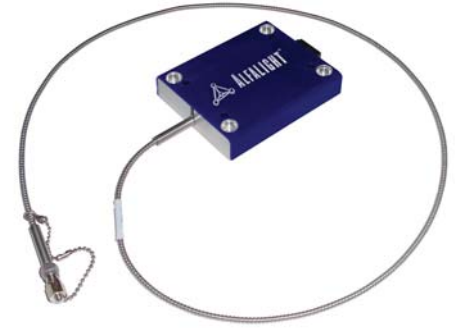




30 W, 808 nm Combined Power Module III Standard and Wavelength Stabilized

The CPM-III products are ideal high-brightness pump sources for end-pumped DPSS lasers for Nd:YAG or Nd:YVO₄. The compact 3.35 × 2.73 × 0.67 inch module comes with a temperature monitoring thermistor. Alfalight's proprietary Wavelength Stabilization Technology, available on XC3-808BW-38-301, minimizes wavelength shift over temperature and can be air-cooled, simplifying thermal management. Lifetime exceeds 20,000 hours.



Features

- 30 watt output
- Single-emitter lasers architecture
- 685 μm / 0.22 NA fiber bundle
- AR Coated SMA 905 output
- Integrated thermistor
- Compact 3.35" × 2.73" × 0.67" module
- MTTF > 20,000 Hours

Applications

- End-pumped industrial DPSS lasers
- Material processing & cutting
- Light welding
- Marking and printing
- Pulsed and CW operation

Wavelength Stabilization Technology

- Chip-level integrated semiconductor grating
- Narrow linewidth (0.8 nm)
- Wide locking range ($\Delta T > 30^{\circ}\text{C}$)

Device Characteristics*

Optical	Symbol	XC3-808B-38-303	XC3-808BW-38-301	Unit
CW optical output power	P_o	30	30	W
Center wavelength, operating	λ_c	808 ± 3	808 ± 1.5	nm
Spectral shift, over case temperature	$d\lambda/dT$	0.26	0.07	nm/°C
Spectral shift, over case power	$d\lambda/dP$	N/A	0.03	nm/W
Spectral width, FWHM	$\Delta\lambda$	4.0	0.8	nm
Locking range over temperature**	T	N/A	15 - 45	°C
Locking range over power	P_o	N/A	8 - 32	W
Output fiber		685 μm / 0.22 NA bundle		
Fiber armor		3 mm Interlocked Stainless Steel Tube		
Connector		AR Coated SMA 905		

Electrical-Optical

Operating current	I_o	5.6 (typical)	6.5 (typical)	A
Operating voltage	V_o	11.7 (typical)	12.3 (typical)	V
Operating mode	R_s	CW or pulsed		

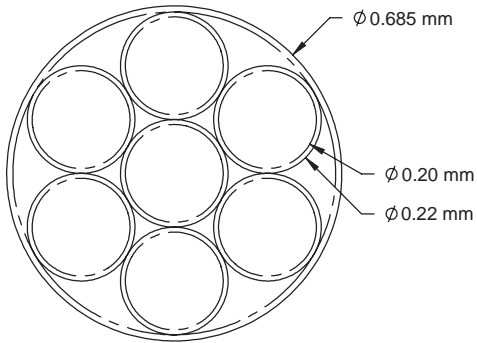
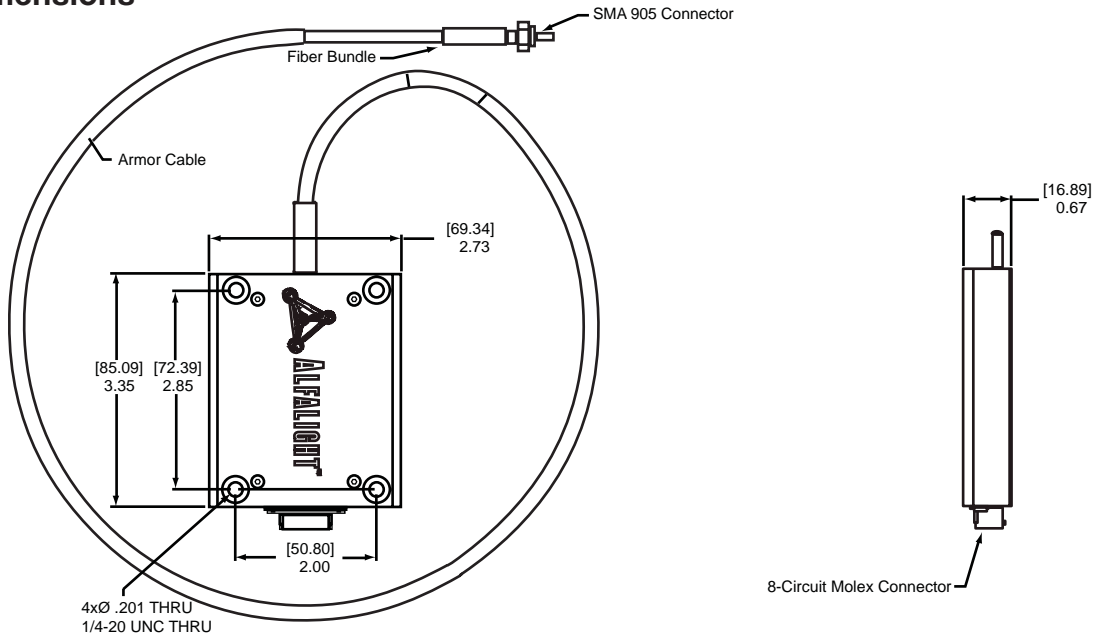
Thermal

