	<b>TEST RESULTS</b> <b>YTTERBIUM FIBER LASER</b> <b>Model YLR-300/3000-QCW-MM-AC</b> <b>S/N PLMP31901422</b>	Form: Revision: Spec: Page:	P69-00051 1 G22-29650 rev.4 1 of 6
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This product is covered by the U.S. Pat. Nos. 5,422,897 and 5,774,484 and any foreign counterparts thereof, and other patents pending.


The information and the following charts provided below is the result of tests performed in controlled environments by IPG Photonics. These provided useful, but not warranted, information about the functions and performance of the product.

N	Characteristic	Symbol	Test Conditions	Min	Typ.	Max	Test Results	Unit
Optical characteristics								
1.1	Operation Mode			Pulsed / CW			Pulsed / CW	
1.2	Maximum Average Power	P <sub>average</sub>	Pulsed mode	300			307.9	W
		P <sub>CW</sub>	CW mode	300			342.0	W
1.3	Maximum Peak Power	P <sub>peak</sub>	Pulsed mode				3079.25	W
1.4	Duty Cycle	DC	Pulsed mode			50 <sup>1)</sup>	Tested	%
1.5	Pulse Duration	τ	Pulsed mode	0.2		50 <sup>2)</sup>	0.2-50	ms
1.6	Maximal Pulse Energy	E <sub>max</sub>	Pulsed mode	30			30.8	J
1.7	Emission Wavelength	λ			1070		1069.6	nm
1.8	Emission Linewidth	Δλ	Pulsed mode maximum output power		5	6	1	nm
1.9	Long-term Power Instability		T = const maximum output power CW & Pulsed mode		± 0.5	± 1	± 0.5	%
Optical output								
2.1	Output Fiber Termination			QBH-compatible connector			Tested	
2.2	Beam Quality	BPP <sup>3)</sup>	50μm core fiber pulsed mode	1		2	2	mm x mrad
General characteristics								
3.1	Cooling Method			Forced Air				
Electrical characteristics								
4.1	Operating Voltage, single phase			200-240 VAC, 50/60 Hz				VAC

<sup>1)</sup> Maximum duty cycle limit is inversely proportional to peak power: 10% for 3000W, 15% for 2000W, ..., 50% for 600W and lower.

<sup>2)</sup> Maximum pulse duration limit is inversely proportional to peak power: 10ms for 3000W, 15ms for 2000W, ..., 50ms for 600W and lower.

<sup>3)</sup> Measurement tolerance for BPP is +/- 10%.

	<p align="center"><b>TEST RESULTS</b>  <b>YTTERBIUM FIBER LASER</b>  <b>Model YLR-300/3000-QCW-MM-AC</b>  <b>S/N PLMP31901422</b></p>	<p>Form:  Revision:  Spec:  Page:</p>	<p align="center">P69-00051  1  G22-29650 rev.4  2 of 6</p>
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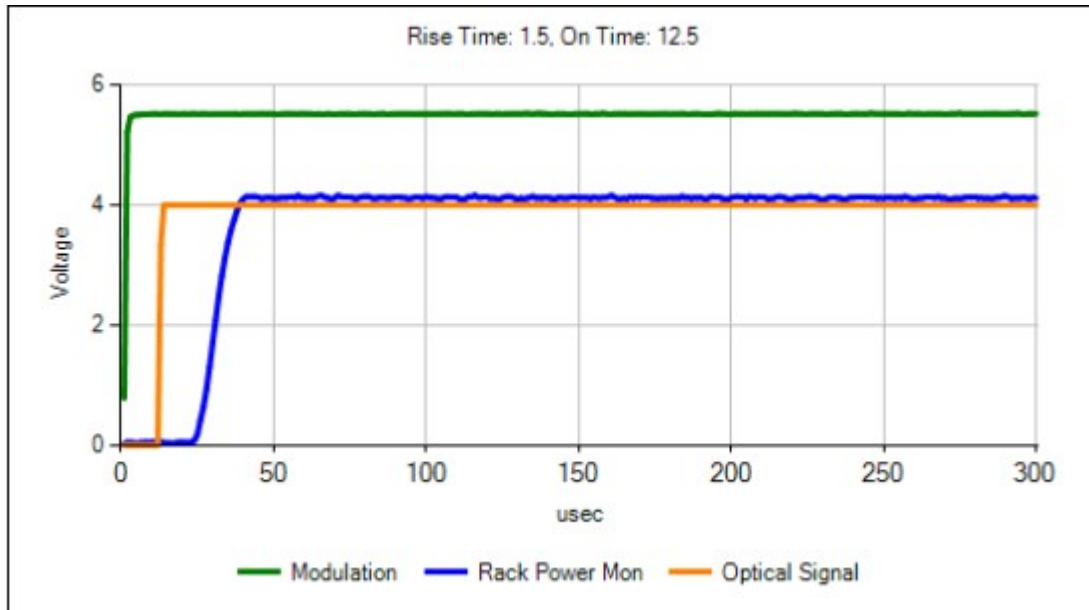
N	Characteristic	Test Conditions	Test Results
	<b>Laser interfaces</b>		
5.1	Control	Analog	Tested
		RS-232	Tested
		Ethernet	Tested

