

PART NUMBER: UMB404P050
LASER DIODE BAR

FEATURES AND BENEFITS

- Excellent Solderability
- Available With Any Silver or Golden Bullet® Configuration
- Lot Tested
- Available Wavelengths (790-980nm)

OPTICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
QCW Power Output	54A at 25°C Heat Sink	50	W
Operating Current	50W at 25°C Heat Sink	54	A
Threshold Current	25°C Heat Sink	12	A
Slope Efficiency	25°C Heat Sink	1.2	W/A
Efficiency	50W at 25°C Heat Sink	50	%
Number of Emitters	—	69	
Emitter Size	—	90x1	µm
Emitter Pitch	—	133	µm
Center Wavelength	50W at 25°C Heat Sink	808	nm
Wavelength Tolerance	50W at 25°C Heat Sink	+/-3	nm
Spectral Width	50W at 25°C Heat Sink	1.6	nm
Wavelength Shift	—	0.25	nm/°C
Beam Divergence FWHM	—	40x10	°x°
Polarization	—	TE	

ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Typical	Units
Series Resistance	25°C Heat Sink	0.004	ohms
Operating Voltage	25°C Heat Sink, 50W	1.8	V

MECHANICAL CHARACTERISTICS

Parameter	Typical
Bar Width	9.6 mm
Bar Thickness	135 µm
Bar Cavity Length	625 µm

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.

50W QCW

NORTHROP GRUMMAN

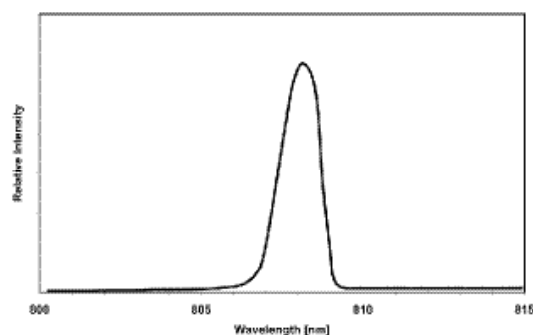
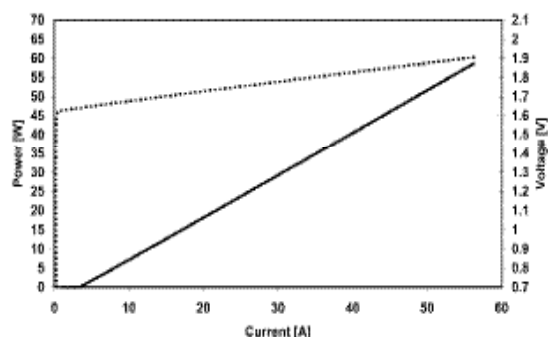
ABSOLUTE MAXIMUM RATINGS

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

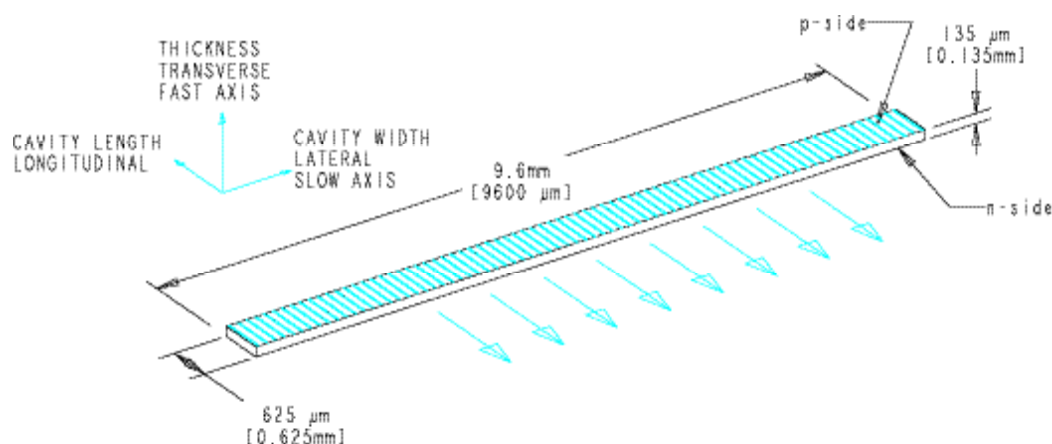
SOLDERING CHARACTERISTICS

Parameter	Conditions
Metalization	1000 Å Au over Pt barrier

OPTICAL CHARACTERISTICS (TYPICAL)



MECHANICAL CHARACTERISTICS



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