

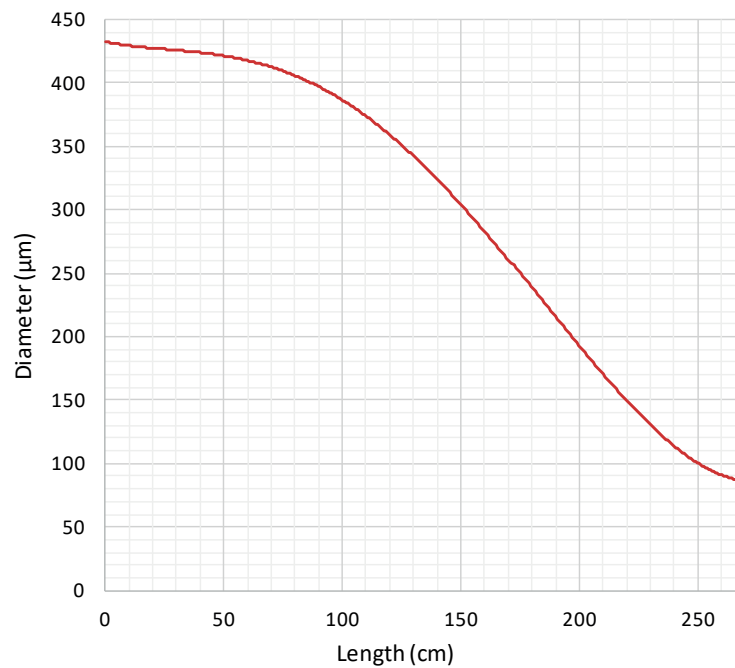
TGModule A - PM

APPLICATIONS

SCIENCE

INDUSTRY

AEROSPACE



KEY FEATURES

- High-power gain fiber based on patented tapered double clad fiber (T-DCF)
- Single mode output, $M^2 < 1.3$
- Large mode area, low level of nonlinear effects

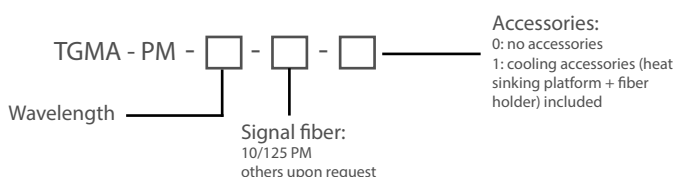
SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNITS
Wavelength	1030	1040	1065	nm
Pump wavelength		976		nm
Mode field diameter		40		μm
Polarization extinction ratio (PER) ¹⁾	15	17		dB
M ²	1	1.2	1.3	
Core NA		0.09		
First cladding NA		0.28		
Clad absorption (915 nm)		6.5		dB/m
Clad absorption (976 nm)		25		dB/m
Core diameter, thin/thick end		9/48		μm
Silica clad diameter, thin/thick end		75/380		μm
Fluorine doped clad diameter, thin/thick end		85/430		μm
Output power ²⁾			150	W
Input power	5	30	100	mW
Pump power (free space)			250	W
Gain fiber coiling diameter	30			cm
Gain fiber length		2.5		m
Input fiber	10/125 PM, others on request			

¹⁾ Measured at 1040 nm for 19 dB PER input. Output PER will depend on PER of the seed source.

²⁾ Output power depends on the applied pump power and seed input.

ORDERING INFORMATION



Example: TGMA - PM - 1040 - 10/125 - 1

OVERVIEW, SPECIFICATIONS

DESCRIPTION

TGModule A-PM incorporates Ampliconyx patent protected, polarization maintaining ytterbium doped tapered double clad fiber (T-DCF) (US 8,433,168 B2, Japan 5390524, People's Republic of China ZL 200880119087.7, EPO 08805462.2 pending). The fiber is pumped through the angle-polished end face using customer provided free space optics. The fiber needs to be cooled during pumping. Heat sink and water cooled fiber holding block are available as accessories. The thin input end of the fiber is a single mode fiber, and the input has an integrated cladding mode stripper (CMS).

