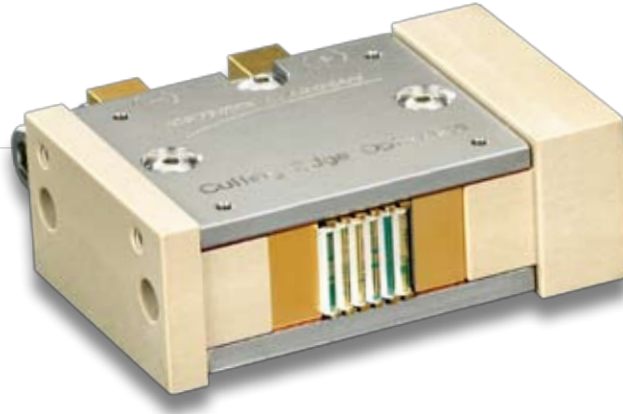


PART NUMBER: MCS051C360  
6-BAR MCC PACKAGE

### 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	360	W
Operating Current	360W at 25°C Heat Sink	68	A
Threshold Current	25°C Heat Sink	18	A
Slope Efficiency	25°C Heat Sink	7.20	W/A
Electrical-Optical Efficiency	360W at 25°C Heat Sink	52	%
Center Wavelength	360W at 25°C Heat Sink	808	nm
Wavelength Tolerance	360W at 25°C Heat Sink	+/-3	nm
Spectral Width	360W 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	0.009	Ω
Operating Voltage	25°C Heat Sink, 360W	10.2	V

### ABSOLUTE MAXIMUM RATINGS

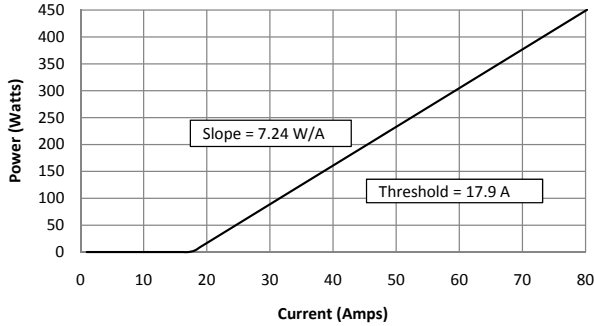
Parameter	Conditions
Reverse Current	0 A
Reverse Voltage	0 V
Operating Temperature Range	-40°C to 70°C
Storage Temperature Range	-40°C to 85°C

### NOTES

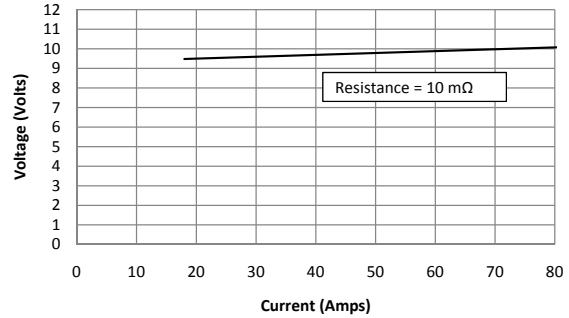
- (1) These specifications apply for operation at 808nm. Other wavelengths available upon request.
- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
- (3) Fast axis and slow axis lensing options are available for most NG-CEO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

OPTICAL CHARACTERISTICS (SAMPLE)