Case operating temperature	T	0 - 50	0 - 50	°C
Power Dissipation		36 (typical at 25°C)	44 (typical at 25°C)	W
Cooling Requirements		Air-Cooled or Water-Cooled Heatsink		

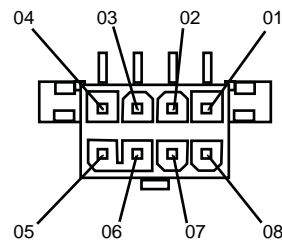
* All conditions are at 25°C submount temperature and output power unless otherwise noted.

** Power outside of 804-812 nm range is less than 10% of the total power.

Package Dimensions

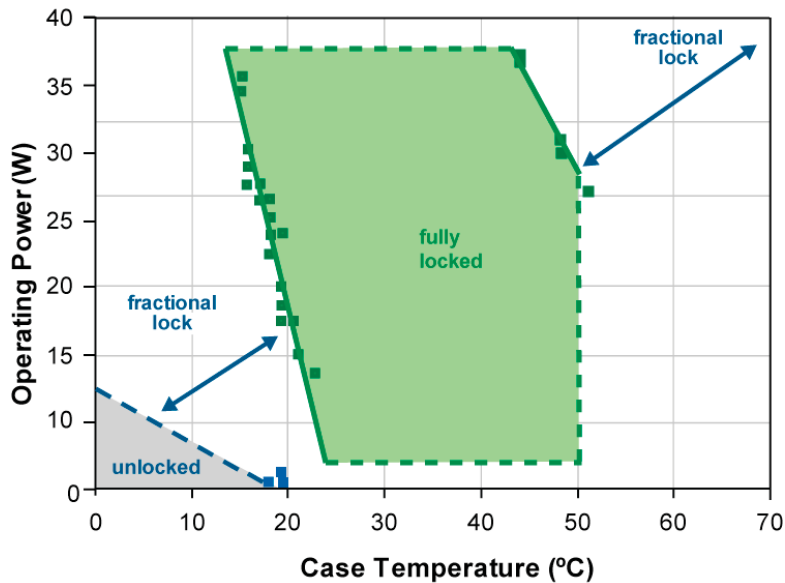


Output Fiber
 685 μm / 0.22 NA Fiber Bundle
 SMA 905 Connector
 The connector can mate to standard 800 μm / 0.22 NA fiber

