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# **FIBER LASER**

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MODEL: YAR-10-1064-LP-SF

SERIAL NUMBER: PA1910004

# 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.

## Optical Characteristics

Characteristic	Test condition	Symbol	Min.	Typ.	Max.	Unit
Mode of Operation			CW			
Polarization			Linear, along slow axis			
Polarization Extinction Ratio		ER	20			dB
Operational Spectral Range		$\Delta\lambda$	1060		1070	nm
Input Power		$P_{in}$	1		5	mW
Output Power	over $\Delta\lambda$	$P_{nom}$	10			W
Output power tunability			5		100	%
Long-Term Output Power Instability	$P_{nom}$ , over 8hrs, T=20°C (const) T=20+/-2°C			0.5 1.5	1.5 3.0	%, peak-to-peak
Input Isolation			25	30		dB
Ratio of Amplified Signal to ASE Background	over $\Delta\lambda$ RBW=0.01nm		50			dB
Relative Level of Residual Pump Power to the Amplified Output Power	$P_{nom}$				-50	dB
Permissible Back Reflection Level					200	mW

## Optical Cables and Connectors

Characteristic	Test condition	Symbol	Min.	Typ.	Max.	Unit
Input Cable Length				3		m
Output Cable Length				1.5		
Output Metal Jacket OD				7		mm
Output Cable Bending Radius			10			cm
Output Termination			Collimator			
Output Beam quality, $M^2$				1.08	1.15	
Beam $\varnothing$	At 1/e <sup>2</sup> level			0.9		mm

## Electrical Characteristics

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Operating Voltage, single-phase	100-120/200-240 VAC, 50/60 Hz					
Maximum Power Consumption				165	200	W

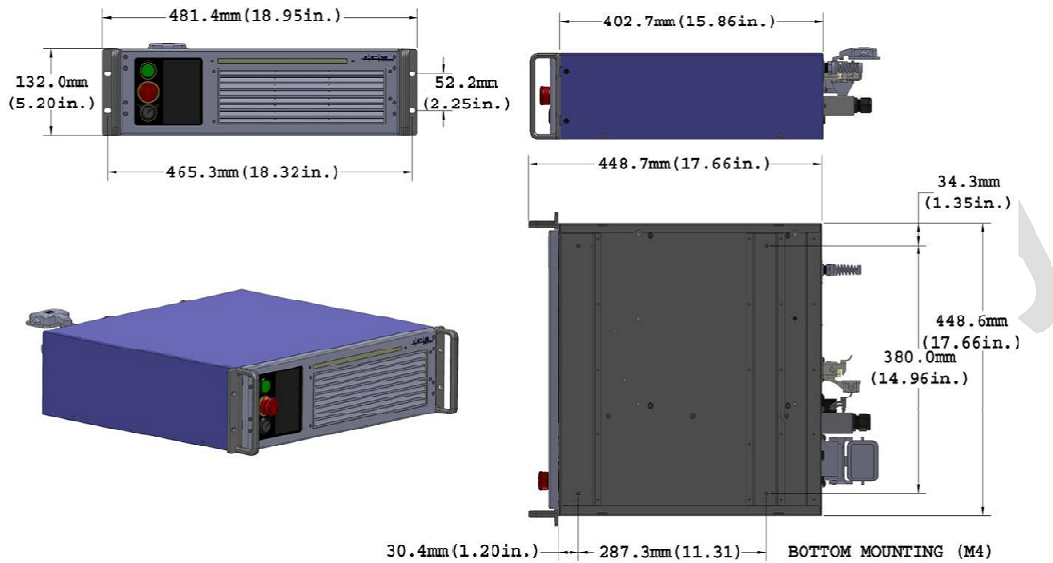
# General Characteristics

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Operating Ambient Temperature Range			10		30	°C
Storage Temperature			-10		65	°C
Warm-up Time to Full Stabilization				15		min
Humidity			20		90	%
Cooling Method			Forced air			
Dimensions W x H x D			3U, 19" rack-mountable 483 x 133 x 424			mm

