	<p align="center"><b>SPECIFICATION</b>  <b>YTTERBIUM FIBER LASER</b>  <b>Model YLR-500-MM-WC-C</b></p>	Spec: Revision: Issue date: Page:	G22-29699 00 08/17/2017 1 of 3
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## 1. Optical characteristics

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Operation Mode			CW / Modulated			
2	Polarization			Random			
3	Nominal Output Power		$P_{nom}$	500			W
4	Emission Wavelength	Output power: 500 W	$\lambda$		1070		nm
5	Emission Linewidth	Output power: 500 W	$\Delta\lambda$		4	5	nm
6	Short-term Power Instability	Output power: 500 W Frequency range: 10 kHz – 20 MHz			1.0	2.0	rms %
7	Long-term Power Instability	Output power: 500 W Time interval: 4 hrs (T=Constant)			±1	±3	%
8	Switching ON/OFF Time	Output power: 500 W			30	50	µs
9	Power Modulation Rate	Output power: 500 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	1.3 2.9 6	1.5 3.7 8	1.9 4.2 10	mm x mrad
2	Delivery Fiber Length		L		5.0	TBD	m
3	Delivery Cable Bending Radius			50*			mm
4	Output Fiber Termination			QBH-compatible connector			

\* For water cooled QBH-compatible connector the minimum bending radius of the delivery cable is 80 mm.

## 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:	3U 19" rack mountable 448 x 580 x 132			mm
5	Weight			40	kg
6	Laser "Cold Start" Temperature	20			°C

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## 4. Cooling

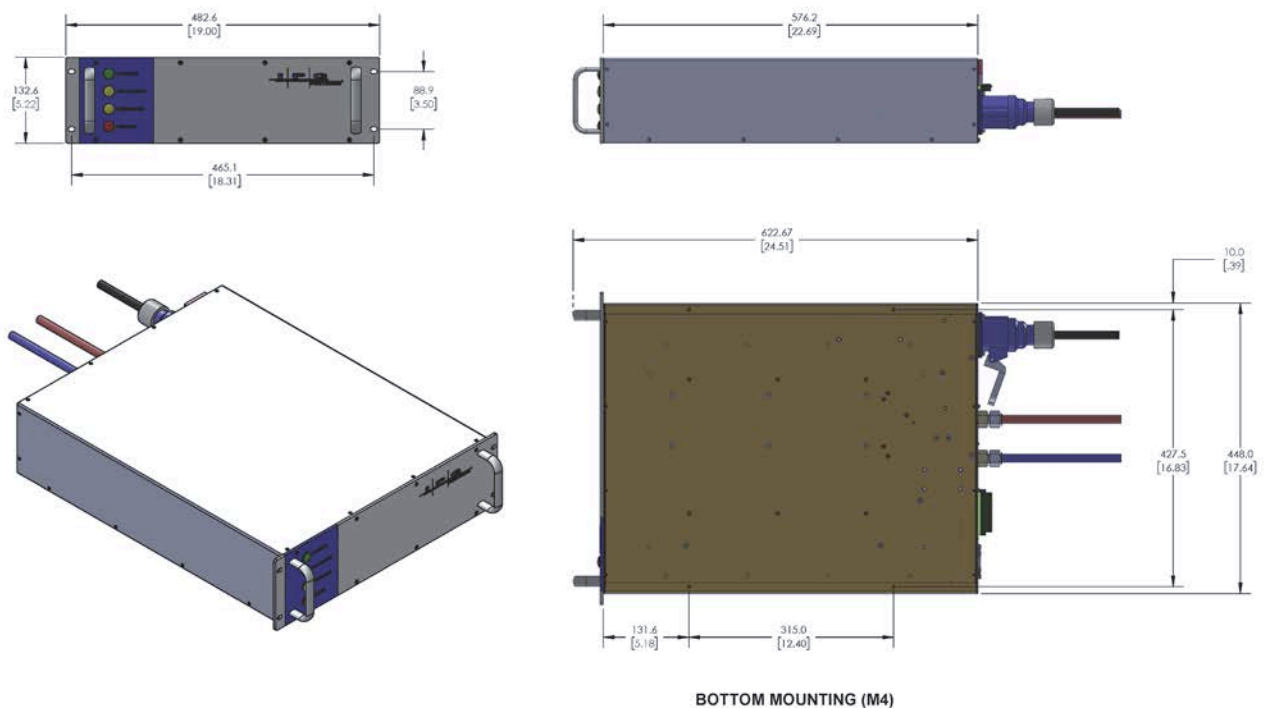
N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Method			Tap or DI-water			
2	Water Temperature *always above dew point			21*	22	25	°C
3	Water Pressure			1.5		3.5	bar
4	Water Flow			3.5			l/min
5	Chiller Cooling Capacity			1.2			kW

## 5. Electrical characteristics

N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Voltage, single-phase	200-240 VAC, 50/60 Hz			
2	Maximum Power Consumption		1500	1700	W
			1600	1800	VA
3	Control	Analog / RS-232 / Ethernet *			

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


## 6. External layout

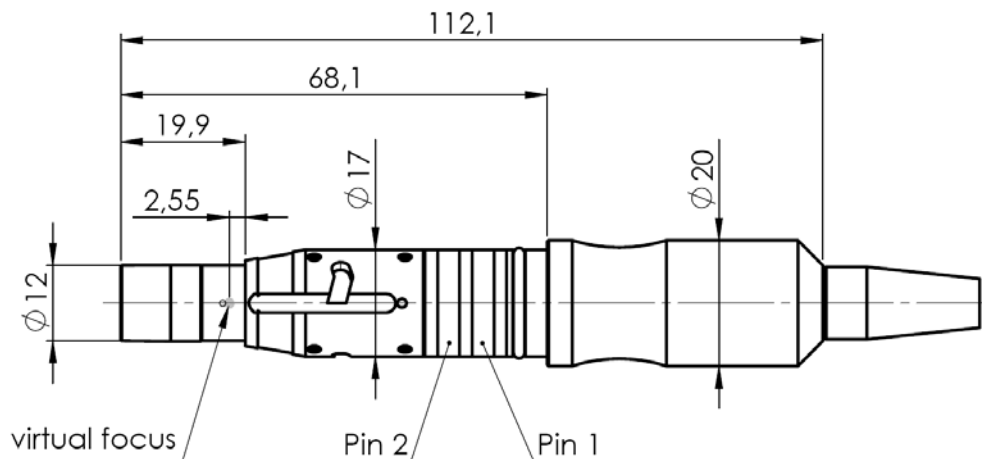


## Laser cabinet

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**QBH-compatible connector, without water cooling**

## 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)

MAX. AVERAGE OUTPUT POWER: 1 kW  
WAVELENGTH RANGE: 900-1200 nm  
VISIBLE AND/OR INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION  
CLASS 4 LASER PRODUCT

Per IEC 60825-1:2007-03; 21 CFR 1040: 10(g)

MAX. AVERAGE OUTPUT POWER: 1 mW  
WAVELENGTH RANGE: 600-700 nm  
VISIBLE LASER RADIATION  
DO NOT STARE INTO THE BEAM OR VIEW  
DIRECTLY WITH OPTICAL INSTRUMENTS  
CLASS 2M LASER PRODUCT

Per IEC 60825-1:2007-03; 21 CFR 1040: 10(g)

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