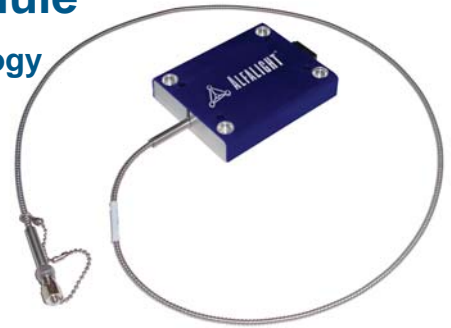




879 nm Combined Power Module

Featuring Wavelength Stabilization Technology

The CPM-III products are ideal high-brightness pump sources for end-pumped Nd:YAG and Nd:YVO₄ DPSS lasers. The compact 3.35 × 2.73 × 0.67 inch module comes with a temperature monitoring thermistor. Alfalight's proprietary Wavelength Stabilization Technology, featured on XC3-879CW-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

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 (~1 nm)
- Wavelength locked between 20°C and 30°C

Device Characteristics*

Optical	Symbol	XC3-879CW-38-301	Unit
CW optical output power	P _o	30	W
Center wavelength, operating	λ _c	879 ± 1.5	nm
Spectral shift, over case temperature	dλ/dT	0.07	nm/°C
Spectral shift, over case power	dλ/dP	0.03	nm/W
Spectral width, FWHM	Δλ	0.8	nm
Locking range over temperature**	T	20 - 30	°C
Locking range over power	P _o	10 - 30	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	6.2 (typical)	A
Operating voltage	V _o	12 (typical)	V
Operating mode	R _s	CW or pulsed	

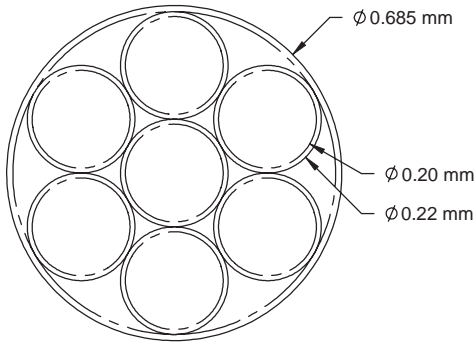
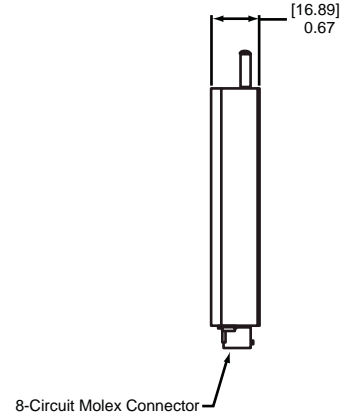
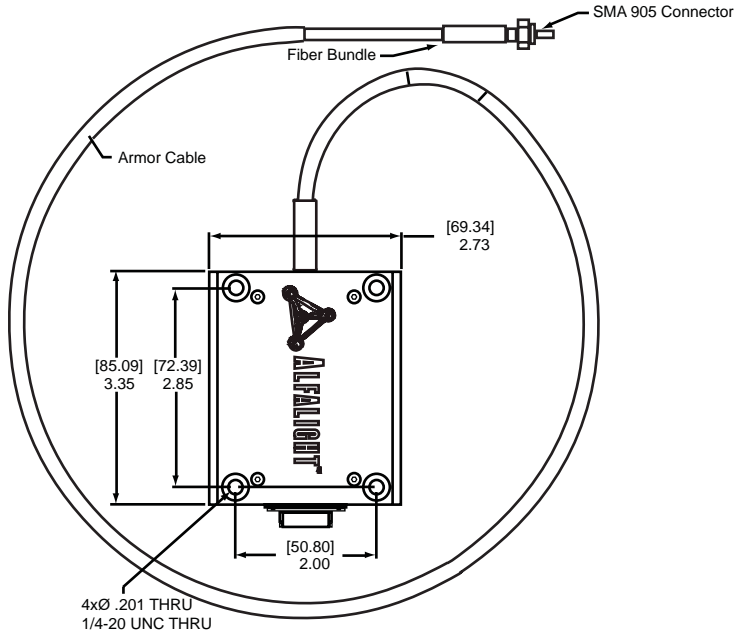
Thermal

Case operating temperature	T	15 - 35	°C
Power Dissipation		38 (typical at 25°C)	W
Cooling Requirements		Air-Cooled or Water-Cooled Heatsink	

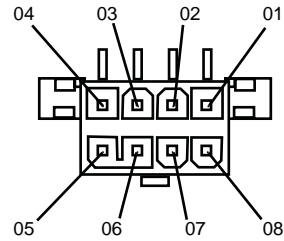
* All conditions are at 25°C temperature and output power unless otherwise noted. Preliminary specifications.

** The module is locked when power outside of 875-884 nm range is less than 10% of the total power.

Package Dimensions



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