

HORUS

LASER

AN EYE SET ON YOUR REQUEST



Fiber pigtailed Sub-ns Microchip Lasers

HLF-I series

The HLF-I products are based on a solid-state, diode-pumped and passively Q-switched laser which is coupled in a single mode fiber.

With our proprietary and patented design, our lasers generate single pulse at 1064 nm with duration as short as 600 ps, repetition rates up to 100 kHz, average power up to 320 mW and energies up to 12 μ J.

The extremely reliable and robust microchip design is perfect for advanced OEM industrial and scientific applications.

The compact design is best suited for almost any system integration.



Applications	Features
<p>Supercontinuum generation</p> <p>Laser seeding for fiber amplification</p> <p>Light Detection and Ranging (LIDAR)</p> <p>Distributed Temperature Sensing (DTS)</p> <ul style="list-style-type: none">3D Scanning3D ImagingBiophotonicsCARS pumpingPollution monitoringAtmospheric SciencesMicromachining	<p>Passively Q-Switched</p> <p>Proprietary and patented Microchip design</p> <p>Singlemode output fiber</p> <p>Sub-ns pulses (600 ps to 2 ns) at 1064nm</p> <p>Pulses without parasite (no second pulse)</p> <p>Repetition rate up to 100 kHz</p> <p>Average power up to 320 mW</p> <p>Peak power up to 15 kW</p> <p>Externally triggerable</p> <p>Electronic power supply with analog or numerical control</p>

Visible and Invisible Laser Radiation
Avoid Eye or Skin Exposure
to DIRECT or SCATTERED radiation
Class 3B (III B) Laser Product
WAVELENGTH 1064nm
PULSE WIDTH < 10 ns AVG POWER < 1W
THIS LASER DOES NOT COMPLY
WITH 21 CFR 1040.10
NOR IEC 60825-1+A1+A2:2001
USE ONLY AS AN OEM COMPONENT



◆ Technical specifications:

	HLF -I-F010	HLF -I-F020	HLF -I-F040	HLF -I-F070
Wavelength	1064 nm	1064 nm	1064 nm	1064 nm
Pulse Repetition Rate (fixed)	10 kHz	20 kHz	40 kHz	70 kHz
Average Power ⁱ	70 - 120 mW	140 - 240 mW	240 - 320 mW	200 - 280 mW
Pulse Energy ⁱ	7 - 12 μ J	7 - 12 μ J	6 - 8 μ J	3 - 4 μ J
Pulse Width ⁱ	0.6 - 2 ns	0.7 - 2 ns	0.8 - 2 ns	0.8 - 2 ns
Power Stability (6 hours) ⁱⁱ	< \pm 3%			
Second Pulses	NA ⁱⁱⁱ			
Optical Fiber	Corning HI980 or equivalent (0.22 NA)			
Polarization	Random			
Optical Fiber Length	0.7 m			
Package Size (without heatsink)	90 x 90 x 50 mm ³			
Expected Lifetime	> 15.000 h			
Operating Temperature	5 - 35 °C (non condensing)			
Storage Temperature	0 - 60 °C			
Laser Classification	3B - IIIB			
Options	External trigger, Photodiode signal output, PM fiber			

i. Fixed and depends on other parameters (average power, pulse width, pulse energy).

ii. After 10 minutes warm-up and temperature variation < \pm 3 °C.

iii. Less than 1% (limited by detection).

Other specifications (pulse repetition rates, powers and pulse widths) on request.

◆ Electronic controller:

OEM module: 12VDC, size: 170 x 102 x 35 mm³

Desktop module: 110-240VAC, size: 210 x 190 x 45 mm³

OEM board: 12VDC, size: 135 x 100 x 20 mm³

◆ Ordering information:

HLF-I-Fxxx-XYZ

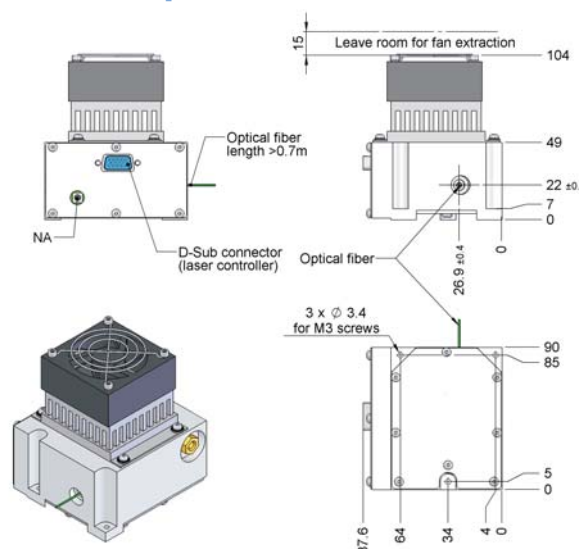
Frequency in kHz

X: Electronic Controller {
 0: OEM Module
 1: Desktop Module
 2: OEM Board

Y: External Trigger {
 0: Free Running
 1: with Internal Trigger
 2: with External Trigger

Z: Photodiode Output Signal {
 0: without
 1: with

◆ Laser footprint:



*Can be supplied without the heatsink module.
 The fan is needed for powers higher than 80 mW.*