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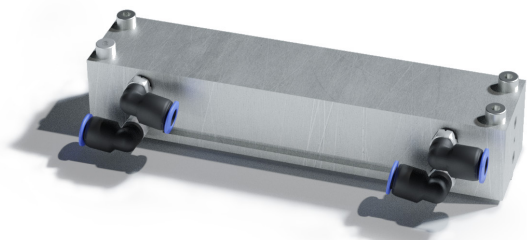
ACCESSORIES, PERFORMANCE

ACCESSORIES

Ampliconyx offers several accessories for TGModule A-PM to help the thermal management and the alignment of required free space optics.



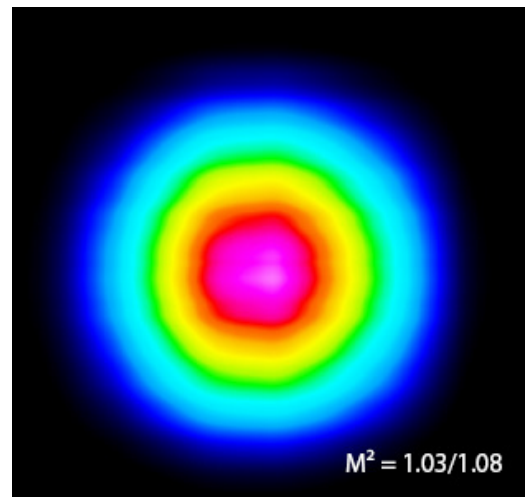
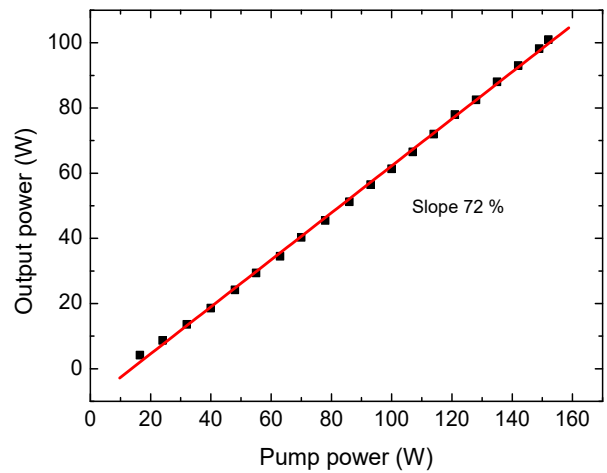
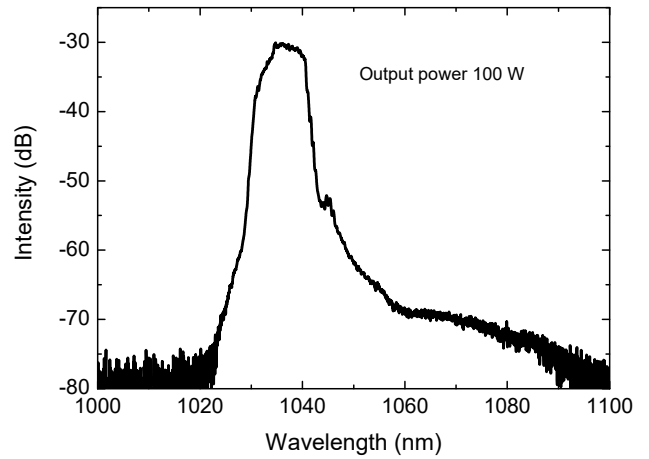
Heat sinking platform can be used to coil the T-DCF and mount the components (CMS and splice protector) securely. For high-power operation the heat sinking platform needs to be mounted onto an actively cooled external heat sink.



Water-cooled fiber holding block allows direct water-cooling of the T-DCF's tip, which has the highest heat load under pumping. This fiber holder can be easily mounted onto a translation stage, making the alignment procedure easier.

EXAMPLE AMPLIFICATION

30 mW, 25 MHz, 40 ps input signal



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