Date:29.10.2019

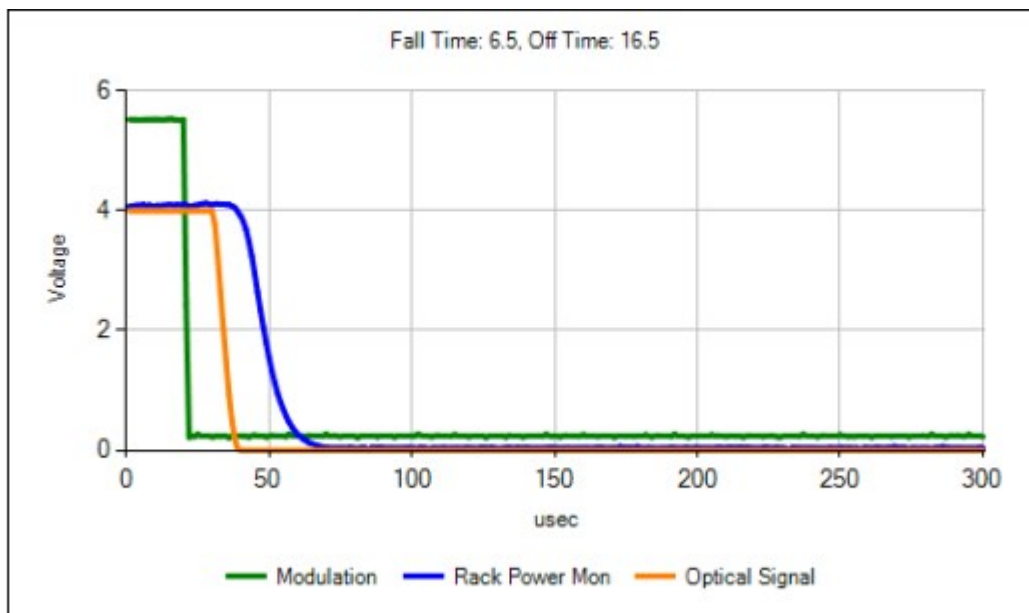
Tested by:Henry Thepsimoung

Approved by:Thomas Rogers

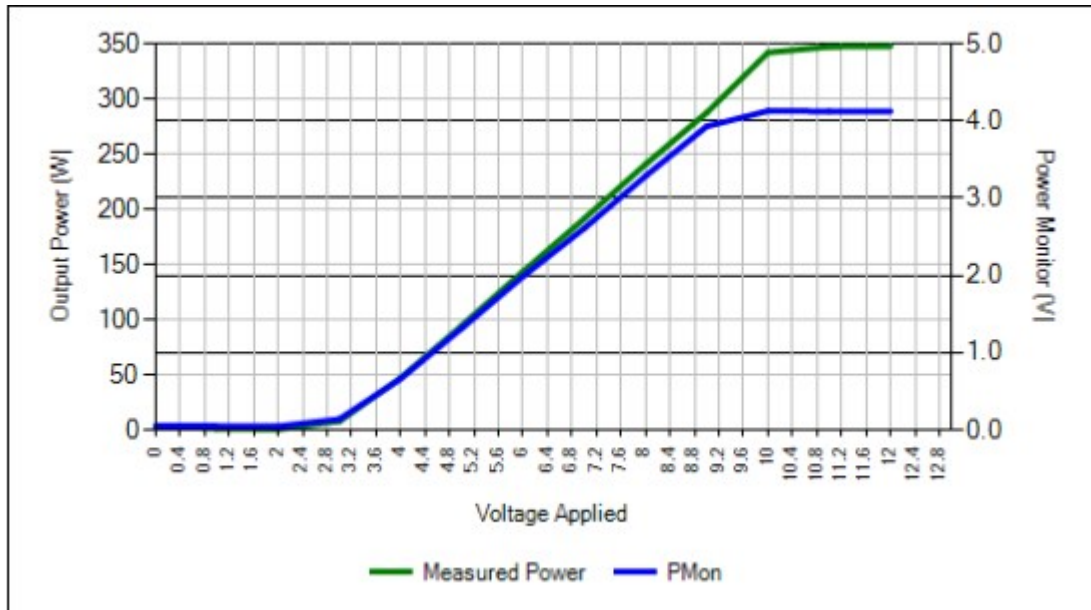
