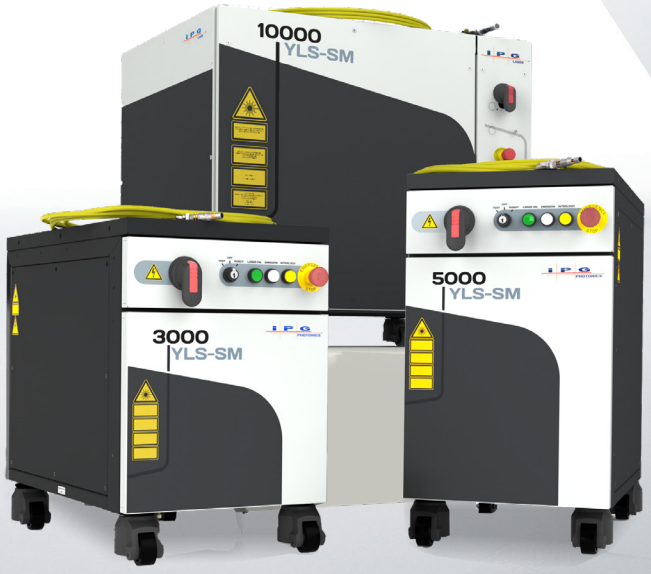
YLS-SM SERIES

High-Power Single-Mode Ytterbium Fiber Lasers



FEATURES

- Single-Mode Beam Quality
- Up to 10 kW Average Power
- High Energy Efficiency
- Maintenance-Free Operation
- Modular “Plug & Play” Design
- 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 10% to full power up to 5 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 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.

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Optical Characteristics	1000-SM	1500-SM	2000-SM	3000-SM	4000-SM	5000-SM	10000-SM
Wavelength Range, nm	1070 ±10						
Mode of Operation	CW/modulated						
Modulation Frequency, kHz	0-5 kHz						
Max. Average Power*, W	1	1.5	2	3	4	5	10
Power Tunability, %	10-100						
Power Stability**, %	±2						
Beam Quality, M^2	1.1 Typ.				1.15 Typ.		<2.0
Output Fiber Length, m	5 (10 option)				5 (7 Optional)	4	2

* Over 4 hours, T=const

GeneralCharacteristics	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		1007 × 815 × 806
Weight, kg	130			170	200	220	420
Supply Voltage, 3-phase, VAC	400-480						
Wall-pug Efficiency, %	40			33			

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