



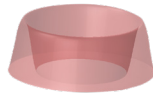
YLS-AMB Series

Adjustable Mode Beam Laser

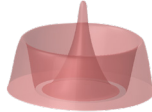
Independent & Dynamic Control of Beam Profile



Central Beam:
100 μm Core, up to 12 kW



Ring Beam:
Outer \varnothing 300 or 600 μm



Central + Ring Beam:
up to 20 kW



Applications

- ▶ Multiple Applications by the Same Laser
- ▶ Applications Requiring On-the-fly Adjustment of Beam Brightness
- ▶ Applications Requiring Non-uniform Intensity Distribution
- ▶ Demanding High-quality Cutting Applications
- ▶ 2D/3D Thin & Thick Metal Cutting and Welding
- ▶ Variable Thickness Cutting
- ▶ Improved Pierce Quality
- ▶ Improved Welding and Brazing Quality
- ▶ Processing Any Metal: Mild and Stainless Steel, Titanium, Copper, Brass and Aluminum



Features

- ▶ Rapid Automatic Switching Between Applications with Different Optimal BPP
- ▶ No Need for External Optics to Adjust BPP
- ▶ Total Output Power up to 20 kW
- ▶ Central Core Power up to 12 kW
- ▶ Easy Process Optimization and Automation
- ▶ Cost-effective Solution to Most Complex Tasks
- ▶ Wall Plug Efficiency Greater 45%
- ▶ Maintenance-free Operation
- ▶ Industry Leading Reliability

NEW PRODUCT

The Broadest Range of Beam Profile Tunability



IPG's YLS-AMB Adjustable Mode Beam Lasers provide up to 20 kW total output power with automatic tuning of output beam mode parameter. The central core delivers up to 12 kW output power. The independent programmable adjustment of the output beam mode to any combination of a small-spot high intensity bright core to a larger ring-shaped beam allows processing a wider range of material thicknesses and improves piercing and cutting speed and quality, as well as optimizing welding performance without need for external free-space optics such as optical switches, zoom process heads and other peripherals previously required to support this level of flexibility. With industry record output power, the YLS-AMB Series fiber lasers enable optimal processing of both thick and thin materials by the same laser.

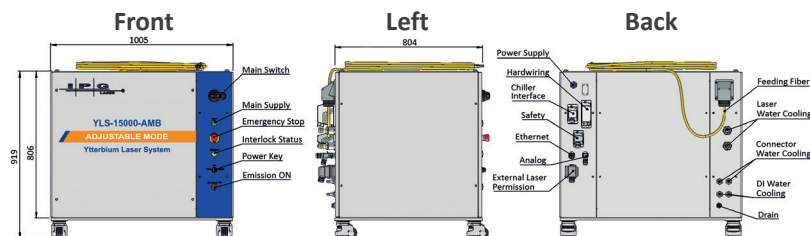
YLS-AMB Series

Adjustable Mode Beam Laser

| Optical Characteristics | | YLS-15000-AMB* |
|---|--|--|
| Wavelength, nm | | 1068-1080 |
| Mode of Operation | | CW/Modulated |
| Modulation Frequency, kHz | | 0-5 |
| Total Average Power, kW | | 15 |
| Central Core Output Power, kW | | 6 |
| Ring Beam Output Power, kW | | 9 |
| Power Tunability, % | | 10-100 |
| Power Stability, % | | ±1 |
| Central Fiber Core Diameter, µm | | 100 |
| Outer Ring Fiber Diameter, µm | | 300 or 600 |
| Central Beam Parameter Product, mm × mrad | | <4, 3.5 Typ. |
| Ring Beam Parameter Product, mm × mrad | | <17, 22 Typ. @130 × 300 µm Ring <35, 30 Typ. @130 × 600 µm Ring |

* All specifications are given for the specific YLS-15000-AMB model with maximum 6 kW power in the core and 9 kW in the ring. The maximum total average power for YLS-AMB Series lasers is up to 20 kW, the maximum central core power up to 12 kW. Different output power levels, custom core/ring output power combinations and core and ring fiber diameters are available upon request. The minimum core size of YLS-AMB Series is 50 µm. Please contact IPG representative with your requirements.

| General Characteristics | |
|------------------------------------|--|
| Cabinet Dimensions (W × D × H), mm | Up to 5 kW: 780 × 804 × 556 6-10 kW: 1005 × 804 × 556 12-20 kW: 1005 × 804 × 806 |
| Weight, kg | Up to 440 |
| Supply Voltage, VAC | 400-480 3-phase, 50/60 Hz |
| Wall-plug Efficiency, % | >45 |



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MAX. AVERAGE OUTPUT POWER: 40,000 W
WAVELENGTH RANGE: 900-1200 nm

DANGER - INVISIBLE LASER
RADIATION AVOID EYE OR SKIN
EXPOSURE TO DIRECT OR
SCATTERED RADIATION
CLASS 4 LASER PRODUCT
IEC 60825-1:2014

The Power to Transform®