

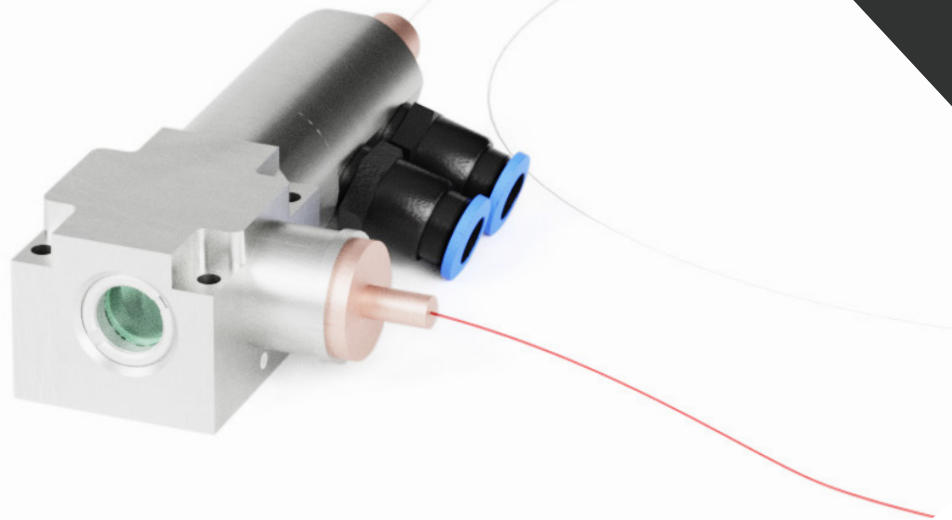
TGModule B - PM

APPLICATIONS

SCIENCE

INDUSTRY

AEROSPACE



KEY FEATURES

- High-power gain module based on patented tapered double clad fiber (T-DCF)
- Single mode output, $M^2 < 1.3$
- Large mode area, low level of nonlinear effects
- Integrated, ready-to-splice pump coupling unit
- Direct water cooling for the pump coupling unit
- Easily integrated into an existing system

SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNITS
OUTPUT				
Output power ¹⁾		100		W
Mode field diameter		40		μm
Polarization extinction ratio (PER) ²⁾	15	17		dB
M ²	1.0	1.2	1.3	
INPUT				
Wavelength	1030	1040	1065	nm
Input signal power				mW
Pump power ³⁾			150	W
Pump wavelength		976		nm
Core NA		0.09		
Cladding NA		0.28		
FIBERS				
Input signal fiber	PM 10/125, others upon request			
Pump fiber	200/220 NA 0.22 150 W or 105/125 NA 0.22 100 W or 4 x 105/125 NA 0.15, others on request			
MECHANICAL				
Gain fiber length		2.5		m
Gain fiber coiling diameter	30	35		cm
Water flow ⁴⁾	5		10	l/min
Pump assembly size	108.5 mm x 58 mm x 29.5 mm			

¹⁾ Output power depends on the applied pump power and seed input. The pump assembly is capable of handling up to 150 W of pump power and 100 W of output power.

²⁾ Measured at 1040 nm for 19 dB PER input. Output PER will depend on PER of the seed source.

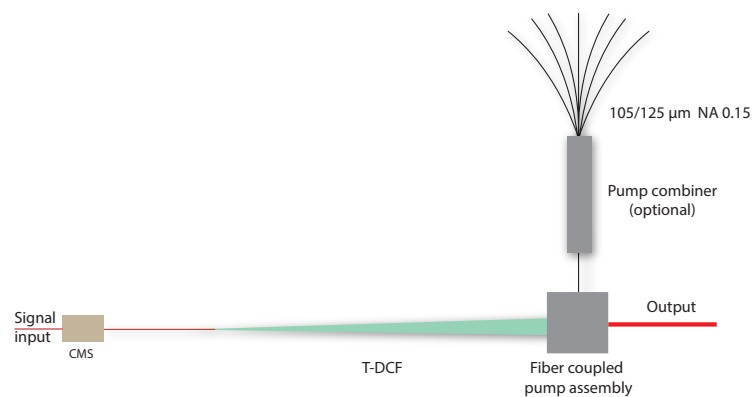
³⁾ Maximum pump power depends on pump fiber selection.

⁴⁾ Recommended water flow for both pump assembly and for the external heat sink for the gain fiber.

OVERVIEW, SPECIFICATIONS

DESCRIPTION

TGModule B-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 thick end of the T-DCF is terminated by a fiber-coupled, water-cooled pump coupling unit, which enables easy splicing of pump diodes with up to 150 W of pump power. Optional pump combiner allows many different pump diode configurations. The unit has a free-space single-mode output with typical beam quality of $M^2 = 1.2$. The unit is fully tested and ships with complete test report.

