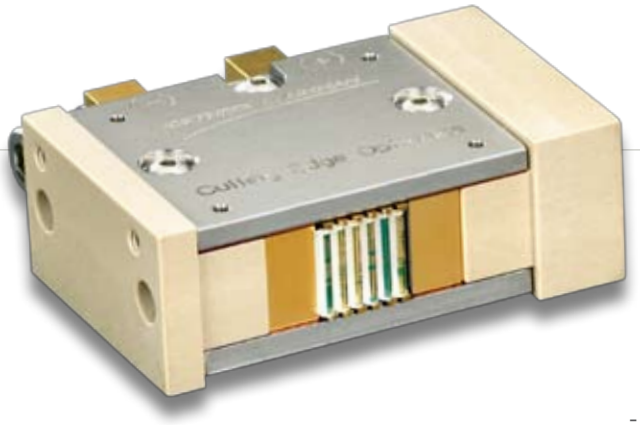
MICROCHANNEL

LASER DIODE ARRAY

360W CW

NORTHROP GRUMMAN



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.

LASER DIODE ARRAY

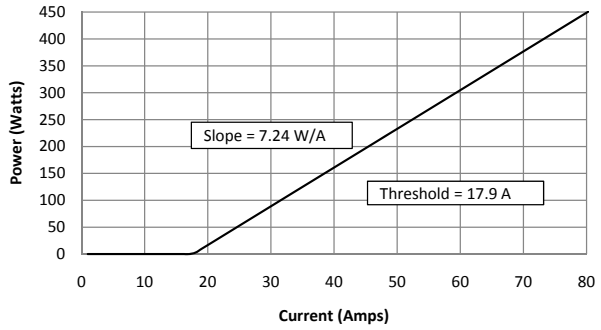
MICROCHANNEL

360W CW

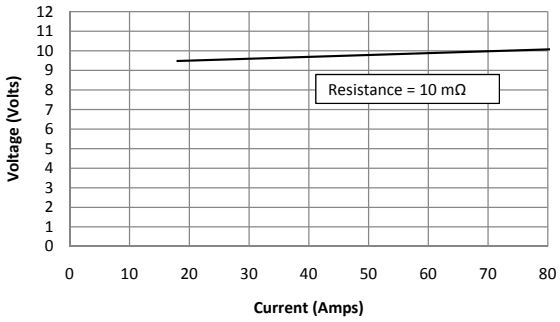
NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)