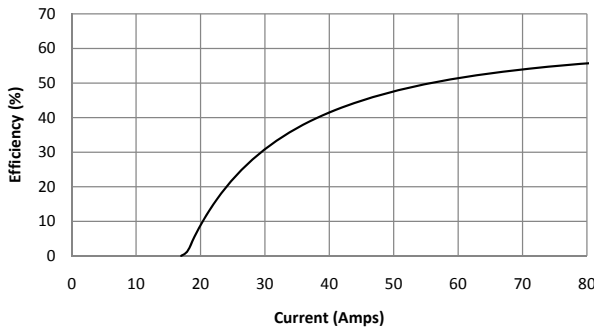
Power vs Current  
25°C



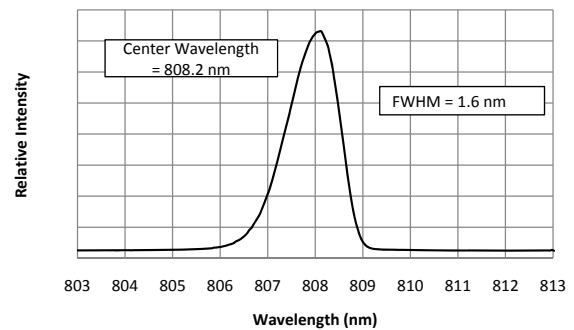
Voltage vs Current  
25°C



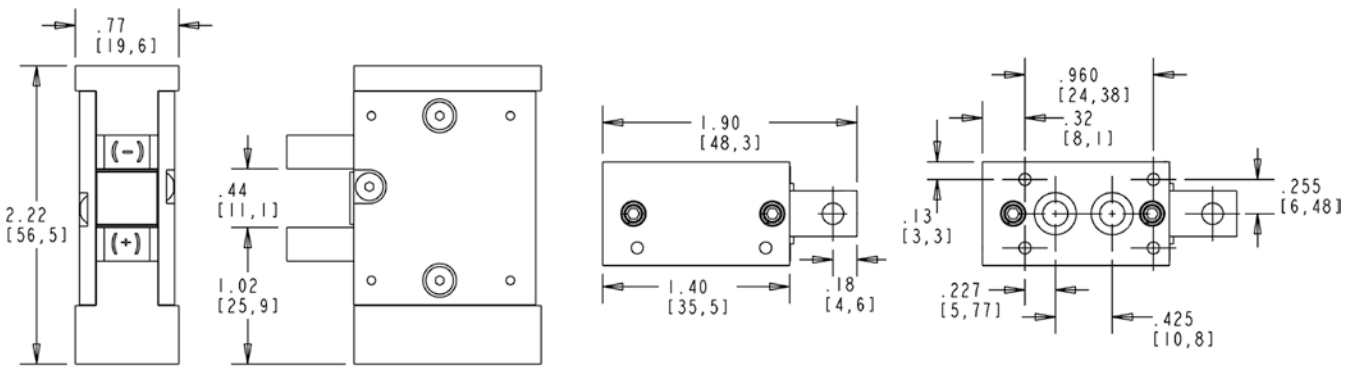
Efficiency vs Current  
25°C



Wavelength Spectrum  
360 W, 67.6 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

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

Rev. B 5/10

PART NUMBER: MCS051C480  
6-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	85A at 25°C Heat Sink	480	W
Operating Current	480W at 25°C Heat Sink	85	A
Threshold Current	25°C Heat Sink	18	A
Slope Efficiency	25°C Heat Sink	7.20	W/A
Electrical-Optical Efficiency	480W at 25°C Heat Sink	55	%
Center Wavelength	480W at 25°C Heat Sink	808	nm
Wavelength Tolerance	480W at 25°C Heat Sink	+/-3	nm
Spectral Width	480W 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	0.009	Ω
Operating Voltage	25°C Heat Sink, 480W	10.2	V

#### ABSOLUTE MAXIMUM RATINGS

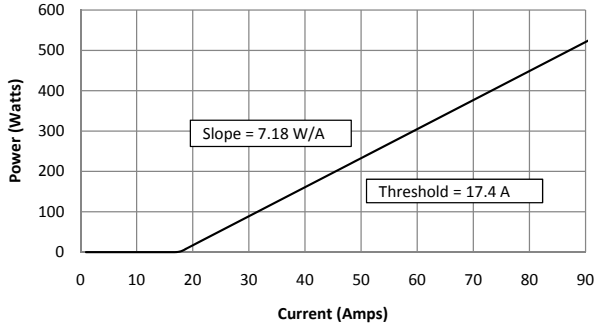
Parameter	Conditions
Reverse Current	0 A
Reverse Voltage	0 V
Operating Temperature Range	-40°C to 70°C
Storage Temperature Range	-40°C to 85°C

#### NOTES

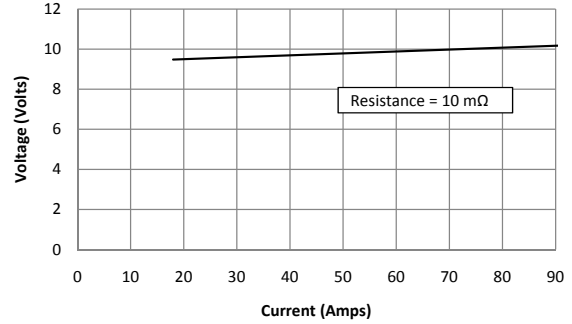
- (1) These specifications apply for operation at 808nm. Other wavelengths available upon request.
- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
- (3) Fast axis and slow axis lensing options are available for most NG-CEO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

