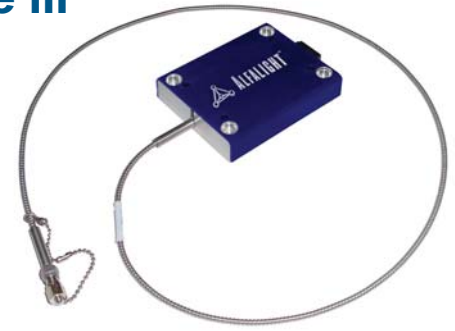




30W Combined Power Module III Standard and Wavelength Stabilized

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 AC3-808BW-68-301, minimizes wavelength shift over temperature and can be air-cooled, simplifying thermal management. Lifetime exceeds 20,000 hours.



Features

- 30 watts output
- Single-emitter lasers architecture
- 685 μm / 0.15NA 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 Performance - Pump	Symbol	AC3-808B-68-303	AC3-808BW-68-301	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	0.3	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 / 0.15 NA bundle		
Fiber armor		3 mm Interlocked Stainless Steel Tube		
Connector		AR Coated SMA 905		

Electrical-Optical Performance-Pump

Operating current	I_o	5.0 (typical)	6.0 (typical)	A
Operating voltage	V_o	11.8 (typical)	12.3 (typical)	V
Operating mode	R_s	CW or pulsed		

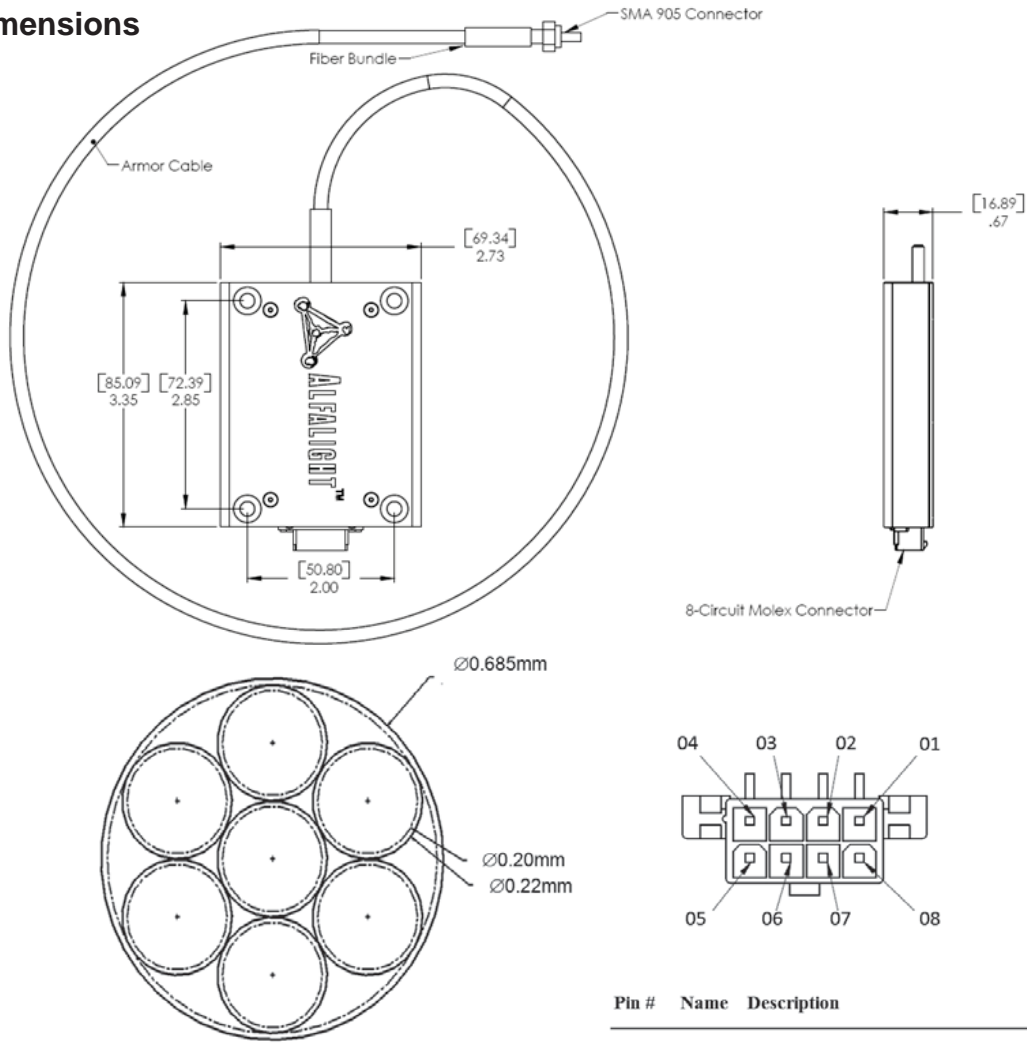
Thermal Performance

Case operating temperature	T	0 - 50	0 - 50	°C
Power Dissipation		29 (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.