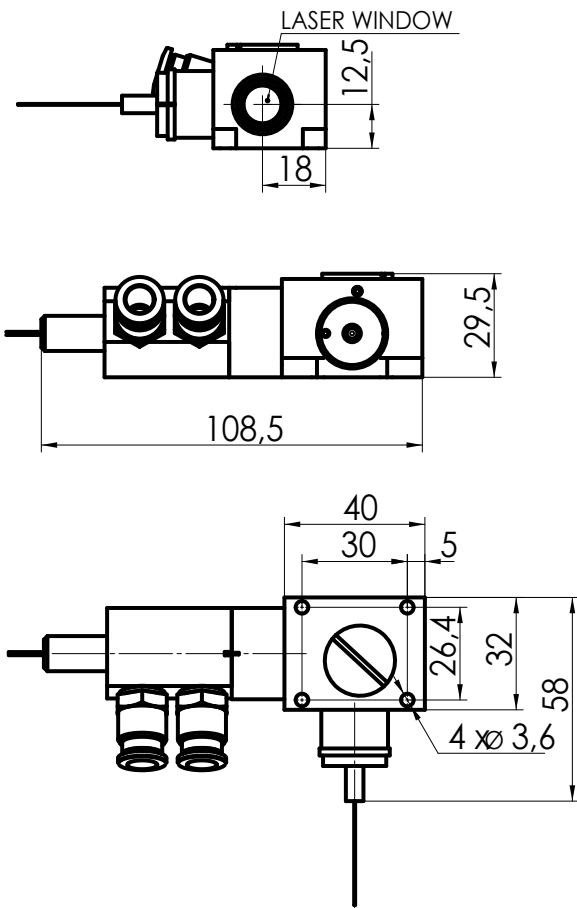


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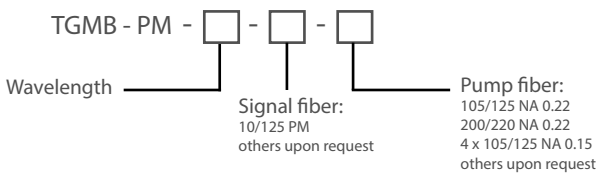
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PERFORMANCE, DIMENSIONS

DIMENSIONS



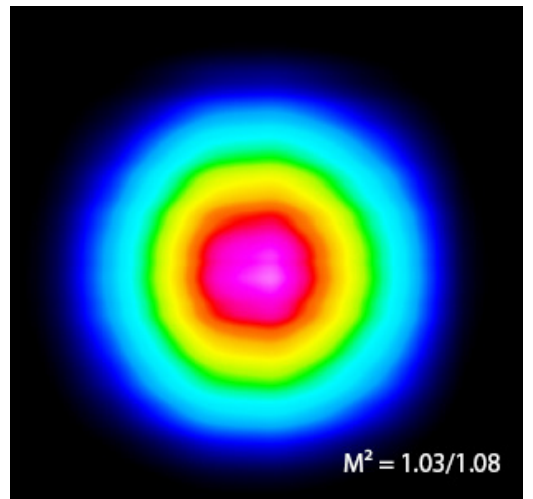
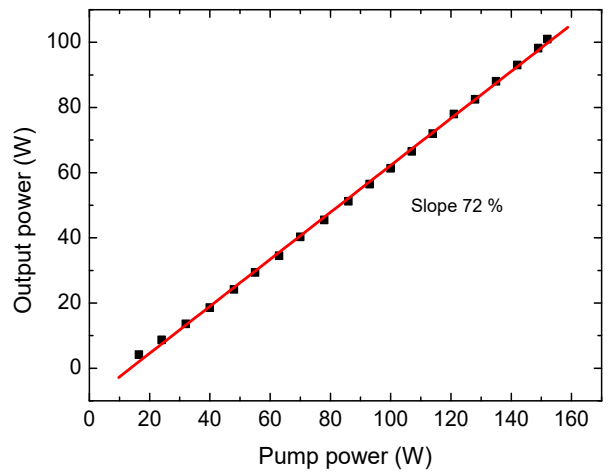
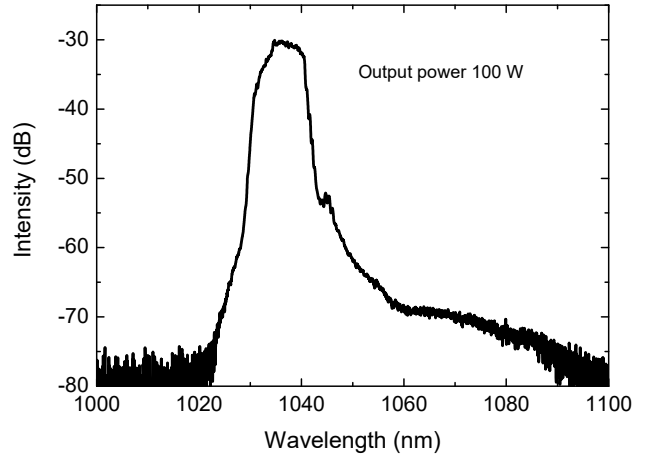
ORDERING INFORMATION



Example: TGMB- PM - 1040 - 10/125 - 105/125

EXAMPLE AMPLIFICATION

30 mW, 25 MHz, 40 ps input signal



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