> **OPTICAL CHARACTERISTICS (SAMPLE)**

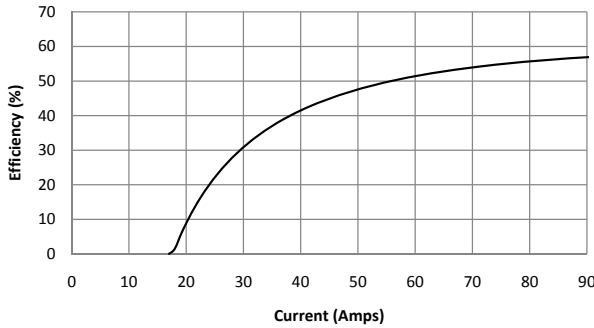
**Power vs Current**  
25°C



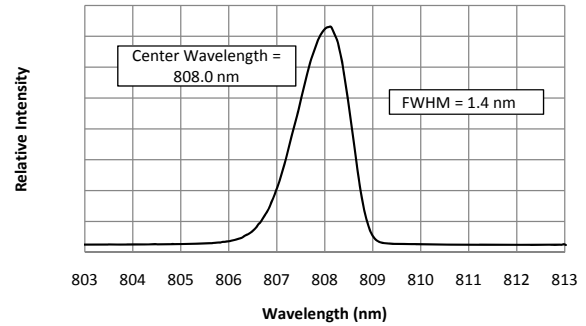
**Voltage vs Current**  
25°C



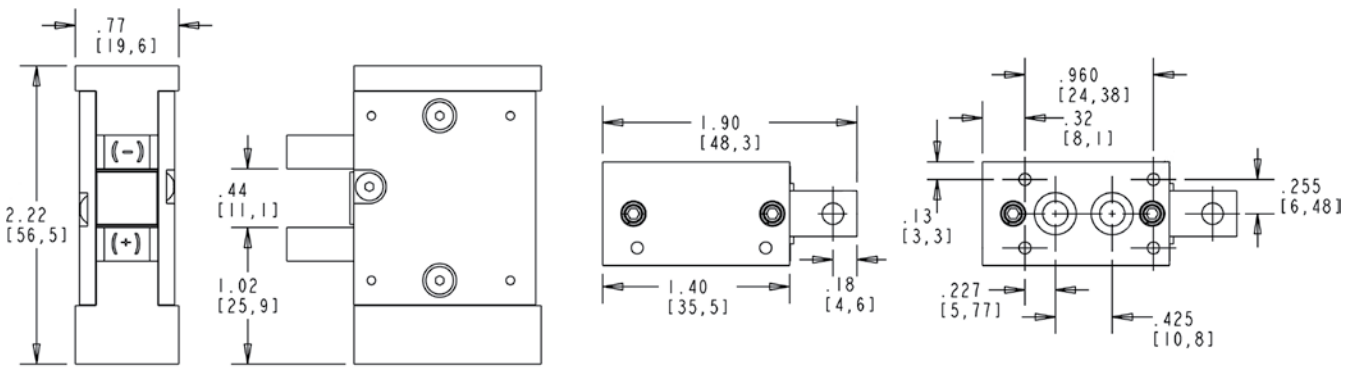
**Efficiency vs Current**  
25°C



**Wavelength Spectrum**  
480 W, 84.3 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

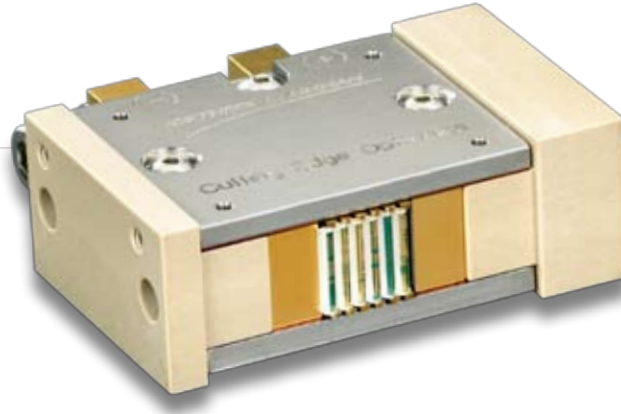
**WARNING**

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE  
REQUIRING SPECIAL HANDLING

Rev. A 5/10      80% WAVELENGTH

PART NUMBER: MCS051C600  
6-BAR MCC PACKAGE

### FEATURES AND BENEFITS



- Micro-Channel Cooled Arrays
- Highest Average Power Available
- 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	101A at 25°C Heat Sink	600	W
Operating Current	600W at 25°C Heat Sink	101	A
Threshold Current	25°C Heat Sink	18	A
Slope Efficiency	25°C Heat Sink	7.20	W/A
Electrical-Optical Efficiency	600W at 25°C Heat Sink	57	%
Center Wavelength	600W at 25°C Heat Sink	808	nm
Wavelength Tolerance	600W at 25°C Heat Sink	+/-3	nm
Spectral Width	600W 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	0.009	Ω
Operating Voltage	25°C Heat Sink, 600W	10.8	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