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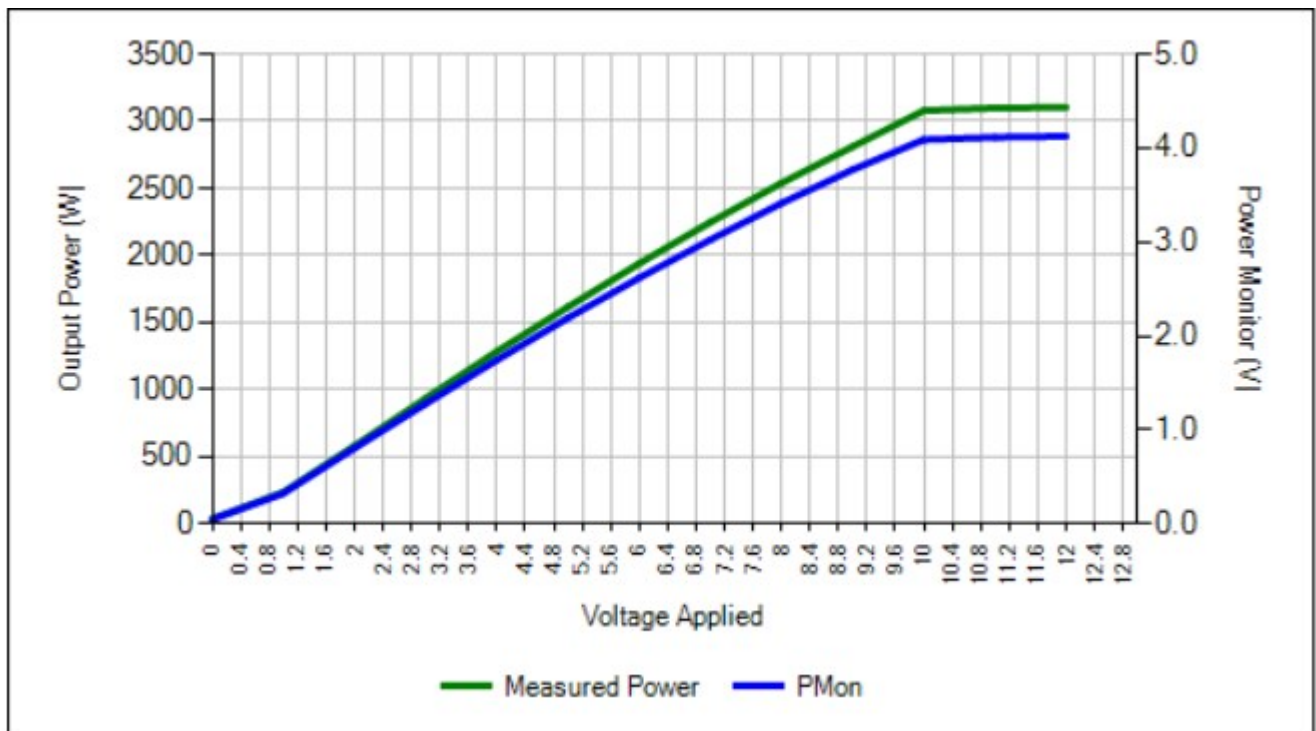
**Fig. 1** Switching ON characteristic at nominal output power



