

# YLS-SM Series

## High-Power Single-Mode Fiber Lasers



### FEATURES

- ▶ Single-Mode Beam Quality
- ▶ Up to 10 kW Output Power
- ▶ High Energy Efficiency
- ▶ Maintenance-Free Operation
- ▶ Modular "Plug & Play" Design
- ▶ Ultra-Compact, Rugged, & Easy to Install



### APPLICATIONS

- ▶ Cutting High Reflectivity Metal
- ▶ Surface Structuring & Texturing
- ▶ Metal Foil Cutting
- ▶ Single-Mode Keyhole Welding
- ▶ Fine Hole Drilling
- ▶ 3D Printing

**YLS-SM single-mode** Ytterbium CW fiber laser systems provide up to 10 kW of average power. YLS-SM lasers feature a dynamic power modulation range from 5% to full power up to 10 kHz with no change in beam divergence or beam profile. High-power single-mode fiber lasers are used in advanced materials processing applications requiring high power and brightness such as cutting, welding, and drilling in materials including highly reflective metals.

Housed in ultra-compact rugged air-conditioned and sealed cabinets, YLS-SM systems are controlled by either digital I/O, analogue control or IPG LaserNet software with the additional option to add DeviceNet, Profibus, or Ethernet interfaces. These fiber laser systems are also available with the widest range of fiber diameters, fiber lengths, and a variety of multiport beam switches, allowing the laser to be shared between workstations on a time or energy basis.

# YLS-SM Series

## High-Power Single-Mode Fiber Lasers

Optical Characteristics	1000-SM	1500-SM	2000-SM	3000-SM	4000-SM	5000-SM	10000-SM
Wavelength Range, nm	1068 - 1080						
Mode of Operation	CW/modulated						
Modulation Frequency, kHz	0-10						
Max. Average Power*, W	1	1.5	2	3	4	5	10
Power Tunability, %	5 -100						
Power Stability**, %	±2						
Beam Quality, M <sup>2</sup>	1.1 Typ.			1.15 Typ.		1.2	<2.0
Output Fiber Length, m	5,10,15,20		5,10,15	5,10	5, 7	4	2

\* Over 4 hours, T=const

General Characteristics	1000-SM	1500-SM	2000-SM	3000-SM	4000-SM	5000-SM	10000-SM
Cabinet Dimensions (W × D × H), mm	430 × 808 × 568			430 × 808 × 700		430 × 808 × 900	
Weight, kg	120	130	170	200	220	470	
Supply Voltage, 3-phase, VAC	400-480						
Wall-pug Efficiency, %	40			33			

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