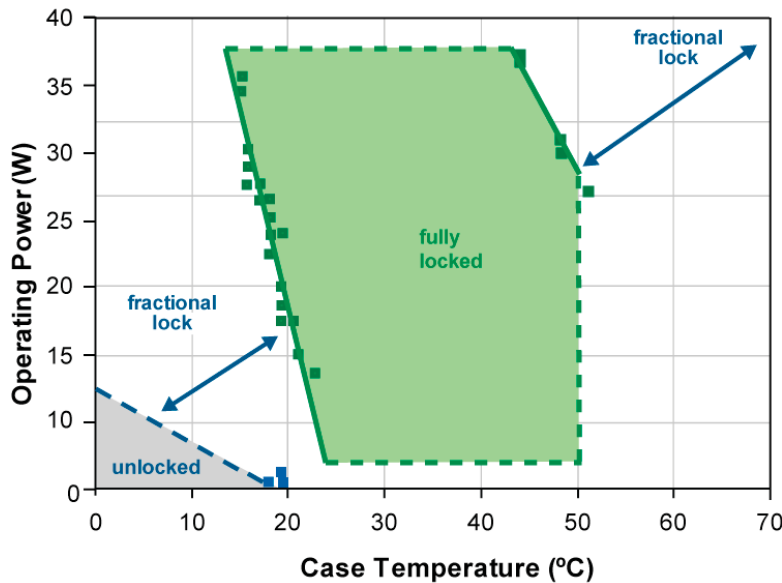
Package Dimensions



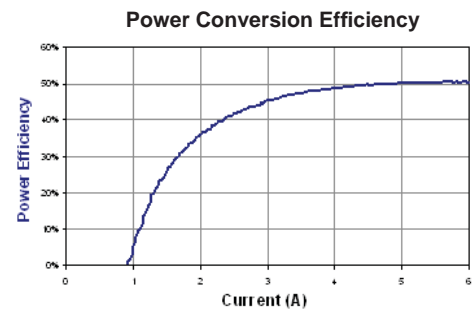
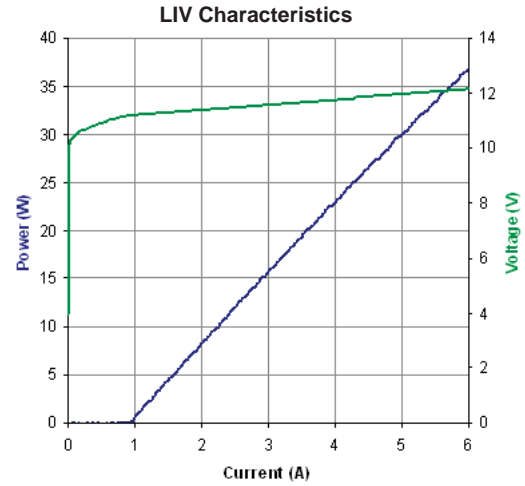
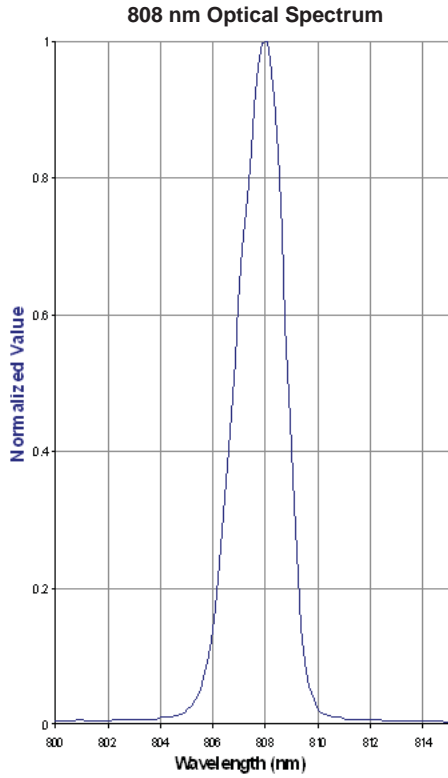
Output Fiber
 685µm / 0.15 NA Fiber Bundle
 SMA 905 Connector
 The connector can mate to standard 800µm / 0.22 NA fiber

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. Both pins must be connected
06		
07	} Laser -	Return ground for diode drive current. Both pins must be connected
08		

Typical AC3-808BW-68-301 Locking Range Over Power and Temperature



Typical AC3-808B-68-303 Module Performance



Typical AC3-808BW-68-301 Module Performance

