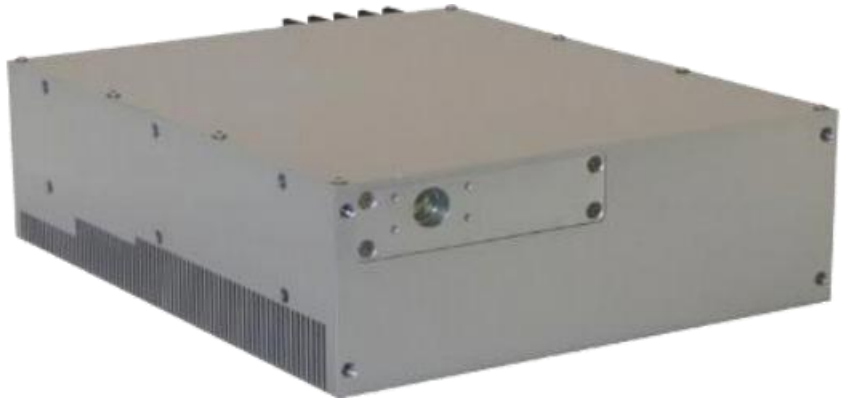
Wedge

Short Pulse Q-Switched DPSS Laser



Features

Up to 4 mJ Pulse Energy

4 MW Peak Power

400 ps to 2,5 ns Pulsewidth

Single Shot to 100 kHz

266,355,532,1064,1570,3100nm

MOPA configurations

Monolithic Design

Air Cooling

Low heat waste

Applications

Micromachining of glass

Specialty marking

Thin film removal

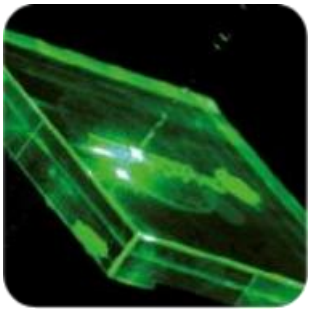
LIDAR and Bathymetry

Non-linear spectroscopy

Harmonic and parametric generation

Visible to IR OPO pumping

TeraHertz generation



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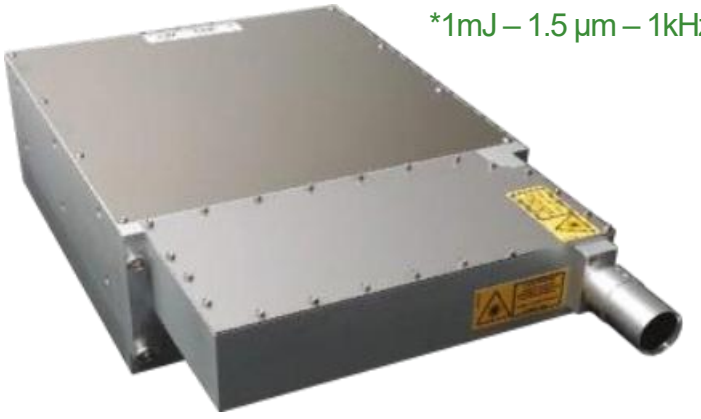
Wedge HB and XB laser models are available at different wavelengths and their main featues are reported in the table below.
All the configurations are based on our proprietary fast active Q-Switch technology, the key point for all the applications requiring high performances in terms of synchronization between the laser and the entire system.

Wedge HB and XB models

	HB 266	HB 355	HB 532	HB 1064	HB 1570	XB 266	XB 355	XB 532	XB 1064	XB 1570	XB 3100
Primary wavelength	266 nm	355 nm	532 nm	1064 nm	1570 nm	266 nm	355 nm	532 nm	1064 nm	1570 nm	3100 nm
Max Pulse Energy	150 µJ	200 µJ	1 mJ	2 mJ	400 µJ	500 µJ	600 µJ	2 mJ	4 mJ	0.8 mJ	> 0.1 mJ
Q-Switch Rep. Rate	Single Shot to 2 kHz					Single Shot to 1 kHz					Single Shot to 2 kHz
Pulsewidth	< 1.5 ns				< 2.5 ns	< 1.5 ns				< 2.5 ns	< 3 ns
Max Peak Power	120 kW	150 kW	800 kW	1.8 MW	200 kW	300 kW	400 kW	1.8 MW	3.6 MW	400 kW	> 30 kW
Polarization	Linear 100:1 (option: circular polarization)					Linear 100:1 (option: circular polarization)					
Cooling	Air-cooled (option: water cooling and contact cooling)					Air-cooled (option: water cooling and contact cooling)					
DC IN Voltage	**Dual 5 V - 15 V DC**					**Dual 9 V - 15 V DC**					



