	PRODUCT SPECIFICATION YTTERBIUM LASER SYSTEM Model YLS-3000-U-Y18	Spec:	G22-2520833
		Revision:	--
		Date:	19.07.2018
		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}	3000			W
4	Output Power Tuning Range			10		105	%
5	Emission Wavelength	Output power: 3000 W	λ	1068		1080	nm
6	Emission Linewidth	Output power: 3000 W	$\Delta\lambda$		3	6	nm
7	Switching ON/OFF Time	Output power: 3000 W			50	100	μ s
8	Output Power Modulation Rate	Output power: 3000 W				5	kHz
9	Output Power Instability	Output power: 3000 W Time interval: 8 hrs (T=Constant)			± 1	± 2	%
10	Red Guide Laser Power				0.4	0.5	mW


2. Optical output

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Delivery Fiber Connector			HLC-8, QBH-compatible LCA, QD-compatible			
2	Beam Parameter Product* (86 %)	Delivery fiber core diameter 50 μ	BPP*		2.0	2.2	mm*mrad
3	Beam Parameter Product* (86 %)	Delivery fiber core diameter 100 μ	BPP*		3.3	4.0	mm*mrad
4	Beam Parameter Product* (86 %)	Delivery fiber core diameter 150 μ	BPP*		5.0	6.0	mm*mrad
5	Beam Parameter Product* (86 %)	Delivery fiber core diameter 200 μ	BPP*		6.0	8.0	mm*mrad
6	Delivery Fiber Length		L	10	20	30	m
7	Delivery Fiber Bending Radius - unstressed - stressed		R	100 200			mm

* Measurement accuracy by means of Primes Focus Monitor $\pm 10\%$

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	PRODUCT SPECIFICATION YTTERBIUM LASER SYSTEM Model YLS-3000-U-Y18	Spec:	G22-2520833
		Revision:	--
		Date:	19.07.2018
		Page:	2 of 3

3. General characteristics

N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Ambient Temperature Range	5		45	°C
2	Humidity, Ambient Temperature Range ≤ 40°C	10		95	%
3	Storage Temperature without water	- 40		+ 75	°C
4	Dimensions (w/t interface plugs, w/t castors), WxDxH:	428 x 808 x 567			mm
5	Weight		140		kg

4. Cooling


N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Cooling Method			Tap and slightly DI-water			
2	Water Temperature for Laser			20	21	22	°C
3	Water Temperature for Optics			27	30	33	°C
4	Water Conductivity for Optics			30	40	50	µS/cm
5	Water Pressure			2.5		3.5	bar
6	Water Flow Rate for Laser Cooling			17	25		l/min

5. Electrical characteristics

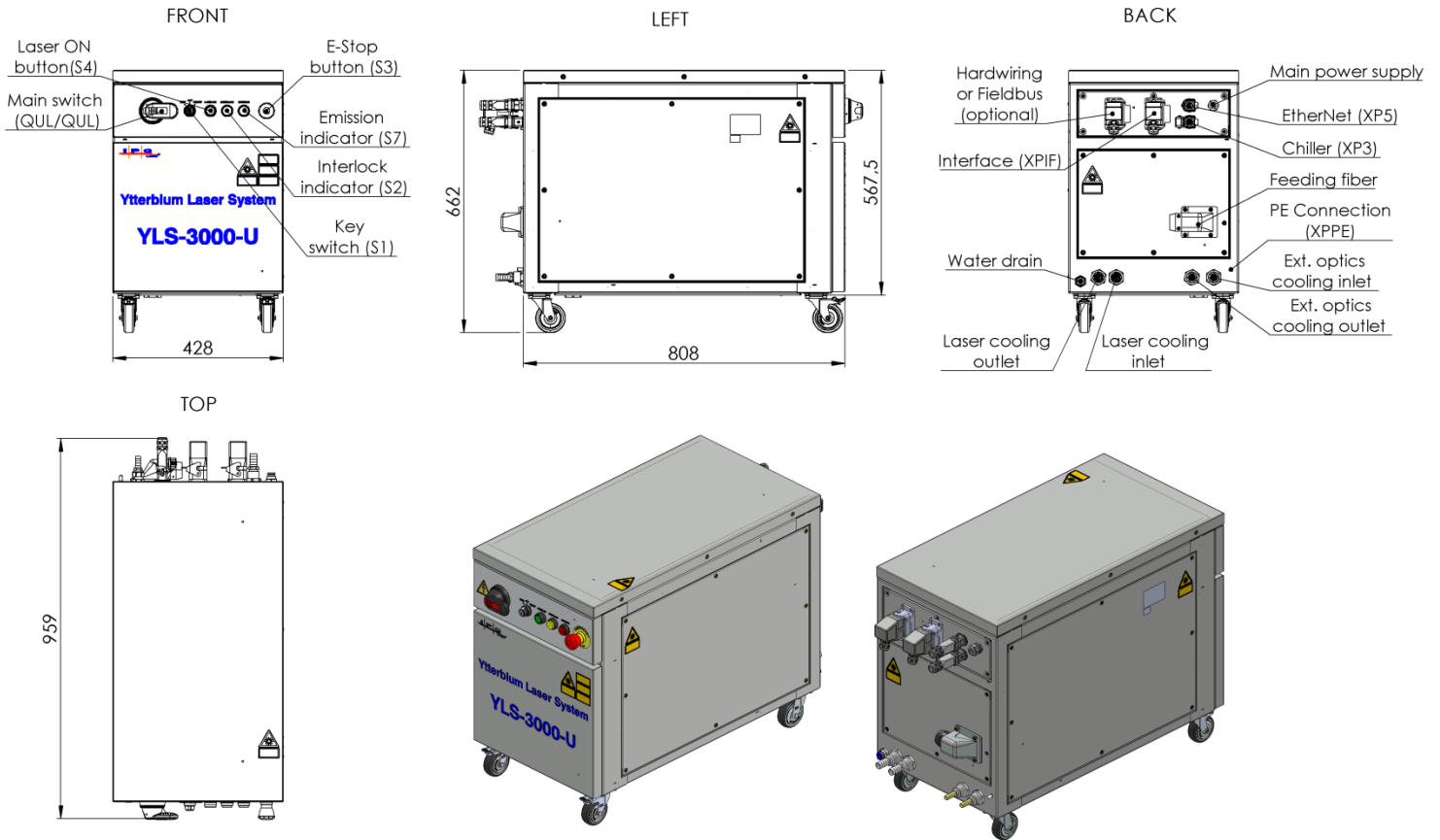
N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Voltage, 3 phases	400-460 V/3P + PE @ 50-60 Hz			
2	Laser Power Consumption at 3000 W power		7.5	8.6	kW
3	Laser Operation Current at 3000 W power and 400 VAC			15	A
4	Input fuses, 400 V			20	A

6. Fast power supply option.

- 6.1. Switching ON/OFF of laser main power supplies during 130 msec accordingly
Category 3 PL d EN ISO 13849-1
- 6.2. Maximal quantity of main power supplies switching ON/OFF cycles per minute is 20 times.

	PRODUCT SPECIFICATION YTTERBIUM LASER SYSTEM Model YLS-3000-U-Y18	Spec: Revision: Date: Page:	G22-2520833 -- 19.07.2018 3 of 3
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7. External layout



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