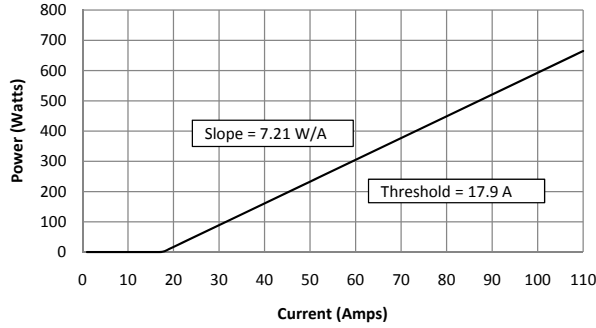
### NOTES

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- (2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.
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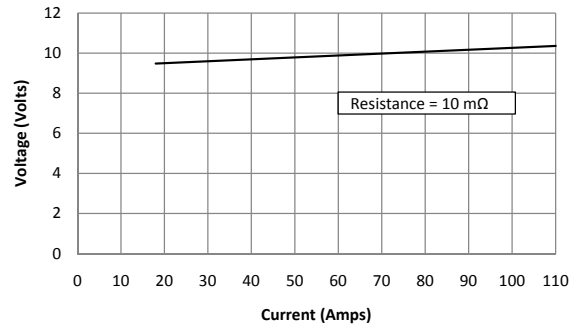


OPTICAL CHARACTERISTICS (SAMPLE)

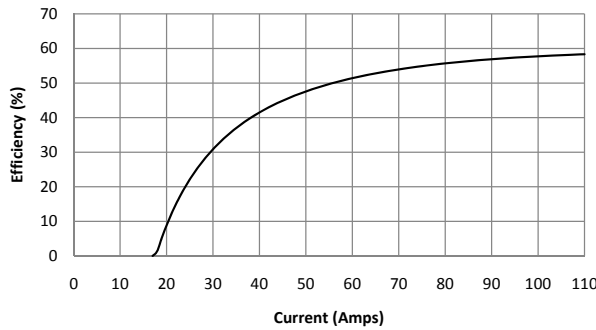
**Power vs Current**  
25°C



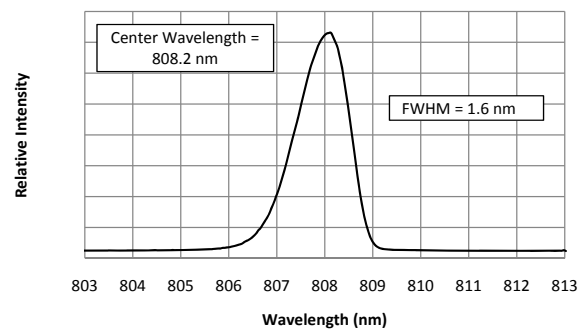
**Voltage vs Current**  
25°C



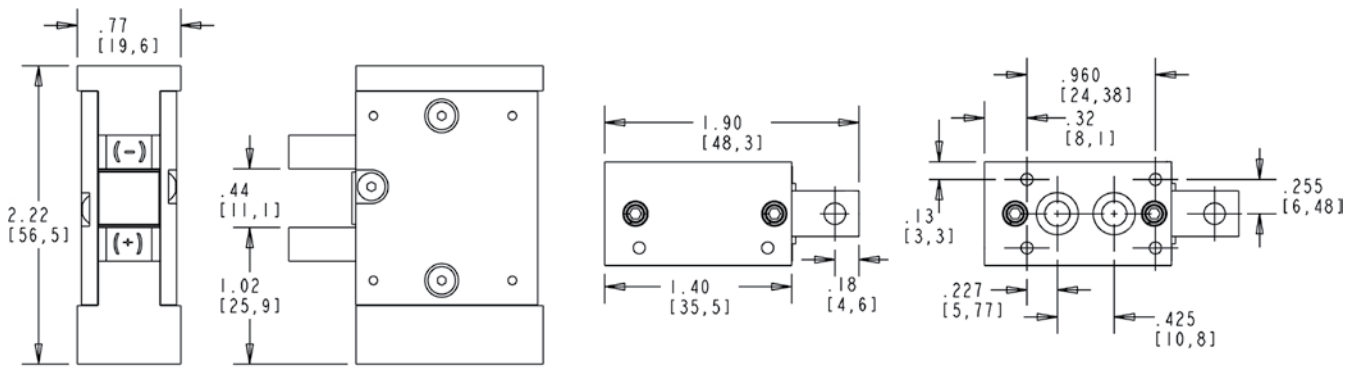
**Efficiency vs Current**  
25°C



**Wavelength Spectrum**  
600W, 101 A, 25°C



MECHANICAL CHARACTERISTICS



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**DANGER**

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

**WARNING**

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE  
REQUIRING SPECIAL HANDLING

Rev. B 5/10