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|  | <p align="center">SPECIFICATION YTTERBIUM FIBER LASER Model YLR-2000-K</p> | Spec: Revision: Issue date: Page: | G22-29706 01 07/20/2018 1 of 3 |
|---|---|--|---|

1. Optical characteristics

| N | Characteristics | Test conditions | Symbol | Min. | Typ. | Max. | Unit |
|----|------------------------------|--|-----------------|----------------|------|------|-------|
| 1 | Operation Mode | | | CW / Modulated | | | |
| 2 | Polarization | | | Random | | | |
| 3 | Nominal Output Power | | P_{nom} | 2000 | | | W |
| 4 | Emission Wavelength | Output power: 2000 W | λ | | 1070 | | nm |
| 5 | Emission Linewidth | Output power: 2000 W | $\Delta\lambda$ | | 1.5 | 5 | nm |
| 6 | Short-term Power Instability | Output power: 2000 W Frequency range: 10 kHz – 20 MHz | | | 1.0 | 2.0 | rms % |
| 7 | Long-term Power Instability | Output power: 2000 W Time interval: 4 hrs (T=Constant) | | | ±1 | ±3 | % |
| 8 | Switching ON/OFF Time | Output power: 2000 W | | | 30 | 50 | µs |
| 9 | Power Modulation Rate | Output power: 2000 W | | | | 50 | kHz |
| 10 | Red Guide Laser Power | | | 0.1 | - | 1.0 | mW |

2. Optical output

| N | Characteristics | Test conditions | Symbol | Min. | Typ. | Max. | Unit |
|---|-------------------------------|---|--------|--------------------------|-------------------|--------------------|-----------------|
| 1 | Beam Quality | Option 1 – 50 µm core fiber Option 2 – 100 µm core fiber Option 3 – 200 µm core fiber | BPP | 1.7 3.4 6.8 | 2.1 4.2 8.4 | 2.7 5.4 10.8 | mm x mrad |
| 2 | Delivery Fiber Length | | L | | 5.0 | TBD | m |
| 3 | Delivery Cable Bending Radius | | | 80 | | | mm |
| 4 | Output Fiber Termination | | | QBH-compatible connector | | | |

3. General characteristics

| N | Characteristics | Min. | Typ. | Max. | Unit |
|---|-------------------------------------|--|------|------|------|
| 1 | Operating Ambient Temperature Range | 10 | | 50 | °C |
| 2 | Humidity | 10 | | 95 | % |
| 3 | Storage Temperature | - 40 | | + 75 | °C |
| 4 | Dimensions, WxDxH: | 4U 19" rack mountable 448 x 677 x 177 | | | mm |
| 5 | Weight | | | 70 | kg |
| 6 | Laser "Cold Start" Temperature | 20 | | | °C |

