
FIBER LASER

MODEL: YLR-50-1064-LP
PL1727994

1. Specifications

This section lists specifications of the product. Specifications describe warranted performance under the temperature range 25°C +/- 5°C and relative humidity <80% (unless otherwise noted). All specifications apply after the instrument's temperature has been stabilized after 1 hour of continuous operation.

1. Optical characteristics

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Operation Mode			CW / Modulated			
2	Polarization			Linear			
3	Polarization Extinction Ratio	P _{nom}	ER	17	20		dB
4	Nominal Output Power		P _{nom}	50			W
5	Emission Wavelength* (vacuum)	P _{nom}	λ		1064		nm
6	Emission Linewidth	P _{nom}	$\Delta\lambda$		1.0	2.0	nm
7	Adjustable Output Power Range			5		50	W
8	Power Control Modes			ACC, External Control			
9	Short-term Power Instability	P _{nom} Frequency range: 10 kHz – 20 MHz			1.0	2.0	rms %
10	Long-term Power Instability	P _{nom} , over 8hrs, T=20°C (const) T=20+/-2°C			0.5 1.5	1.5 3.0	%
11	Power Modulation Rate	P _{nom}				20	kHz
12	Red Guide Laser Power			0.1	0.3	1.0	mW
13	Residual Pump Power Level	P _{nom}				-50	dB

*Emission wavelength was requested close to 1065nm

2. Optical output

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Beam Quality		M ²		1.05	1.1	mm
2	Delivery Fiber Length		L		5		m
3	Delivery Cable Bending Radius			100			cm
4	Output Fiber Termination			Collimator			
5	Beam Diameter (1/e ²)		W ₀	4.5	5.0	5.5	mm

3. General characteristics

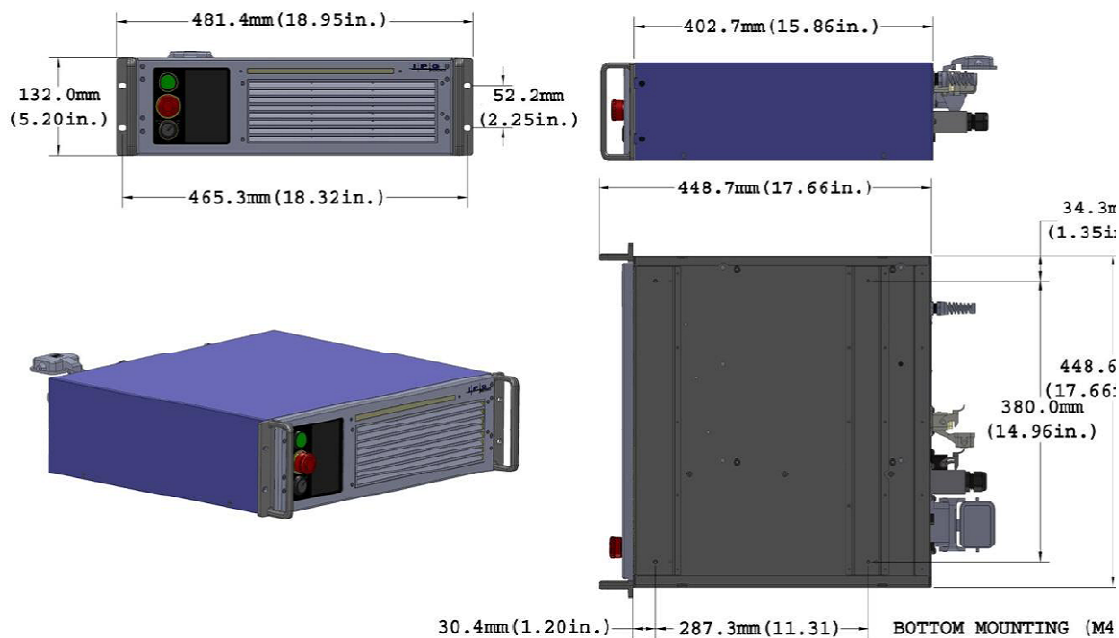
N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Ambient Temperature Range	10		30	°C
2	Humidity	10		95	%
3	Storage Temperature	- 40		+ 75	°C
4	Dimensions, WxDxH:	3U 19" rack mountable 448X394X133			
5	Weight			20	kg
6	Warm-up Time To Start of Operation To Full Stabilization		1 30		min

