

# 360W CW High Power Stacks

Part Number: MCS051

## 6-BARS

- High Power Stack
- Available With Up To 64 Bars Per Stack
- Available Wavelengths (790-1550nm)



## OPTICAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
CW Power Output	25°C Heat Sink	360	---	---	W
Operating Current	360W at 25°C Heat Sink	---	68	75	A
Threshold Current	25°C Heat Sink	---	13	15	A
Center Wavelength	360W at 25°C Heat Sink	---	808	---	nm
Wavelength Tolerance	360W at 25°C Heat Sink	---	± 3	---	nm
Spectral Width FWHM	360W at 25°C Heat Sink	---	2.5	4.0	nm
Wavelength Shift	---	0.23	0.25	0.27	nm/°C
Beam Divergence FWHM (unlensed)	---	---	40x10	42x12	° x °
Beam Divergence FWHM (lensed)	---	---	0.25x10	0.5x10	° x °

## ELECTRICAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Series Resistance	25°C Heat Sink	12	30	42	m ohms
Operating Voltage	25°C Heat Sink	---	11.7	12.6	V

## COOLING REQUIREMENTS

PARAMETER	CONDITIONS	UNITS
Type	Deionized water with deionizer cartridge	---
Resistivity	0.5 ± 0.2	M ohms
Flow Rate	0.6 ± 0.12	gpm
Pressure	minimum 40, maximum 80	psi
Particle Filter	≤ 5	μ
PH Level	7.5 ± 0.5	---

## ABSOLUTE MAXIMUM RATINGS

PARAMETER	CONDITIONS
Reverse Current	0 A
Reverse Voltage	0 V
Operating Temperature Range <sup>(2)</sup>	15°C or to 35°C
Storage Temperature Range	-20°C to 80°C

**NORTHROP GRUMMAN**

### 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.

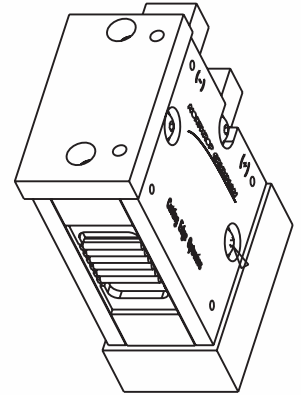
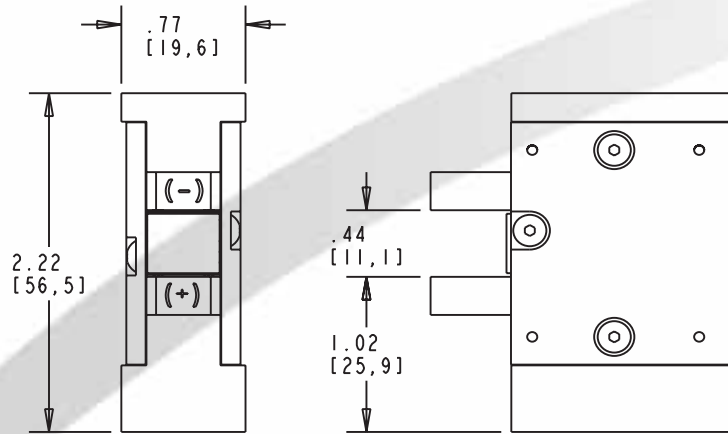


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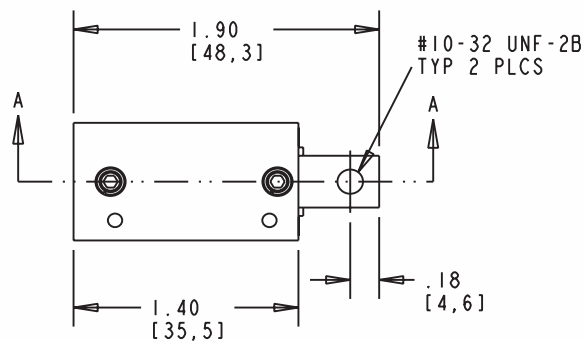
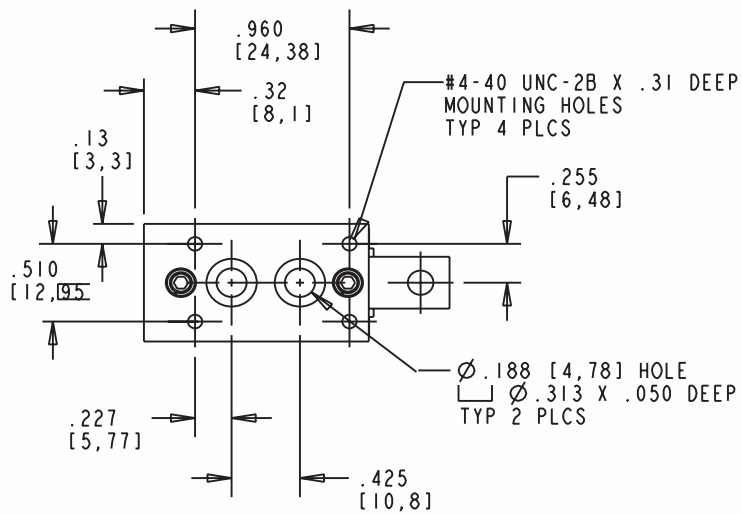
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# MECHANICAL CHARACTERISTICS



SCALE 1.000



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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.

**DANGER**

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

\* Diode laser  
 SW & up, 750-1500nm  
 CLASS IV

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



Rev A 01/06