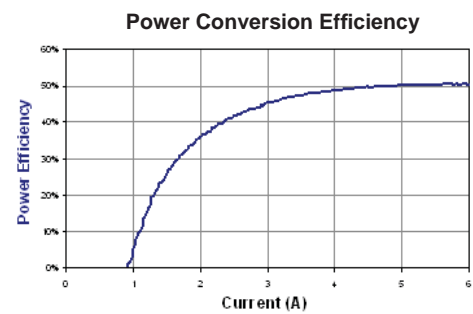
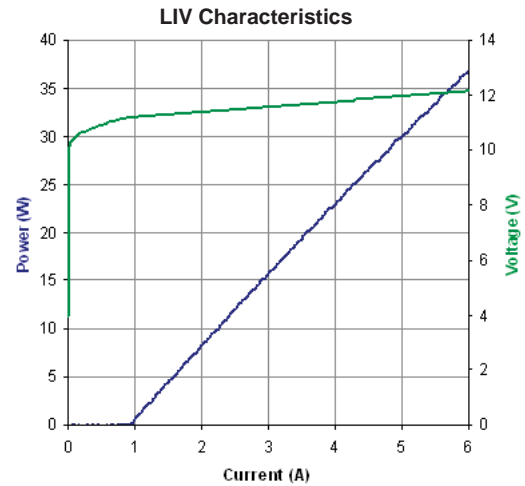
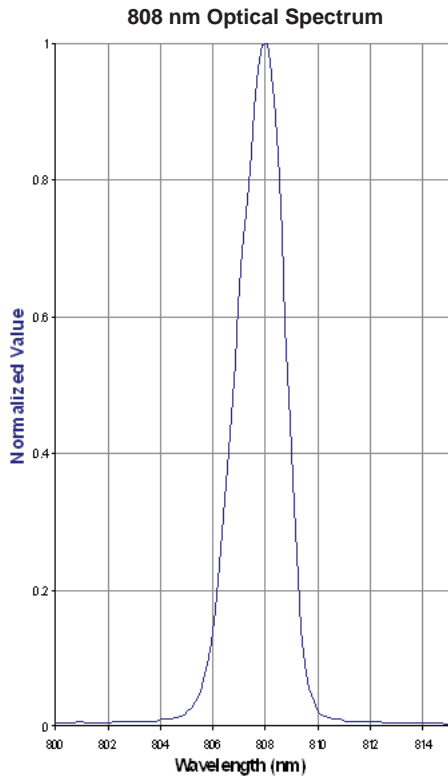


Pin#	Name	Description
01	TH	Thermistor
02	TH	Thermistor
03	GND	Case ground
04	N/C	Do not connect
05	} Laser +	Constant current supply for laser diodes.
06		Both pins must be connected
07	} Laser -	Return ground for diode drive current.
08		Both pins must be connected

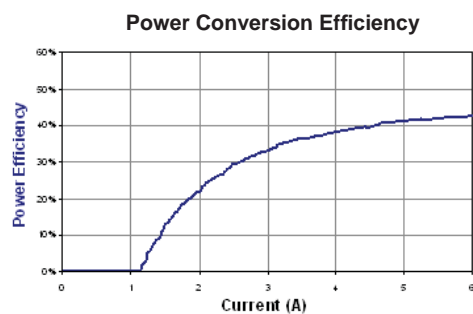
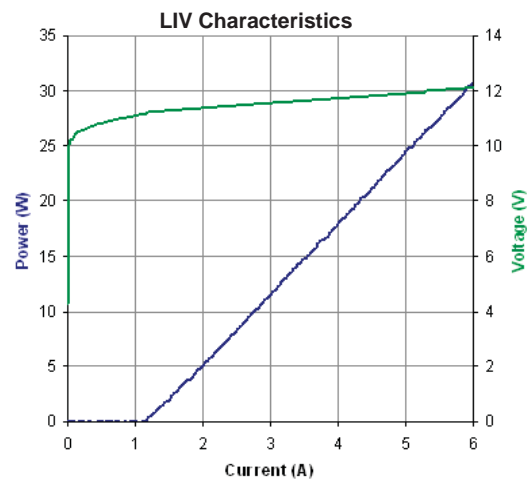
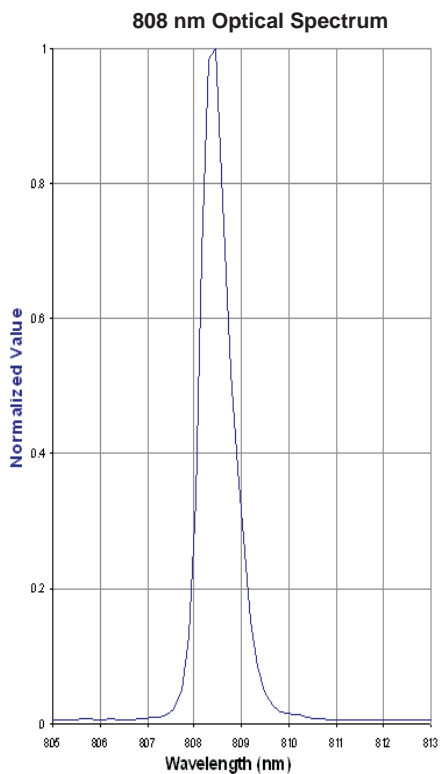
Typical XC3-808BW-38-301 Locking Range Over Power and Temperature



Typical XC3-808B-38-303 Module Performance



Typical XC3-808BW-38-301 Module Performance



Alfalight, Inc.

1832 Wright Street • Madison, WI 53704 • 608.240.4800 *telephone* • 608.240.4801 *facsimile* • alfa-sales@alfalight.com
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