PhotonCom
Photonic Communication Instruments

data sheet

Stabilized HeNe Laser

Key Features

- Frequency locked stabilization system
- Low power consumption
- Fiber coupled optical output
- Easy integration into existing systems

Overview

The **PhotonCom Stabilized HeNe Laser** provides a high stability reference output, conveniently coupled into a single-mode 4/125 µm optical fiber.

Its innovative frequency locked stabilization system allows for a longer useful lifetime of the laser as it maintains the reference stability over time, even as the power decays with aging.

Designed for power efficiency, its lower consumption reduces thermal dissipation increasing electronic components longevity and prevents runaway thermal failure as the HeNe tube weakens in power.

Practically suited for easy integration into existing equipment, the PhotonCom Stabilized HeNe Laser can be operated from standard power supplies (12V – 15V). The stabilizer system includes an optional embedded power sensor on board and comes with a firmware based monitoring system that can be customized for status reporting.

Applications

- Drop-in replacement part (wavemeters)
- Fiber optic components testing and measurement
- Manufacturing
- Research and development

sales@photoncom.com www.photoncom.com 1-866-396-6248

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Specifications

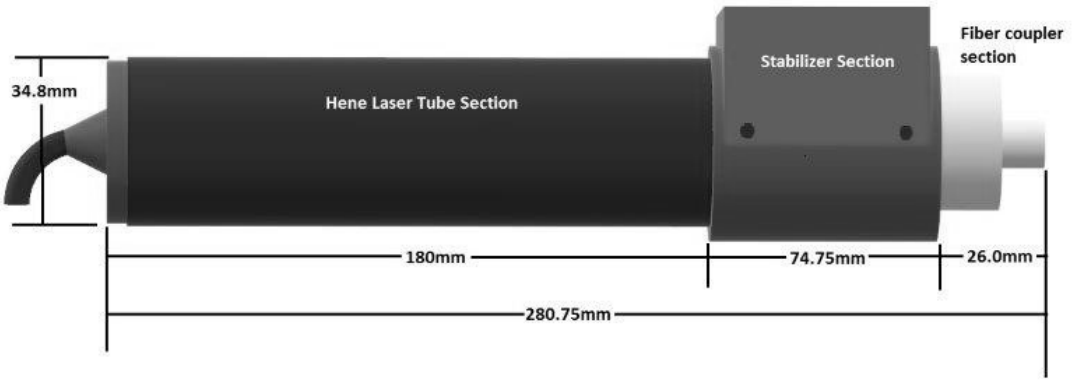
Electrical		Optical	
Laser			
Ignition voltage	≤ 7 kV	Neon isotope	99.9 % ^{20}Ne
Operating voltage	1000 ± 100 V	Absolute lock frequency adjustable	632.991 nm (473.613 THz) vacuum
Operating current *	3.5 ± 0.2 mA	Output power	≥ 0.5 mW
Break current	< 2.8 mA	Longitudinal mode spacing (c/2L)	1085 MHz
Stabilizer		Amplitude noise 30 Hz - 10MHz **	≤ 0.2 % rms
Supply voltage	12 to 15 V DC	Frequency stability (10 mins)	≤ 5 MHz (0.01ppm)
Max current consumption	1 A	Time to lock (from room temp)	≤ 4 mins
		Warm up period (from room temp)	≤ 15 mins
		Lifetime	≥ 25000 hours

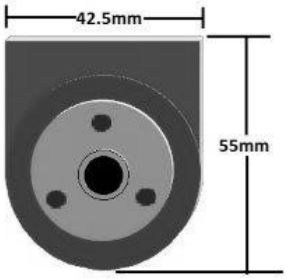
* can tolerate 4mA operation

** depends on the power supply

Environmental		Mechanical	
Temperature range	+15 to +35 °C (operating) ; - 40 to +80 ° C (storage)	Outline	See drawing
Relative humidity	≤ 80 % non-condensing	Installation position	User defined
Altitude	3000 m (operating) ; 12000 m (storage)		

> Product specifications and descriptions provided in this document are subject to change without notice.





Ordering code: P5LAS-1 Custom configurations are available upon request

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