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4. Cooling

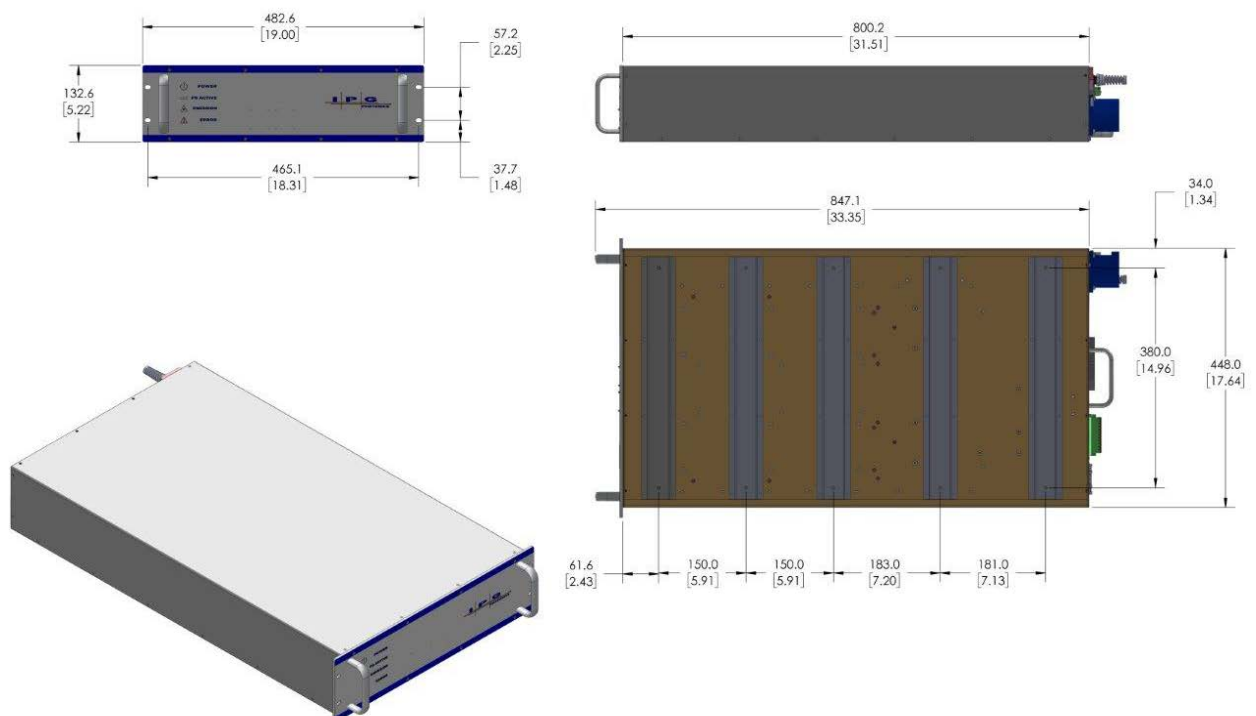
| N | Characteristics | Test conditions | Symbol | Min. | Typ. | Max. | Unit |
|---|--|-----------------|--------|-----------------|------|------|-------|
| 1 | Method | | | Tap or DI-water | | | |
| 2 | Water Temperature *always above dew point | | | 21 * | 22 | 25 | °C |
| 3 | Water Pressure | | | 1.5 | | 3.5 | bar |
| 4 | Water Flow | | | 10 | | | l/min |
| 5 | Chiller Cooling Capacity | | | 3.2 | | | kW |

5. Electrical characteristics

| N | Characteristics | Min. | Typ. | Max. | Unit |
|---|---------------------------------|------------------------------|------|------|------|
| 1 | Operating Voltage, single-phase | 200-240 VAC, 50/60 Hz | | | |
| 2 | Maximum Power Consumption | | 4800 | 5200 | W |
| | | | 5300 | 5700 | VA |
| 3 | Control | Analog / RS-232 / Ethernet * | | | |

* For details please refer to YLR-Series User Guide.


6. External layout



Laser cabinet

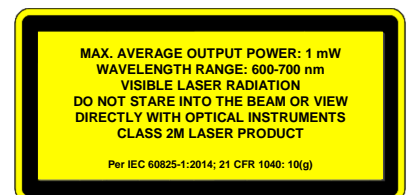
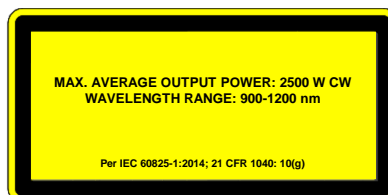
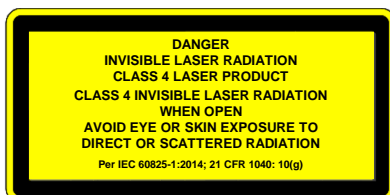
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7. Beam management accessories

| N | Type | Model |
|---|-----------------------|--|
| 1 | Attachable Collimator | D25F50, D25F60, D25F85, D50F100, D50F120, D50F160, D50F200 |
| 2 | Compact Beam Coupler | BC1x112 |
| 3 | Compact Beam Switch | BS1xN12 N – number of output channels (1, 2, 3 or 4) |



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