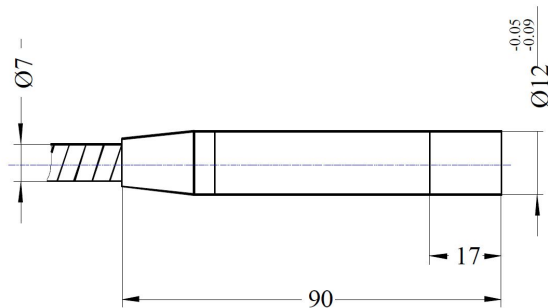
# Control / Monitor Interface

Characteristic	Description
Output Power Stabilization Mode	Pump Diode Current Control (ACC) Optical Output Power Control (APC)
Control	Touch Screen Display, Ethernet, RS-232

# Outline Drawings



## OH-2 Collimator:



# Certification

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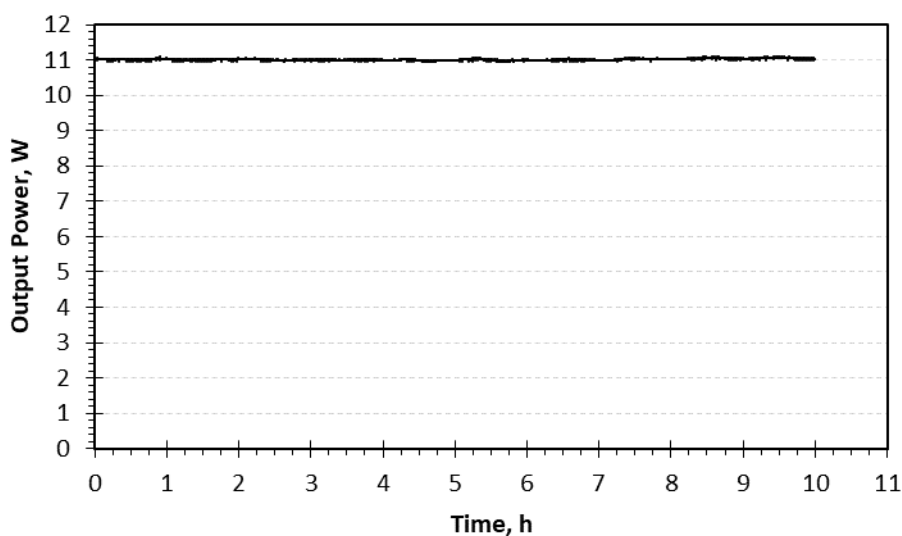
Test data shipped with each laser.

- Serial Number
- Output Power Setpoint
- Output Spectrum
- Long Term Power Stability (8 hours)
- Polarization Extinction Ratio

## 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	YAR-10-1064-LP-SF	
Serial Number	PA1910004	
<b><u>Optical Characteristics</u></b>	Specification	Test Results
Maximum Output Power, W	10 (min)	11.1
Operating Spectral Range, nm	1060-1070	1060-1070
Input Power Range, mW	1-5mW	1-5mW
Output Polarization State	Linear	Linear
Polarization Extinction Ratio, dB	>20	>20
Operation Mode	CW	CW
Output Power Stability (over 8 hours), %	<3	1.4
<b><u>Optical Output</u></b>		
Output Termination	Collimator	Collimator
Output Fiber Length, m	1.5	1.5
Permissible Back Reflection Level, mW	200	200
<b><u>Electrical Characteristics</u></b>		
Supply Voltage for Laser Driver, VAC	100-240	100-240



