YLS-SM-AMB

Single-Mode Adjustable Mode Beam Lasers

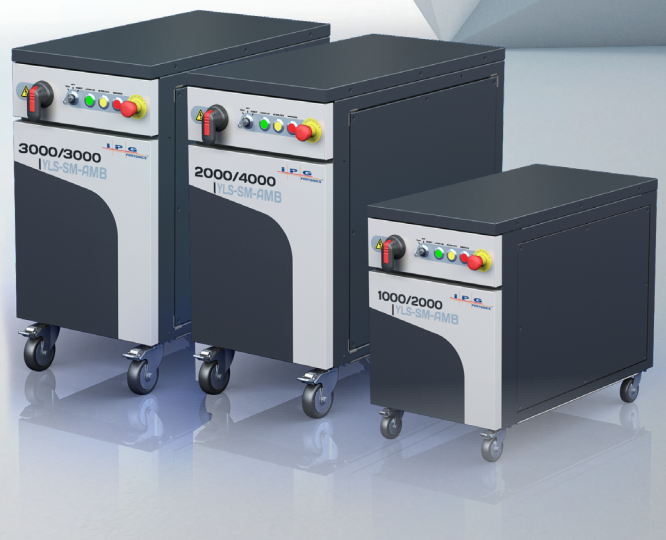
Designed for High-Speed Precision Welding Applications

FEATURES

- Single-mode Core up to 3 kW
- Ring Beam up to 5 kW
- Spatter-free welding speeds up to 2X faster than lower power alternatives
- Easy Process Optimization and Automation

APPLICATIONS

- Battery Manufacturing
- High Precision Single-mode Keyhole Welding
- High Speed Welding with No Spatter, Cracking and Porosity



Adjustable Mode Beam (AMB) dual beam lasers greatly improve welding productivity by introducing a secondary ring beam that stabilizes the weld pool. A high intensity core beam enables very high welding speeds while the ring beam ensures excellent weld quality by virtually eliminating spatter, cracking, and porosity.

YLS-SM-AMB lasers utilize a high brightness single-mode core beam to achieve high-speed precision welding even in reflective and delicate metals. Specifically designed for welding electric vehicle battery cells and modules, YLS-SM-AMB lasers provide the highest powers and widest range of beam mode parameters of any single-mode dual beam laser on the market.

With a uniquely high power 3 kW single-mode core, YLS-SM-AMB can achieve the desired weld penetration depth up to 2X faster than lower power alternatives.

YLS-SM-AMB

Single-Mode Adjustable Mode Beam Lasers

Optical Characteristics	YLS-1000/2000-SM-AMB	YLS-2000/4000-SM-AMB	YLS-3000/3000-SM-AMB
Central Wavelength Range, nm	1068-1080		
Mode of Operation	CW/Modulated		
Modulation Frequency, kHz	0-5		
Total Average Power, kW	3	6	
Central Core Output Power, kW	1, 1.5, 2		3
Ring Beam Output Power, kW	2, 1.5, 1	5, 4.5, 4	3, 2, 1
Power Tunability, %	10-100		
Power Stability, %	±1		
Core Beam Quality, M^2	<1.2		
Central Fiber Core	14		
Outer Ring Fiber Diameter, µm	40×100		250
Feeding Fiber Length, m	up to 10		

General Characteristics	YLS-1000/2000-SM-AMB	YLS-2000/4000-SM-AMB	YLS-3000/3000-SM-AMB
Cabinet Dimensions (W × D × H),	430 × 804 × 556	430 × 804 × 700	
Weight, kg	<140	<200	
Supply Voltage, VAC	400-480 3-phase, 50/60 Hz		
Wall-plug Efficiency, %	40 Typ.		

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