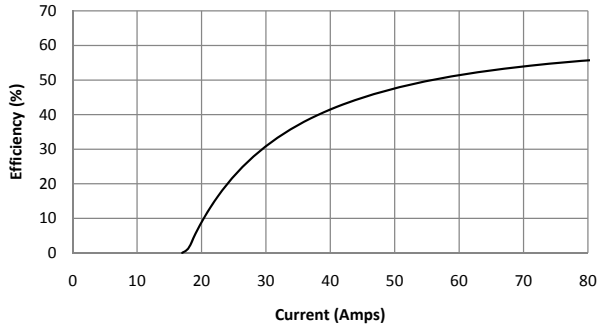
Power vs Current
25°C



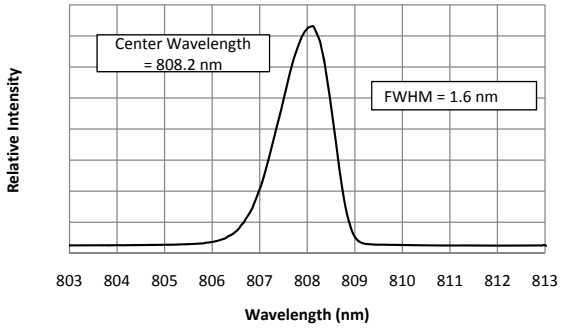
Voltage vs Current
25°C



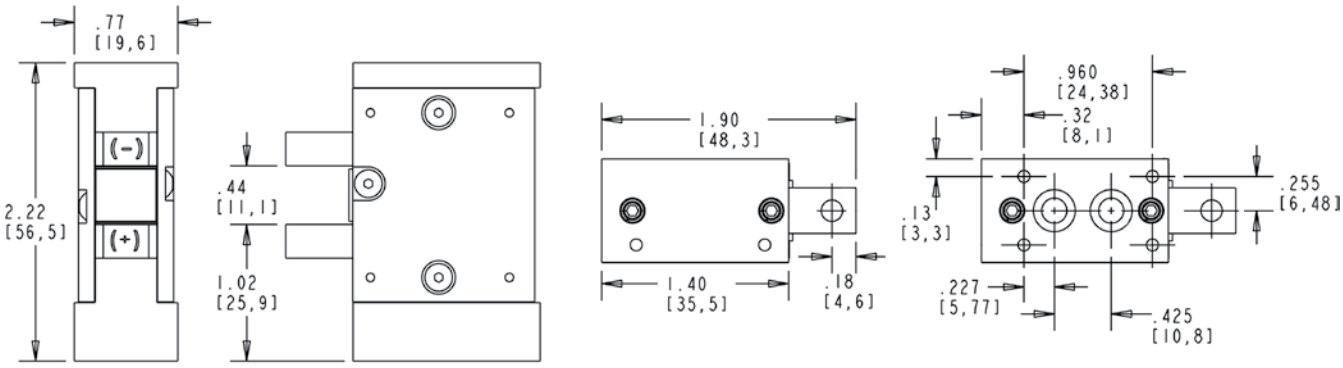
Efficiency vs Current
25°C



Wavelength Spectrum
360 W, 67.6 A, 25°C



MECHANICAL CHARACTERISTICS

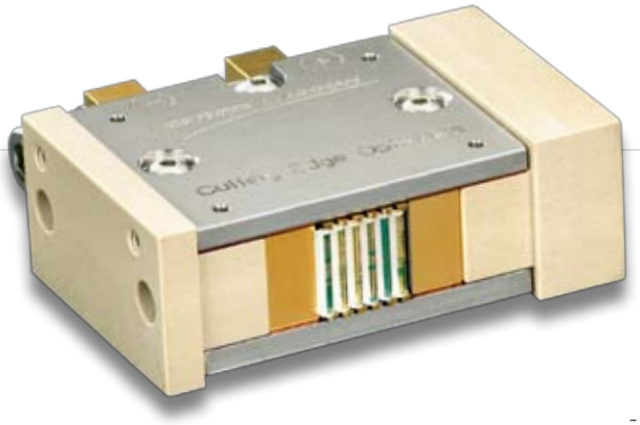


MICROCHANNEL

LASER DIODE ARRAY

480W CW

NORTHROP GRUMMAN



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.

LASER DIODE ARRAY

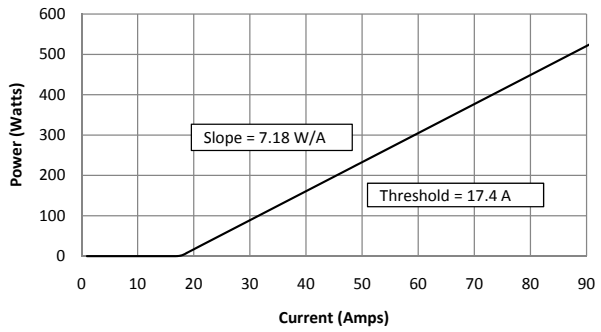
MICROCHANNEL

480W CW

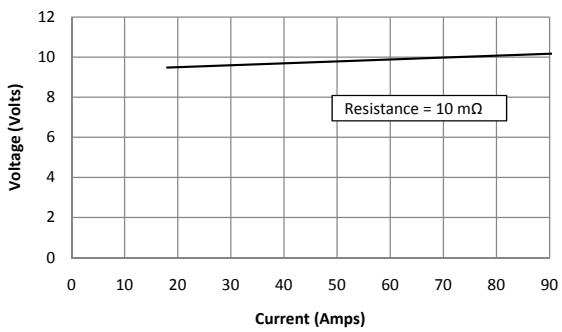
NORTHROP GRUMMAN

OPTICAL CHARACTERISTICS (SAMPLE)