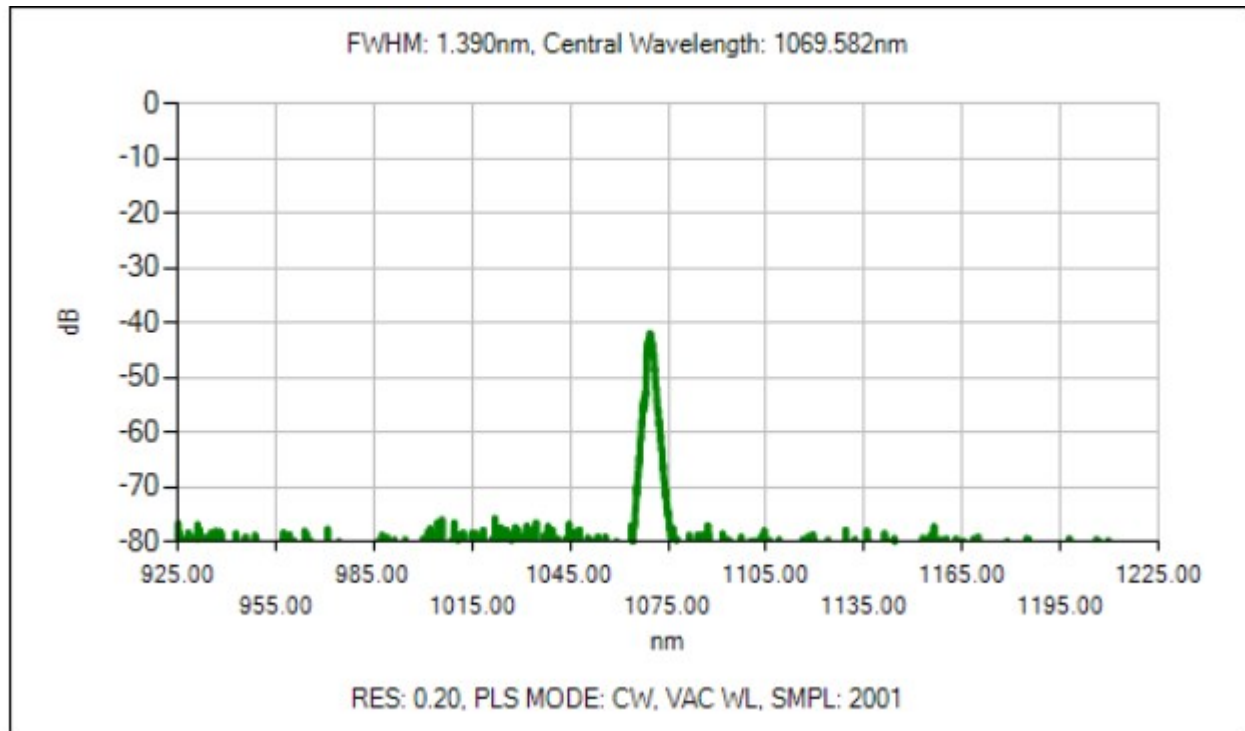
**Fig. 2** Switching OFF characteristic at nominal output power



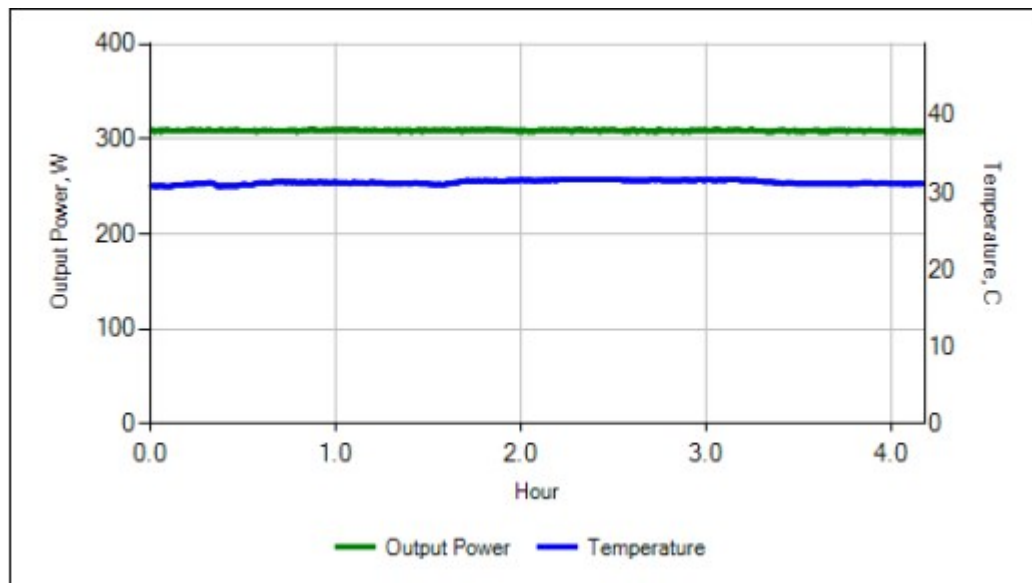
**Fig. 3** CW Mode: Output Power vs. Analog Voltage



