

YD1025 Fiber Block1.8 PM40 Photonic Crystal Fiber Amplification Module

Product Overview

The YD1025 Fiber Block1.8 Module is an optimal solution for power amplification of high-power, high-energy ultra-fast fiber lasers. The gain unit of the amplification module is the PM40/200DC YDF fiber independently designed and manufactured by YSL Photonics. This fiber combines a high-concentration ytterbium-doped core with a micro-structured fiber design. While maintaining flexible bending characteristics, it can achieve single-mode polarized laser amplification. The modular packaging process facilitates industrial production and the construction of research platforms.

Product Features

- Signal Input Fiber: PM15/250 SC, single-clad fiber with a core diameter of 15 μ m, which can be fusion-spliced directly with the signal fiber for signal injection.
- Gain Fiber: Integrated PM40/200DC YDF fiber, operating in single-mode polarization-maintaining.
- Signal Output End: An AR-coated end cap has been fusion-spliced to prevent end-face damage and reflection.
- The module integrates an efficient water-cooling system with quick connectors, ensuring excellent heat dissipation performance and meeting the requirements of long-term maintenance-free operation.



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Product Parameters

Optical Parameters	Value
Signal Wavelength (nm)	1030-1040
Core Diameter (μm)	40±2.0
Beam Quality M ² @1030nm	≤1.3
Mode Field Diameter (μm)	31±2.0
Pump Cladding Diameter (μm)	195±10
Pump Cladding Numerical Aperture	0.55±0.05
Extinction Ratio@1030nm	>15
Pump Absorption Coefficient (dB@976nm)	16±2.0
Glass Cladding Diameter (μm)	440±15
Coating Diameter (μm)	565±15
Input Signal Fiber Type	PM15/250 SCF
Typical Optical Efficiency	>70%
Maximum Pump Power (W)	~150
Module Parameters	Value
Weight(Kg)	1.8
Output End Cap Angle	0°
Output End Cap Length (mm)	7
Output End Cap Diameter (mm)	10, with anti-reflection coating
Input Fiber Length (m)	~1
Water-Cooling Parameters	Value
Module Water Flow Rate (L/min) (25±5°C)	2.0-6.0
Water-Cooling Pipe Flow Rate (L/min) (25±5°C)	0.2-0.5

Note: For the module installation dimensions and hole positions, please consult the technical team of YSL Photonics.