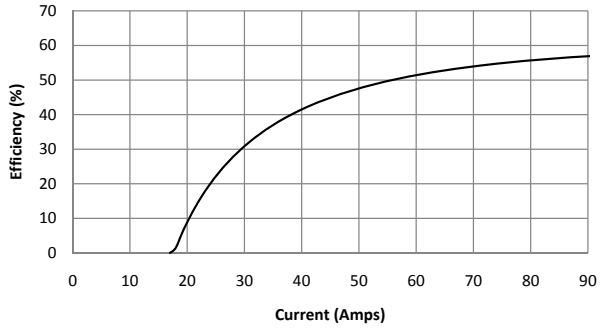
Power vs Current
25°C



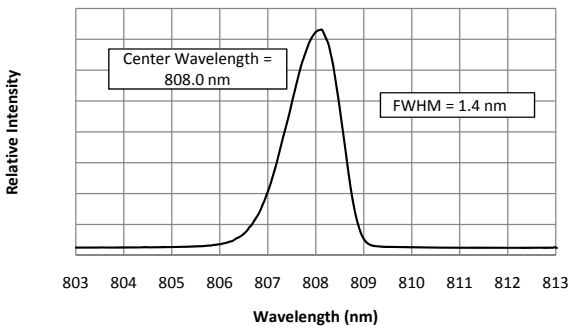
Voltage vs Current
25°C



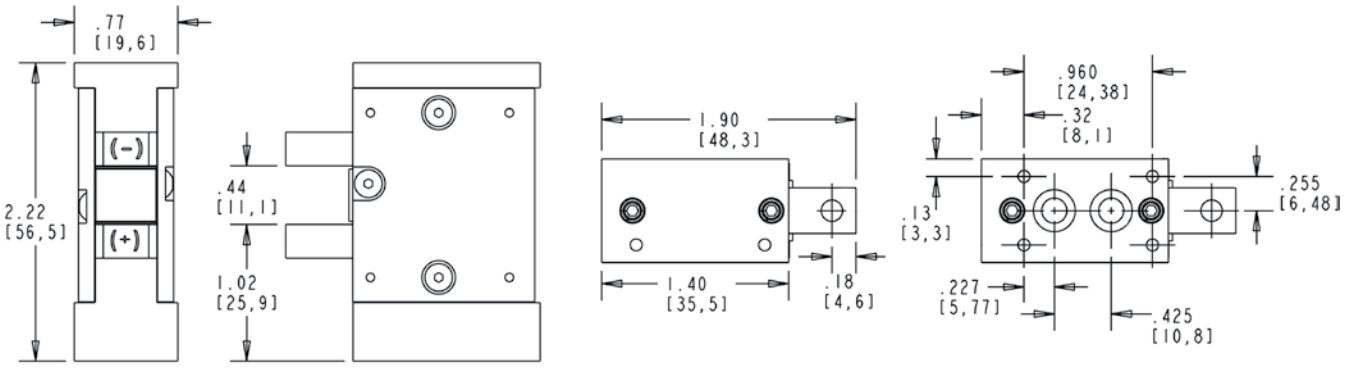
Efficiency vs Current
25°C



Wavelength Spectrum
480 W, 84.3 A, 25°C



MECHANICAL CHARACTERISTICS

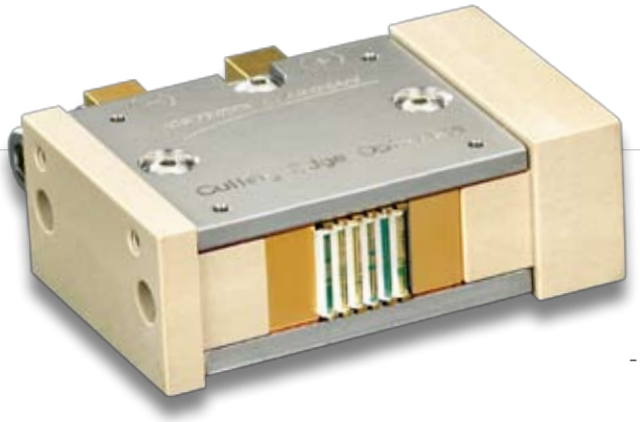


MICROCHANNEL

LASER DIODE ARRAY

600W CW

NORTHROP GRUMMAN



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

(1) These specifications apply for operation at 808nm. Other wavelengths available upon request.