4. Electrical characteristics

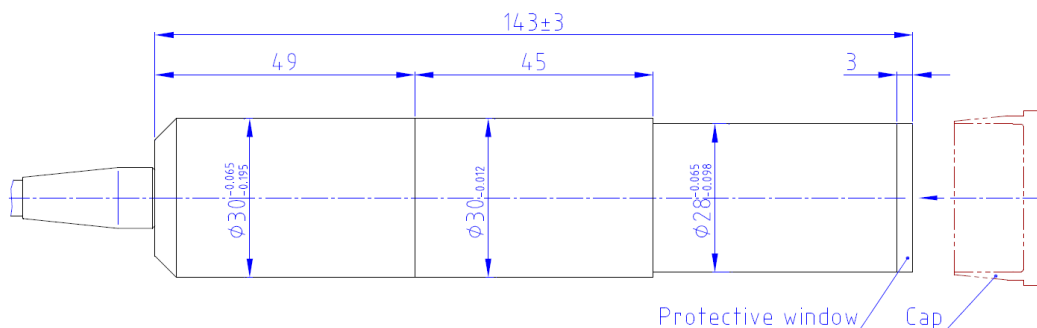
N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Voltage, single-phase	100-120/200-240 VAC, 50/60 Hz			
2	Maximum Power Consumption		255	300	W
3	Control	Display with touch-screen / Analog / RS-232 / Ethernet ****			

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

5. External layout



OH-4 Collimator:



2. Results of Technical Tests

The information and the following charts provided below is the result of tests performed in controlled environments by IPG Photonics. These tests were conducted on IPG's calibrated equipment in accordance with industry standards. The test results provide useful, but not warranted, information about the functions and performance of the product. IPG warrants the product solely to the agreed upon product specifications

Model	YLR-50-1064-LP	
Serial Number	PL1727994	
	SPECIFICATION	TEST RESULTS
<u>Optical Characteristics</u>		
Nominal Output Power, W	50	50
Stable Output Power Range, W	10 to 55	10 to 55
Operational Wavelength (in Vacuum), nm	1065+/-0.5	1065.2
Bandwidth, nm	<2.0	0.7
Output Polarization State	Linear	Linear
Polarization Extinction Ratio, dB	>17	>20
Operation Mode	CW	CW
Power Instability ACC Mode (over 8 hours), %	< 3	0.9
Short-Term Power Instability, % In Frequency Range (1kHz-20MHz)	<2	1.5
<u>Optical Output</u>		
Output Fiber Length, m	5	5
Output Termination	Collimator	Collimator
Beam Quality (M^2)	<1.1	<1.1
<u>Electrical Characteristics</u>		
Supply Voltage for Laser Driver, VAC	100-240	100-240
Nominal Level, %	---	94.5
Maximum Level, %	---	100