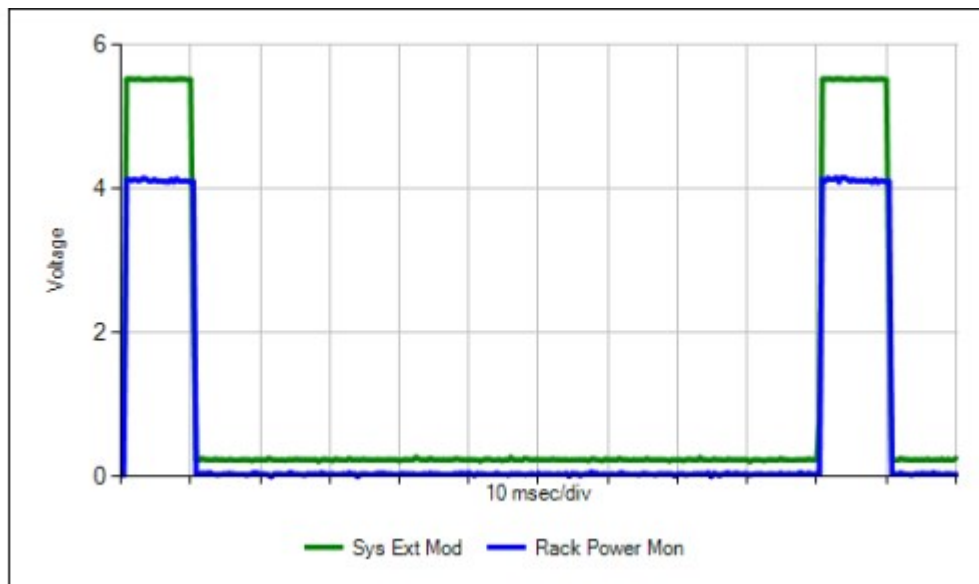
**Fig. 4** Pulsed Mode: Peak Output vs. Analog Voltage at RR=10Hz, 10% Duty Cycle



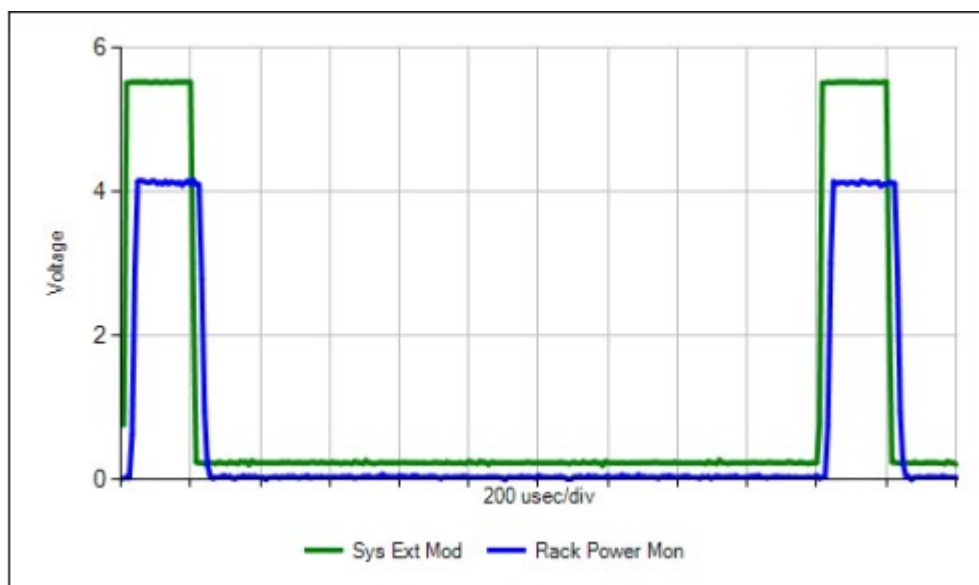
**Fig. 5** Output Spectrum at Nominal Output Power



**Fig. 6** Output Power Stability Chart



**Fig. 7** Pulsed Mode: Laser Output Signal Frequency 10Hz (10% Duty Cycle)



**Fig. 8** Pulsed Mode: Laser Output Signal Frequency 500Hz (10% Duty Cycle)