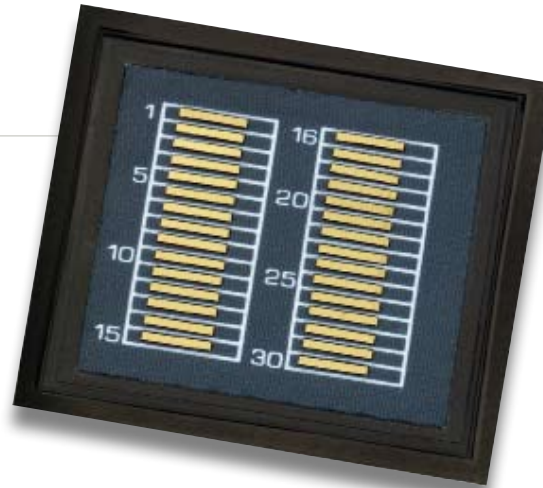


PART NUMBER: UMB404P050  
LASER DIODE BAR



#### > 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

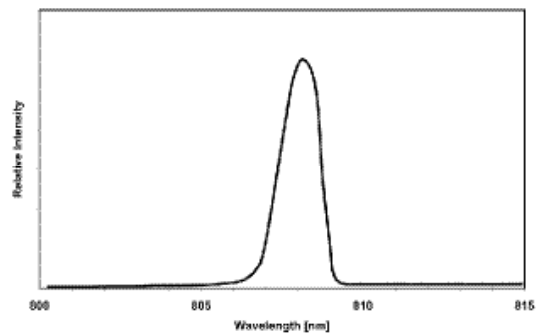
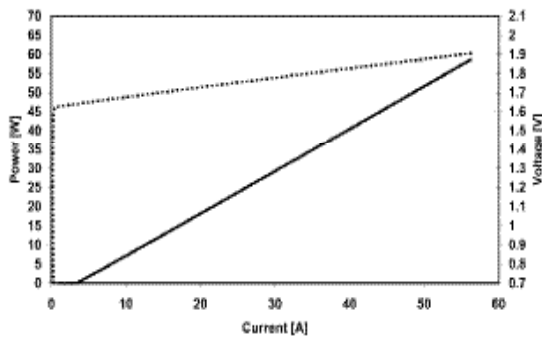
> ABSOLUTE MAXIMUM RATINGS

| 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 |

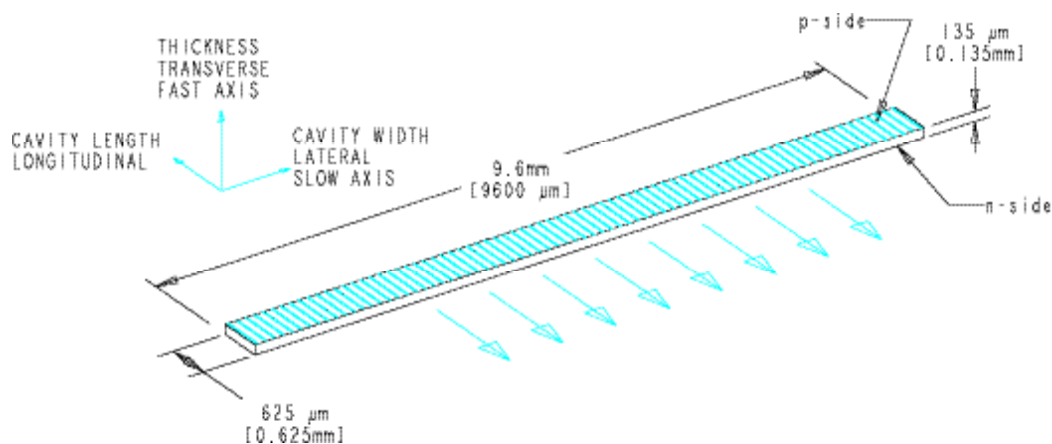
> SOLDERING CHARACTERISTICS

| Parameter    | Conditions                |
|--------------|---------------------------|
| Metalization | 1000 Å Au over Pt barrier |

> OPTICAL CHARACTERISTICS (TYPICAL)



> MECHANICAL CHARACTERISTICS



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