

#### SPECIFICATION YTTERBIUM FIBER LASER Model YLR-700-MM-WC-C

 Spec:
 G22-29702

 Revision:
 00

 Issue date:
 10/19/2017

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# 1. Optical characteristics

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Operation Mode			CW / Modulated		lated	
2	Polarization			Random			
3	Nominal Output Power		P <sub>nom</sub>	700			W
4	Emission Wavelength	Output power: 700 W	λ	1070			nm
5	Emission Linewidth	mission Linewidth Output power: 700 W Δλ 4		5	nm		
6	Short-term Power Instability	Output power: 700 W Frequency range: 10 kHz – 20 MHz	1.0 2.0		rms %		
7	Long-term Power Instability  Output power: 700 W Time interval: 4 hrs (T=Constant)  ±1		±3	%			
8	Switching ON/OFF Time	Output power: 700 W 30 50		50	μS		
9	Power Modulation Rate	Output power: 700 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		Option 1 – 50 µm core fiber		1.3	1.5	1.9	mm
	Beam Quality	Option 2 – 100 µm core fiber	BPP	2.9	3.7	4.2	Х
		Option 3 – 200 µm core fiber		6	8	10	mrad
2	Delivery Fiber Length		L		5.0	TBD	m
3	Delivery Cable Bending			50*			mm
	Radius			30			mm
4	Output Fiber Termination			QBH-compatible connector		ector	

<sup>\*</sup> 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,	3U 19" rack mountable			
4	WxDxH:	448	8 x 580 x	132	mm
5	Weight			40	kg
6	Laser "Cold Start" Temperature	20			°C

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## 4. Cooling

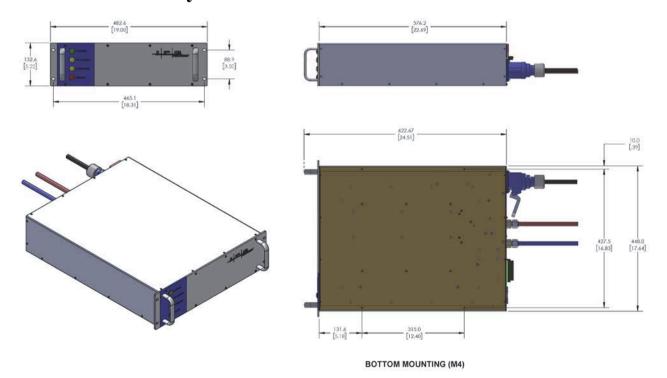
N	Characteristics	<b>Test conditions</b>	Symbol	Min.	Typ.	Max.	Unit
1	Method			Tap or DI-water			
2	Water Temperature *always above dew point			21*	22	25	°C
3	Water Pressure			1.5		3.5	bar
4	Water Flow			5			l/min
5	Chiller Cooling Capacity			1.2			kW

#### 5. Electrical characteristics

N	Characteristics	Min.	Тур.	Max.	Unit
1	Operating Voltage, single-phase	200-240 VAC, 50/60 Hz			
2	Maximum Power Consumption		1900	2100	W
	Maximum Power Consumption		2000	2200	VA
3	Control	Analog / RS-232 / Ethernet *			

<sup>\*</sup> For details please refer to YLR-Series User Guide.

# 6. External layout



#### Laser cabinet

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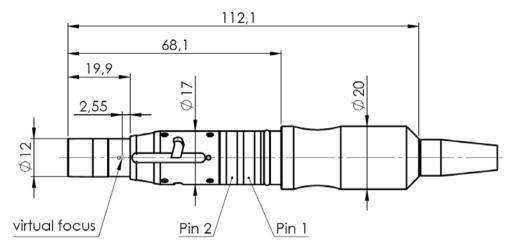
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QBH-compatible connector, without water cooling

### 7. Beam management accessories

N	Туре	Model
1	Attachable Collimator	D25F50, D25F60, D25F85, D50F100, D50F120, D50F160,
		D50F200
2	Compact Beam Coupler	BC1x112
2	Compact Boom Switch	BS1xN12
3	Compact Beam Switch	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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