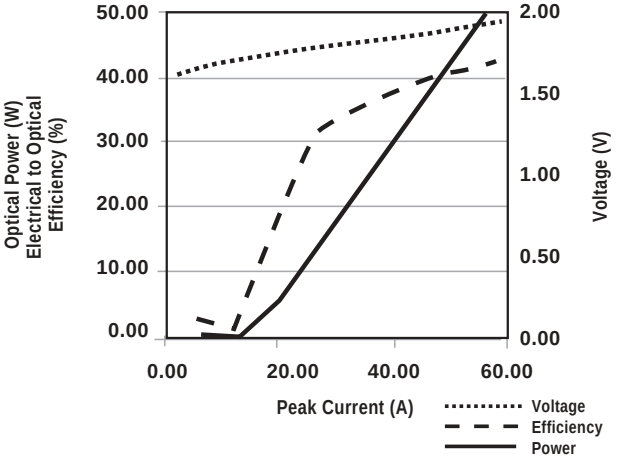
CEO
CUTTING EDGE OPTRONICS

Unmounted 50W Pulsed Laser Diode Bar
Part Number: UMB01P050

PULSED UNMOUNTED BARS

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



OPTICAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Peak Power Output	65A at 25˚C Heat Sink (1)	50	---	---	W
Operating Current	50W at 25˚C Heat Sink	---	55	65	A
Threshold Current	25˚C Heat Sink	---	13	16	A
Slope Efficiency	25˚C Heat Sink	0.95	1.1	---	W/A
Efficiency	50W at 25˚C Heat Sink	35	40	---	%
Number of Emitters (2)	---	---	72	---	
Emitter Size (2)	---	---	90 x 1	---	µm
Emitter Pitch (2)	---	---	133.3	---	µm
Center Wavelength (3)	50W at 25˚C Heat Sink	792	808	812	nm
Wavelength Tolerance (3)	50W at 25˚C Heat Sink	± 1	± 3	± 4	nm
Spectral Width	50W at 25˚C Heat Sink	---	2	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)	25˚C Heat Sink,	---	5	---	%/G shot

ELECTRICAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Built-in Voltage	25˚C Heat Sink	---	1.6	1.7	V
Series Resistance	25˚C Heat Sink	---	0.008	0.012	ohms
Operating Voltage	25˚C Heat Sink, 20W	---	2.0	2.3	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 10 million shots and 5% per billion shots thereafter.

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ABSOLUTE MAXIMUM RATINGS

PARAMETER	CONDITIONS
Forward Current	70A
Reverse Current	25µA
Reverse Voltage	3V
Operating Temperature Range [5]	-20C or to 50˚C
Storage Temperature Range	-40C to 85˚C

MECHANICAL CHARACTERISTICS

PARAMETER	DIMENSION
Bar Length	9.6 ± 0.01 mm
Bar Thickness	110 ± 10 µm
Bar Cavity Length	625 ± 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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No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products.

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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