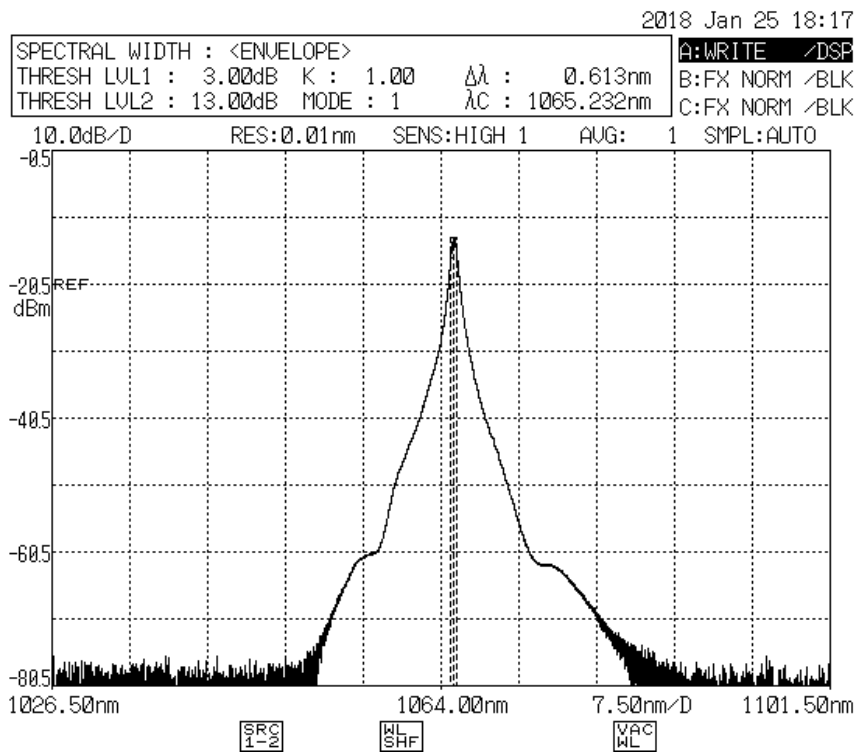


Fig.1. Emission Spectrum at P_{nom}

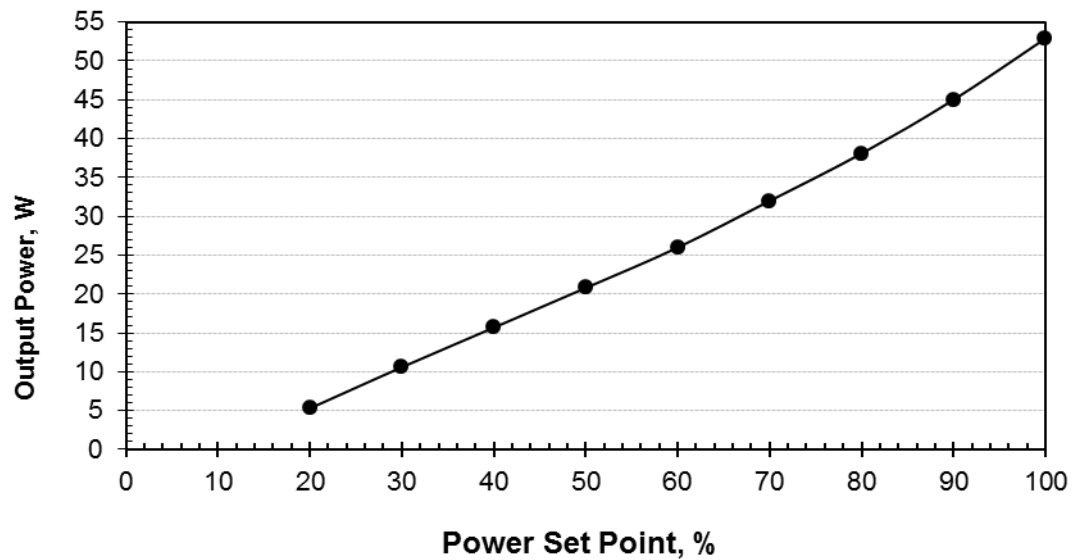


Fig.2. Power Set Point

3. Production Confirmation:

Date: 01/29/2018

Model: YLR-50-1064-LP

Serial Number: PL1727994

Sales Order: S36471

Output Termination: Collimator, 5 meters output cable

Special Features: CE marking, 1065 nm emission wavelength

Checked By: OM, AA