

# YLS-2000/20000-QCW

## High Power Quasi-CW Ytterbium Fiber Laser



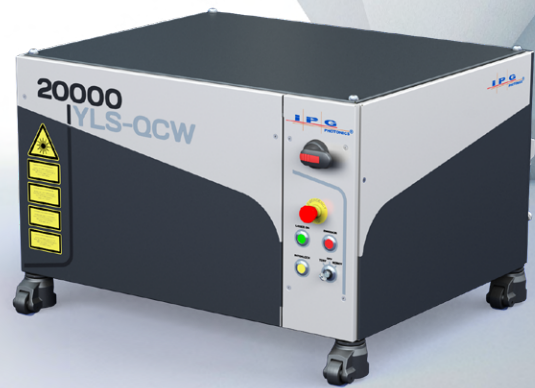
### FEATURES

- ▶ CW Output Power 2 kW @ Workpiece
- ▶ Peak Power: 20 kW
- ▶ Pulse Duration: 0.2-10 ms
- ▶ Maintenance-free Operation
- ▶ Modulation up to 2 kHz
- ▶ Cost-effective Cutting System
- ▶ Record Reliability
- ▶ Compact, Rugged Design



### APPLICATIONS

- ▶ 2D/3D Thin and Thick Cutting
- ▶ Processing Copper, Brass and Aluminum
- ▶ Processing Ceramics, Sapphire, Silicon
- ▶ Welding
- ▶ Surface Treatment
- ▶ Drilling



The **YLS-2000/20000-QCW** Quasi-CW fiber laser delivers high peak power of 20 kW, pulse durations of 0.2-10 ms and a maximum pulse energy of 200 J at repetition rate up to 2 kHz. The YLS-2000/20000-QCW laser is well suited to drilling and cutting applications within the aerospace industry, where percussion drilling, trepanning and fine cut features are often required.

QCW Series lasers can be operated in either continuous wave or long pulse mode (0.2-10 ms) at repetition rates up to 5 kHz, providing up to **10 times higher peak power** in the pulsed mode over CW mode. **The unparalleled flexibility** in operating parameters makes QCW lasers ideally suited for processing a wide range of materials including both metals and non-metals such as ceramics, sapphire and silicon in a variety of applications including spot and seam welding, drilling, cutting of highly reflective metals, surface texturing, engraving and ablation.

Available in compact form factor, with very low cost per watt, QCW fiber lasers are substantially more cost-effective than legacy YAG lasers due to >30% energy efficiency and maintenance-free operation. **QCW lasers are available for requalifying existing lamp-pumped processes.**

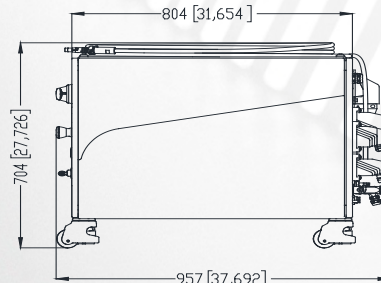
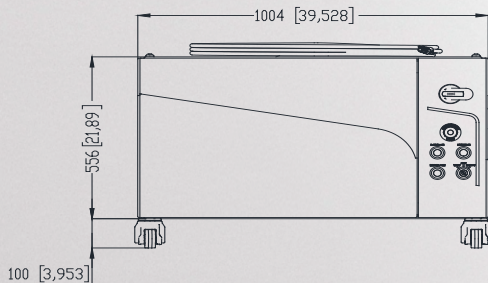
# YLS-2000/20000-QCW

## High Power Quasi-CW Ytterbium Fiber Laser

| Optical Characteristics           |   |
|-----------------------------------|---|
| Wavelength, nm                    | 1070 ±5   |
| Mode of Operation                 | Pulsed/CW   |
| Repetition Rate, kHz              | 2   |
| Average Power*, W                 | 2000  |
| Power Tunability, %               | 10-100  |
| Peak Power, W                     | 20000   |
| Max. Pulse Energy, J              | 200   |
| Pulse Duration, ms                | 0.2-10  |
| Power Stability, %                | ±2  |
| Beam Parameter Product, mm × mrad | 15 @ 300 μm feeding fiber<br>4.2 @ 100 μm feeding fiber |

\* Higher power levels are available upon request.

| General Characteristics            |                           |
|------------------------------------|---------------------------|
| Cabinet Dimensions (W × D × H), mm | 1004 x 804 x 556          |
| Weight, kg                         | 380                       |
| Cooling                            | Water-cooled              |
| Supply Voltage, VAC                | 400-480 3-phase, 50/60 Hz |
| Power Consumption, kW              | <9                        |



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MAX. AVERAGE OUTPUT POWER: 4,000 W  
 MAX. PEAK OUTPUT POWER: 40 kW  
 PULSE DURATION: 0.2-10 ms  
 PULSE REPETITION RATE: 0-2000 Hz  
 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

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