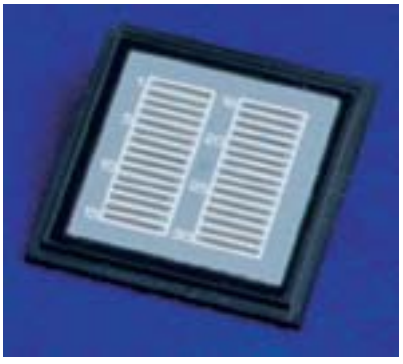
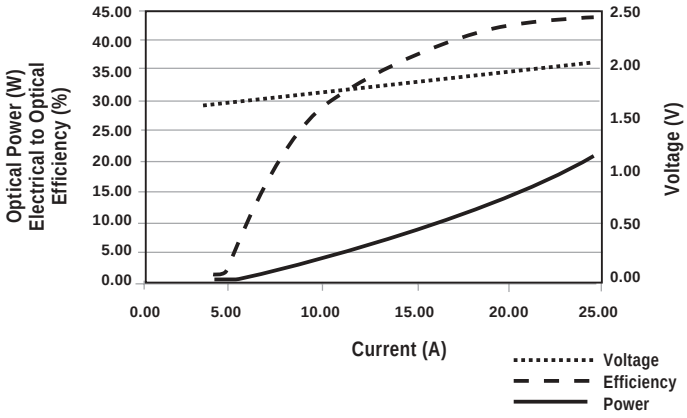
CEO
CUTTING EDGE OPTRONICS

Unmounted 20W CW Laser Diode Bar
Part Number: UMB01C020

CW UNMOUNTED BARS

- Excellent Solderability
- Lot Tested
- Also Available from 915nm-980nm





OPTICAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
CW Power Output	30A at 25C Heat Sink (1)	20	---	---	W
Operating Current	20W at 25C Heat Sink	---	28	30	A
Threshold Current	25C Heat Sink	---	7.5	9.0	A
Slope Efficiency	25C Heat Sink	0.90	1.1	---	W/A
Efficiency	20W at 25C Heat Sink	35	42	---	%
Number of Emitters (2)	---	---	46	---	
Emitter Size (2)	---	---	80 x 1	---	µm
Emitter Pitch (2)	---	---	200	---	µm
Center Wavelength (3)	20W at 25C Heat Sink	792	808	812	nm
Wavelength Tolerance (3)	20W at 25C Heat Sink	± 1	± 3	± 4	nm
Spectral Width	20W at 25C Heat Sink	---	1.9	2.5	nm
Wavelength Shift with Temperature	---	0.23	0.25	0.27	nm/C
Beam Divergence FWHM	---	---	40x10	42x12	x °
Polarization	---	---	TE	---	---
Degradation Rate (4)	25C Heat Sink,	---	3	---	%/kHr

ELECTRICAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Built-in Voltage	25C Heat Sink	---	1.6	1.7	V
Series Resistance	25C Heat Sink	---	0.005	0.012	ohms
Operating Voltage	25C Heat Sink, 20W	---	1.8	2.1	V

U.S. Patent Numbers: 5,734,672 5,913,108

NOTES

1. Lot tested in Siver Bullet Package.
2. Standard. Other emitter geometries are available.
3. Different wavelengths and wavelength tolerances are standard options.
4. Typical degradation rates are 5% in the first 100 hours and 3% per 1,000 hours thereafter.

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ABSOLUTE MAXIMUM RATINGS

PARAMETER	CONDITIONS
Forward Current	30A
Reverse Current	25µA
Reverse Voltage	3V
Operating Temperature Range [5]	-20C or to 50C
Storage Temperature Range	-40C to 85C

MECHANICAL CHARACTERISTICS

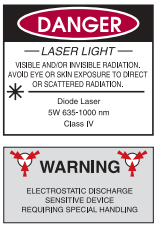
PARAMETER	DIMENSION
Bar Length (Width)	9.6 ± 0.01 mm
Bar Thickness	135 ± 10 µm
Bar Cavity Length	1000 ± 2 µm

SOLDERING CHARACTERISTICS

PARAMETER	CONDITIONS
Metalization	1000 Å Au over Pt barrier

NOTES

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



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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.

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