

HORUS

LASER

AN EYE SET ON YOUR REQUEST



532 nm Sub-ns Microchip Lasers

HLX-G series

The HLX-G products are based on a solid-state, diode-pumped and passively Q-switched laser.

With our proprietary and patented design, our lasers generate single pulse at 532 nm with duration as short as 600 ps, repetition rates up to 50 kHz, average power up to 150 mW and energies up to 10 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

Light Detection and Ranging (LIDAR)

Atmospheric Sciences

Biophotonics

Biohazard detection

MALDI

Microdissection

Laser Induced Fluorescence (LIF)

Laser Induced Breakdown Spectroscopy (LIBS)

RAMAN Spectroscopy

Micromachining

Gemstone marking

Features

Passively Q-Switched

Proprietary and patented Microchip design

Sub-ns pulses (600 ps to 1 ns) at 532nm

Pulses without parasite (no second pulse)

Repetition rate up to 50 kHz

Average power up to 150 mW

Peak power up to 15 kW

Externally triggerable

**Electronic power supply with
analog or numerical control**

VISIBLE LASER RADIATION

Avoid Eye or Skin Exposure
to DIRECT or SCATTERED radiation
Class 3B (III B) Laser Product
WAVELENGTH 532nm
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:

	HLX -G-F005	HLX -G-F010	HLX -G-F020	HLX -G-F040
Wavelength	532 nm	532 nm	532 nm	532 nm
Pulse Repetition Rate (fixed)	5 kHz	10 kHz	20 kHz	40 kHz
Average Power ⁱ	50 mW	30 - 50 mW	40 - 100 mW	40 - 120 mW
Pulse Energy ⁱ	10 μ J	3 - 5 μ J	2 - 5 μ J	1 - 3 μ J
Pulse Width ⁱ	1 ns	0.6 - 1 ns	0.6 - 1 ns	0.8 - 1 ns
Power Stability (6 hours) ⁱⁱ	< \pm 3%			
Second Pulses	NA ⁱⁱⁱ			
Beam Quality (M ²)	< 1.2	1.2	1.3	1.3
Polarization	> 100:1			
Waist radius (1/e ² in intensity)	35 μ m \pm 4	35 μ m \pm 4	30 μ m \pm 3	30 μ m \pm 3
Beam Divergence (full angle)	12 mrad	12 mrad	15 mrad	15 mrad
Ellipticity at the Focusing Point	< 1.4	< 1.4	< 1.5	< 1.5
Package Size (without heatsink)	90 x 90 x 50 mm ³			
Expected Lifetime	> 8.800 h			
Operating Temperature	5 - 35 °C (non condensing)			
Storage Temperature	0 - 60 °C			
Laser Classification	3B - IIIB			
Options	External trigger, Photodiode signal output			

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:

HLX-G-Fxxx-XYZ

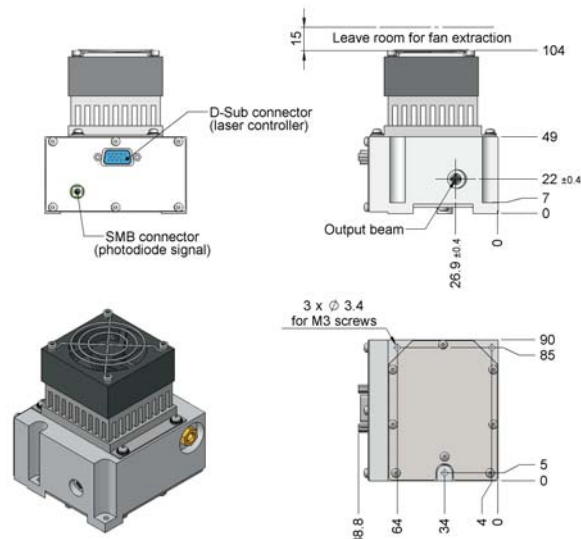
Frequency in kHz

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.*