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# HLX-G

MICROCHIP  
LASERS



## 532 nm SUB-ns MICROCHIP LASERS



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 500 ps, repetition rates up to 100 kHz, average powers up to 200 mW and energies up to 20  $\mu$ J.



### FEATURES

- Passively Q-switched
- Proprietary microchip design
- Sealed package
- Clean pulse (no parasite)
- Repetition rate up to 100 kHz
- Externally triggerable
- Air cooled

### APPLICATIONS

- Micromachining
- Light detection and ranging (LIDAR)
- Biohazard detection
- Biophotonics
- Pollution monitoring
- LIF (Laser Induced Fluorescence)
- LIBS (Laser Induced Breakdown Spectroscopy)
- Raman spectroscopy



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# HLX-G

## 532 nm SUB-ns MICROCHIP LASERS

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.

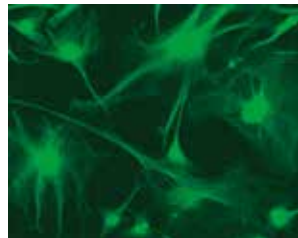
MICROCHIP  
LASERS



OPTICAL SPECIFICATIONS	HIGH ENERGY		STANDARD		HIGH REP RATE	
Pulse Rep Rate range	1 kHz	5 kHz	20kHz	30 kHz	40 kHz	50kHz
Pulse energy (up to)	20 $\mu$ J	13 $\mu$ J	10 $\mu$ J	5 $\mu$ J	3 $\mu$ J	2 $\mu$ J
Average power	20 mW	65 mW	200 mW	150 mW	120 mW	100 mW
Pulse duration typ. range	< 1ns	< 1ns	< 1ns	< 1ns	< 1ns	~ 1ns
Spatial mode	TEM 00, M <sup>2</sup> < 1,2					
Power stability (rms 24H)	< 2%					
Beam diameter typ.	50-100 $\mu$ m					
Ellipticity at focusing point	Roundness correction < 10% in option					
Polarization	> 100:1					
Laser class	III B					
Operating temperature	5-40°C (non condensing)					
Expected lifetime	> 15,000 h					
OTHER SPECIFICATIONS						
Laser head dimension	90 x 85 x 70 mm (with heat sink)					
Photodiode output signal	TTL compliant					
External trigger option	TTL signal requested					
OEM driver	12 VDC/5A - dimension 115 x 85 x 35 mm					
Desktop driver	110-240 VAC - dimension 210 x 170 x 45 mm					



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### OPTION

UV 355 nm and 266 nm on demand  
OEM or desktop controller  
Customised beam shaping



CAUTION – VISIBLE  
LASER RADIATION AVOID EYE AND  
SKIN EXPOSURE TO DIRECT OR  
SCATTERED RADIATION  
CLASS 3B OR 4 LASER PRODUCT

# HLX-I

MICROCHIP  
LASERS



## 1064 nm SUB-ns MICROCHIP LASERS



The **HLX-I** 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 1064 nm with duration as short as 450 ps, repetition rates up to 100 kHz, average powers up to 500 mW and energies up to 50  $\mu$ J.



### FEATURES

- Passively Q-switched
- Proprietary microchip design
- Sealed package
- Clean pulse (no parasite)
- Repetition rate up to 100 kHz
- Externally triggerable
- Air cooled

### APPLICATIONS

- Micromachining
- Light detection and ranging (LIDAR)
- Laser seeding for fiber amplification
- Biophotonics
- Pollution monitoring



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# HLX-1

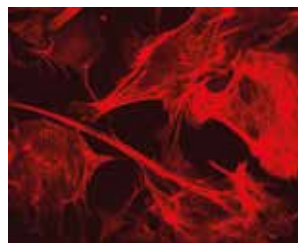
## 1064 nm SUB-ns MICROCHIP LASERS

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.

MICROCHIP  
LASERS



OPTICAL SPECIFICATIONS	HIGH ENERGY		STANDARD		HIGH REP RATE		LONG PULSE
Pulse Rep Rate range	1 kHz	5 kHz	20kHz	30 kHz	40 kHz	100 kHz	5kHz
Pulse energy (up to)	40 $\mu$ J	30 $\mu$ J	20 $\mu$ J	17 $\mu$ J	10 $\mu$ J	3 $\mu$ J	50 $\mu$ J
Average power	40 mW	150 mW	400 mW	500 mW	400 mW	300 mW	250 mW
Pulse duration typ. range	< 1ns	< 1ns	~ 1ns	~ 1ns	~ 1ns	~ 2 ns	~ 4 ns
Spatial mode	TEM 00, $M^2 < 1,2$						
Power stability (rms 24H)	< 2%						
Beam diameter typ.	100-200 $\mu$ m						
Polarization	> 100:1						
Laser class	III B or IV						
Operating temperature	5-40°C (non condensing)						
Expected lifetime	> 15,000 h						
OTHER SPECIFICATIONS							
Laser head dimension	90 x 85 x 70 mm (with heat sink)						
Photodiode output signal	TTL compliant						
External trigger option	TTL signal requested						
OEM driver	12VDC/5A - dimension 115 x 85 x 35mm						
Desktop driver	110-240VAC - dimension 210 x 170 x 45mm						



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### OPTION

- Fiber coupling (SMF, PM, LMA, PCF...)
- 2 output emission
- OEM or desktop controller
- Average power up to 1W
- Customised beam shaping



CAUTION – INVISIBLE  
LASER RADIATION AVOID EYE AND  
SKIN EXPOSURE TO DIRECT OR  
SCATTERED RADIATION  
CLASS 3B OR 4 LASER PRODUCT