



**SPECIFICATION
YTTERBIUM FIBER LASER
Model YLR-1500-U-K**

Spec:	G22-29734
Revision:	01
Issue date:	08/16/2020
Page:	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}	1500			W
4	Emission Wavelength	Output power: 1500 W	λ		1070		nm
5	Emission Linewidth	Output power: 1500 W	$\Delta\lambda$		1.5	4	nm
6	Short-term Power Instability	Output power: 1500 W Frequency range: 10 kHz – 20 MHz			1.0	2.0	rms %
7	Long-term Power Instability	Output power: 1500 W Time interval: 4 hrs (T=Constant)			±1	±3	%
8	Switching ON/OFF Time	Output power: 1500 W			30	50	μs
9	Power Modulation Rate	Output power: 1500 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		90	%
3	Storage Temperature	- 20		+ 60	°C
4	Dimensions, WxDxH:	2U 19" rack mountable 448 x 550 x 88			mm
5	Weight			40	kg

CONFIDENTIAL: This document and any data disclosed therein is the property of IPG Photonics Corporation and its affiliates, and constitute and contain proprietary information. Neither receipt nor possession of this document confers or transfers any right to duplicate, use, or disclose any information contained herein except as expressly authorized in writing by IPG Photonics Corporation. No representations and warranties are made hereby, except in a binding purchase order.



**SPECIFICATION
YTTERBIUM FIBER LASER
Model YLR-1500-U-K**

Spec:	G22-29734
Revision:	01
Issue date:	08/16/2020
Page:	2 of 3

4. Cooling

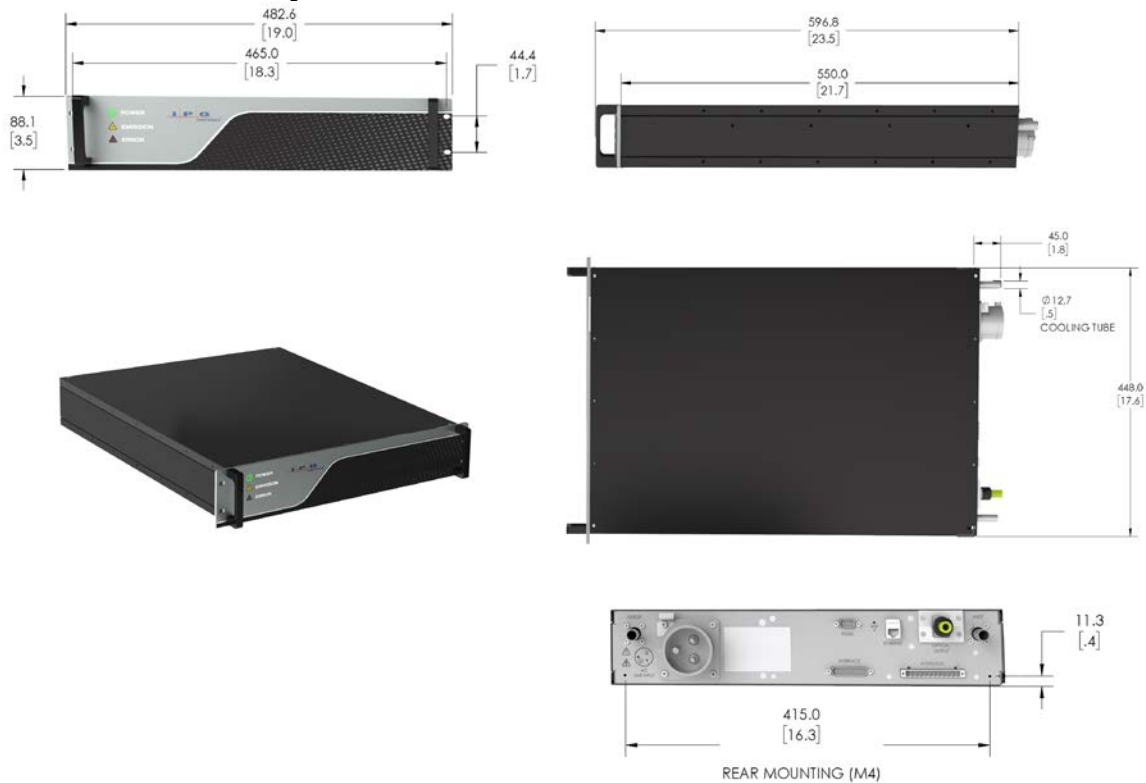
N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Method			Tap or DI-water			
2	Water Temperature *always above dew point			21*	22	25	°C
3	Water Pressure			2.5		5.5	bar
4	Water Flow			10			l/min
5	Chiller Cooling Capacity			2.7			kW