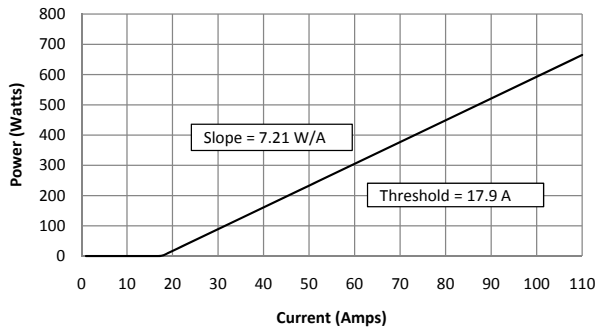
(2) A dry nitrogen environment should be provided by the user when storing and operating at temperatures below ambient dew point.

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

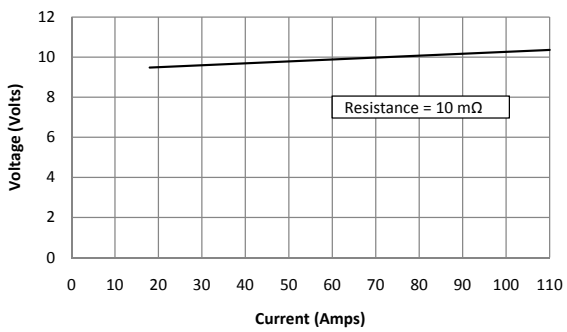
600W CW

OPTICAL CHARACTERISTICS (SAMPLE)

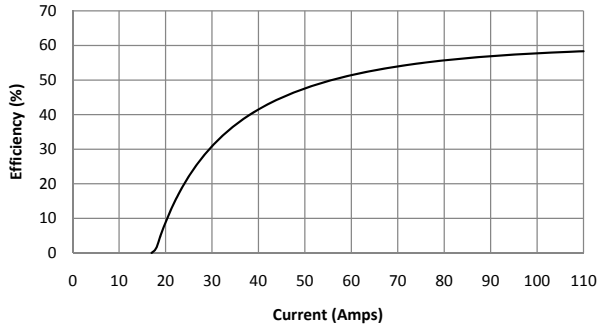
Power vs Current
25°C



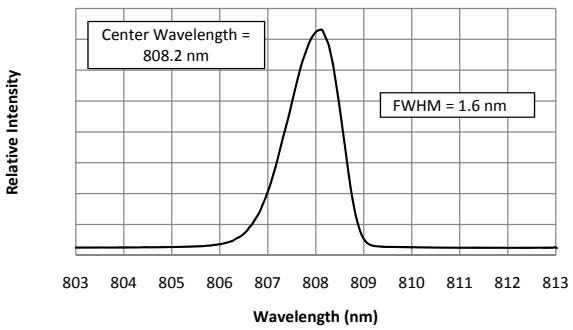
Voltage vs Current
25°C



Efficiency vs Current
25°C



Wavelength Spectrum
600W, 101 A, 25°C



MECHANICAL CHARACTERISTICS