	YTTERBIUM PULSED FIBER LASER SPECIFICATION MODEL YLP-HP-1-30x240-500-500	Spec: Revision: Page:	E27604 01 1 of 3
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1 Optical characteristics

No	Characteristic	Conditions	Symbol	Min.	Typ.	Max.	Unit
1	Mode of operation			pulsed			
2	Polarization state			random			
3	Average output power	PRR≥PRR _{nom}	P _{nom}		500		W
4	Output power adjustment range			10		100	%
5	Central emission wavelength		λ	1055	1064	1075	nm
6	Emission bandwidth				4	10	nm
7	Laser ON stabilization time	ACON mode			50	100	μs
		90% –105% of P _{nom}					
8	Laser switching OFF time	100% → 10% of P _{nom}			5	10	μs

2 Operation modes table


N	Mode	Pulse duration at maximum energy			Maximum pulse energy	Min. pulse repetition rate	Nominal PRR (PRR _{nom})	Max. pulse repetition rate
		Min.	Typ.	Max.				
		ns			mJ	kHz	kHz	kHz
1	T1	27	30	33	0.25	200	2000	2000
2	T2	54	60	66	0.5	100	1000	2000
3	T3	108	120	132	1	50	500	2000
4	T4	200	240	280	1	50	500	1000

3 Optical output / Output Isolator

No	Characteristic	Conditions	Min	Typ	Max	Unit
9	Output beam diameter	86% power	6		10	mm
10	Beam quality	M ²	1.2		2	
11	Output fiber length			3		m
12	Reflected light pass		window in the housing			
13	Isolator dimensions		see drawing			
14	Isolator operating temperature range		+15		+35	°C
15	Isolator protection window		installed			

Issued by:	Issue Date:
S. Maryashin	23.10.2012

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4 Electrical characteristics

No	Characteristic	Conditions	Min.	Typ.	Max.	Unit
16	Laser modulation input: HIGH (+16...+24V) LOW (0...+10V) disconnected (floating)		emission (Laser ON) power leakage (Laser OFF) power leakage (Laser OFF)			
17	Control interface		RS-232C			
18	Power supply voltage		220		240	VAC
19	Power consumption				2400	W

5 General characteristics

No	Characteristic	Symbol	Min.	Typ.	Max.	Unit
20	Environment		non-condensed including laser internal parts			
21	Operating temperature range (environment)		+10		+50	°C
22	Operating temperature range (internal water cooled modules)		+18	+24	+26	°C
23	Cooling water temperature			+19		°C
24	Storage temperature		-20		+60	°C
25	Humidity		10		95	%
26	Device dimensions (WxHxD)		483x266x665			mm
27	Housing type		19" rack mountable 6U height			
28	Cooling method		regular water			
29	Water flow		5			liter/min
30	Chiller cooling capacity				1900	W
31	Maximum pressure in water cooling system				3.5	bars


6 Delivery options

- 5V laser modulation signal

7 Certification

Test data shipped with each laser

- Nominal output average power, W
- Pulse repetition rate, kHz
- Operating wavelength, nm
- Pulse duration, ns
- Beam diameter (86% power), mm
- Laser switching ON/OFF time, µs

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8 Isolator external layout