5. Electrical characteristics

N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Voltage, single-phase	200-240 VAC, 50/60 Hz			
2	Maximum Power Consumption		4000	4200	W
				4600	VA
3	Control	Analog / RS-232 / Ethernet *			

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

6. External layout



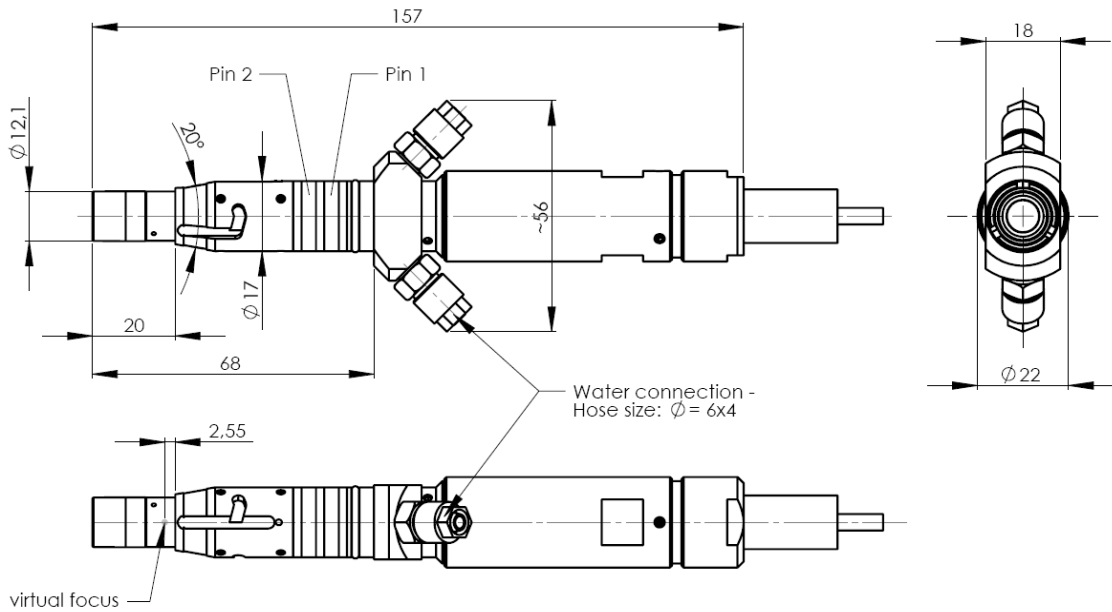
Laser cabinet

CONFIDENTIAL: This document and any data disclosed therein is the property of IPG Photonics Corporation and its affiliates, and constitute and contain proprietary information. Neither receipt nor possession of this document confers or transfers any right to duplicate, use, or disclose any information contained herein except as expressly authorized in writing by IPG Photonics Corporation. No representations and warranties are made hereby, except in a binding purchase order.



**SPECIFICATION
YTTERBIUM FIBER LASER
Model YLR-1500-U-K**

Spec:	G22-29734
Revision:	01
Issue date:	08/16/2020
Page:	3 of 3



QBH-compatible connector, water cooled

DANGER
INVISIBLE LASER RADIATION
CLASS 4 LASER PRODUCT
CLASS 4 INVISIBLE LASER RADIATION
WHEN OPEN
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
Per IEC 60825-1:2014; 21 CFR 1040: 10(g)

MAX. AVERAGE OUTPUT POWER: 2000 W CW
WAVELENGTH RANGE: 900-1200 nm
Per IEC 60825-1:2014; 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 60825-1:2014; 21 CFR 1040: 10(g)

CONFIDENTIAL: This document and any data disclosed therein is the property of IPG Photonics Corporation and its affiliates, and constitute and contain proprietary information. Neither receipt nor possession of this document confers or transfers any right to duplicate, use, or disclose any information contained herein except as expressly authorized in writing by IPG Photonics Corporation. No representations and warranties are made hereby, except in a binding purchase order.