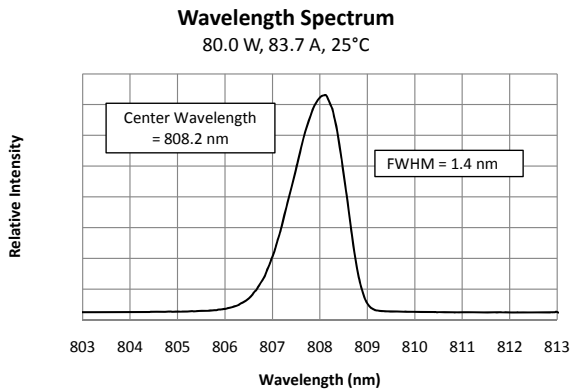
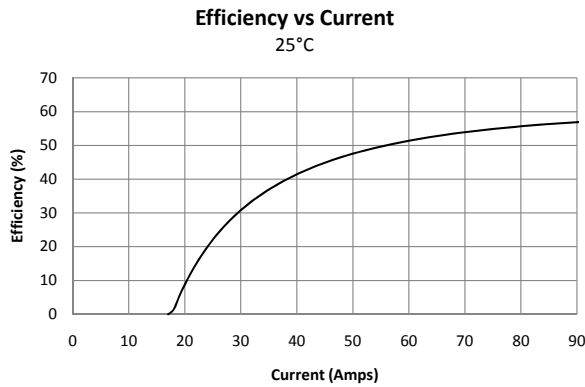
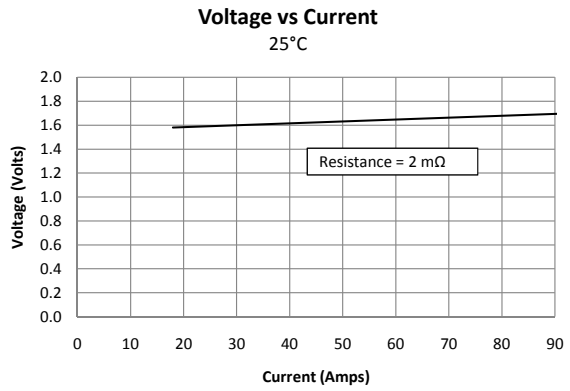
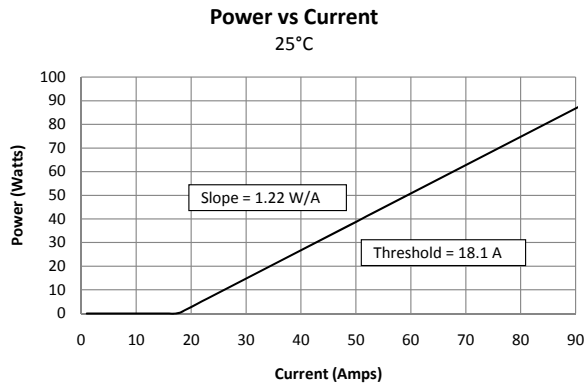
#### ABSOLUTE MAXIMUM RATINGS

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

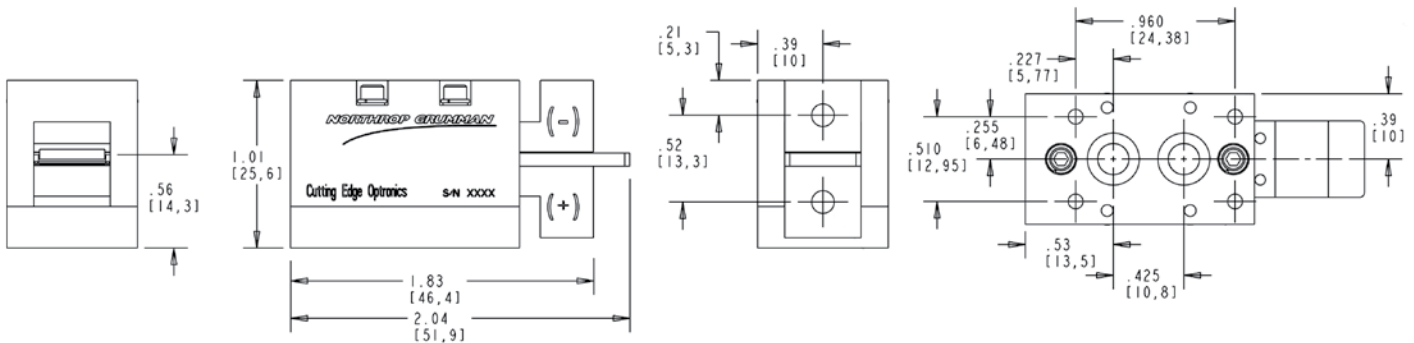
#### NOTES

- (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)



MECHANICAL CHARACTERISTICS



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

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ELECTROSTATIC DISCHARGE SENSITIVE DEVICE  
REQUIRING SPECIAL HANDLING

Rev: A 5/10

PART NUMBER: MCS056C100  
1-BAR MCC PACKAGE

### FEATURES AND BENEFITS



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- MCC Arrays Can Be Lensed Upon Request, With A Typical FAC Of 0.25° (FWHM)

### OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
CW Power Output	101A at 25°C Heat Sink	100	W
Operating Current	100W at 25°C Heat Sink	101	A
Threshold Current	25°C Heat Sink	18	A
Slope Efficiency	25°C Heat Sink	1.20	W/A
Electrical-Optical Efficiency	100W at 25°C Heat Sink	57	%
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	1.8	nm
Wavelength Shift	—	0.25	nm/°C
Beam Divergence FWHM	—	38 x 7	x°
Beam Divergence FWHM (Lensed)	—	0.25 x 7	x°

### ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
Series Resistance	25°C Heat Sink	0.002	Ω
Operating Voltage	25°C Heat Sink, 100W	1.8	V

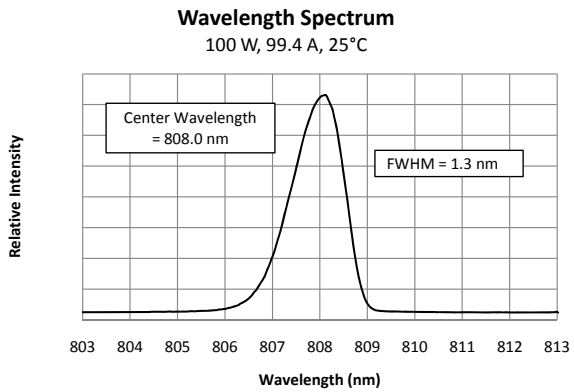
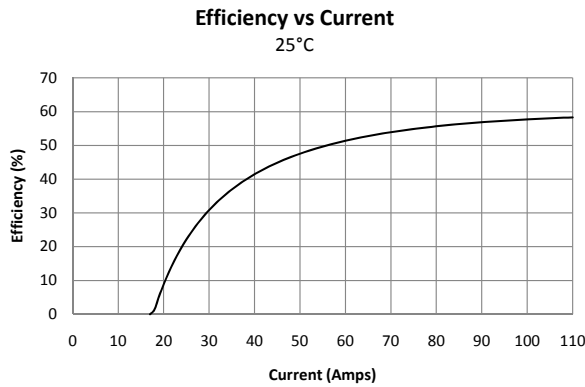
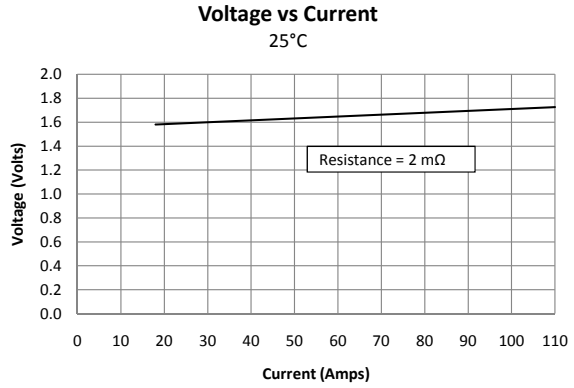
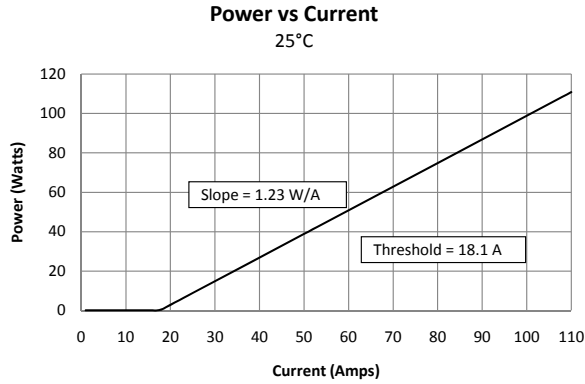
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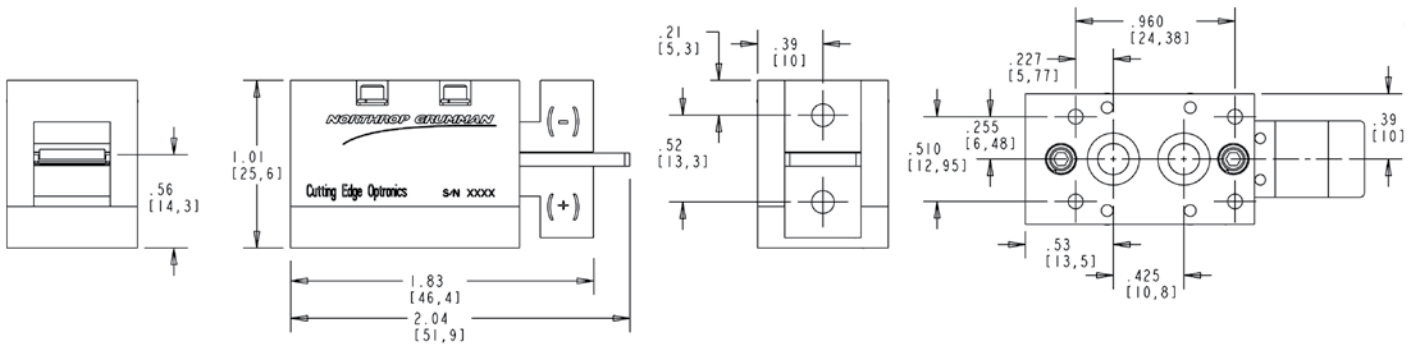
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