



VLMA Er Amplifier



Features and Benefits

- All-fiber design
- 50 μm core diameter
- Diffraction limited output
- PM and non-PM versions available
- 1 ns pulses amplified to 100 μJ , 100kW peak power

Overview

Development of the new Very Large Mode Area Erbium Doped Fiber Amplifier Module was driven by increasing demand for high energy and high peak power pulses for a wide variety of industrial and scientific applications.

The VLMA Amplifier Module builds upon the TrueMode™ Fiber Laser Cavity family designed for kilowatt single-mode fiber lasers for industrial machining and welding. OFS, a global market leader in the design and manufacture of rare-earth doped fibers, possess the expertise and experience in fiber fabrication necessary to meet that demand. OFS has been developing and manufacturing high-power components and modules for many years and understands the reliability standards expected in the diverse material processing applications.

Typical Applications

Free Space Communications

LIDAR

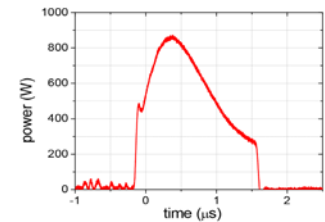
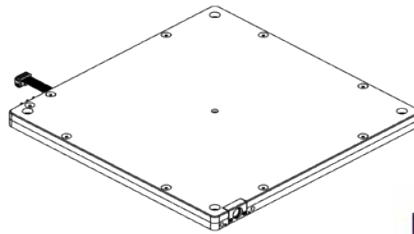
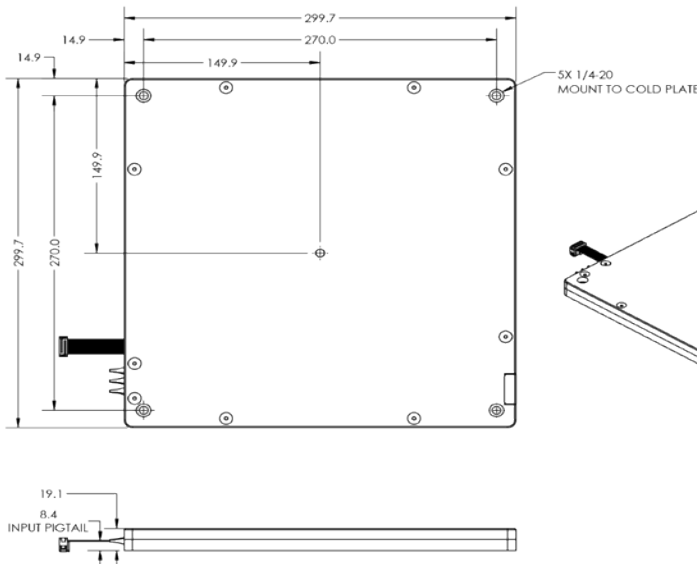
Micro-machining

Femtosecond Chirped Pulse Amplification

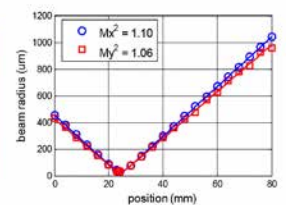
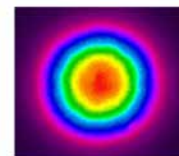


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Product Specifications	PM VLMA Er Amplifier	Non-PM VLMA Er Amplifier
Fiber Parameters		
Core Diameter	50 μm	
A_{eff}	> 1000 μm^2	
Er abs	~ 50 dB/m	
Seed laser input pigtail	PM-SMF, length > 1 m; 125 mm OD; 250 mm OD buffer; Dual-coat acrylate	SMF, length > 1 m; 125 mm OD; 250 mm OD buffer; Dual-coat acrylate
Pump laser input pigtail	SMF; length > 1 m; 125 mm OD; 250 mm OD buffer; Dual-coat acrylate	
Amplifier Performance		
Polarization extinction ratio	> 15dB at max. power	N/A
Operating wavelength	1545 to 1575 nm	
Output average power	> 20 W using 50 W, 1480 nm Raman fiber laser pump > 40 W using 100 W, 1480 nm Raman fiber laser pump	
Peak power	up to 100 kW in a 1 ns pulse	
Beam quality: M^2	Typical: < 1.2 < 1.3 at maximum power	
Output beam	Free space, diverging beam	
Pump laser required	1480 nm Raman fiber laser	
Cooling	Air or water cooled cold plate	



1 mJ, single-frequency pulses at 1560 nm



For additional information please contact your sales representative.

You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.



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