**Fig.1** Long-Term Output Power Stability

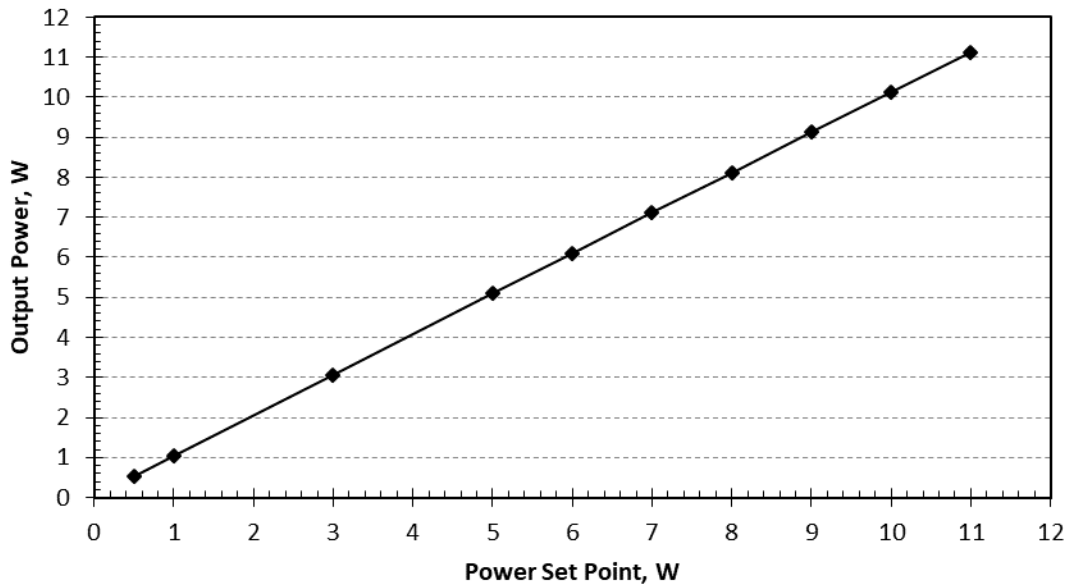


Fig.2 Power Setting

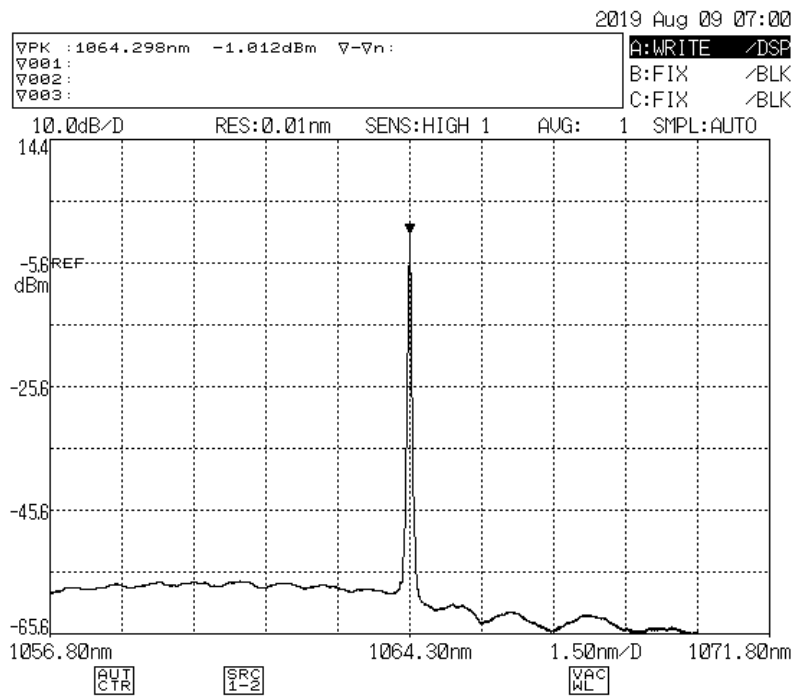


Fig.3 Emission Spectrum at  $P_{nom.}$

### 3. Product Certification

Production Confirmation:

Date: 08/09/2019

**Model: YAR-10-1064-LP-SF**

**Order Number: S47988**

**Serial Number: PA1910004**

**Output Termination: Collimator**

**Custom Features: NA**

**Checked by: JA, OM**