*1mJ – 1.5 µm – 1kHz Eye-safe

OPTIONS AVAILABLE:

Beam expanding and collimation optics
Multi-wavelength configurations
Multimodal Fiber coupling
Low jitter option
Remote control box and software interface
AC-DC power supply

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Wedge HF and XF are also actively Q-Switched lasers and this feature together with the sub-ns pulsewidth makes these lasers unique on the market. The extremely compact and rugged design coming from airborne applications is very appreciated also in industrial and instrumentation fields.

	Wedge HF and XF models									
	HF 266	HF 355	HF 532	HF 532 Plus	HF 1064	XF 266	XF 532	XF 532 Plus	XF 1064	XF 1064 Plus
Primary wavelength	266 nm	355 nm	**532 nm**	**532 nm**	1064 nm	266 nm	532 nm	**532 nm**	1064 nm	**1064 nm**
Max Pulse Energy	15 µJ	40 µJ	100 µJ	120 µJ	180 µJ	5 µJ	30 µJ	40 µJ	70 µJ	80 µJ
Q-Switch Rep. Rate	single shot to 50 kHz	single shot to 100 kHz		**20 to 100 kHz**	single shot to 100 kHz	single shot to 50 kHz	single shot to 100 kHz	**50 to 200 kHz**	single shot to 100 kHz	**50 to 200 kHz**
Pulsewidth	700 ps to 1.5 ns	500 ps to 1 ns	700 ps to 2.5 ns	**500 ps to 2 ns**	700 ps to 2.5 ns	400 ps to 700 ps	400 ps to 1.5 ns	**400 ps to 1.6 ns**	400 ps to 1.5 ns	**400 ps to 1.6 ns**
Max Peak Power	20 kW	80 kW	140 kW	**200 kW**	250 kW	10 kW	75 kW	**90 kW**	175 kW	**150 kW**
Polarization	Linear 100:1 (option: circular polarization)					Linear 100:1 (option: circular polarization)				
Beam quality (M^2)	< 1.5					< 1.3				
Cooling	Air-cooled (option: water cooling and contact cooling)					Air-cooled (option: water cooling and contact cooling)				
DC IN Voltage	24 V					24 V				

OPTIONS AVAILABLE:

Beam expanding and collimation optics
Multi-wavelength configurations
Multimodal Fiber coupling
Low jitter option
Remote control box and software interface
AC-DC power supply

*C-Wedge 355-532-1064

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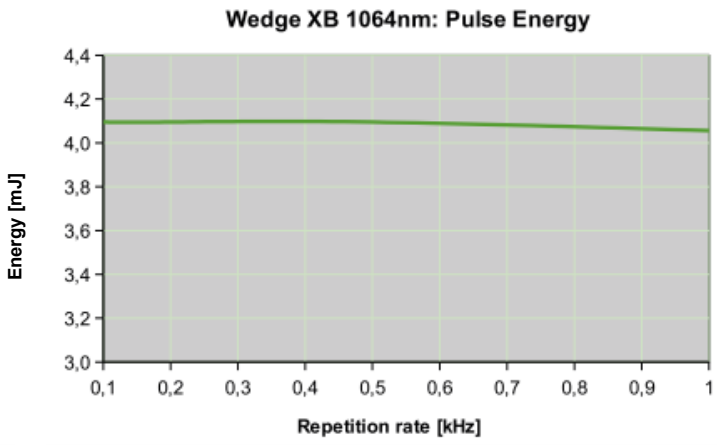
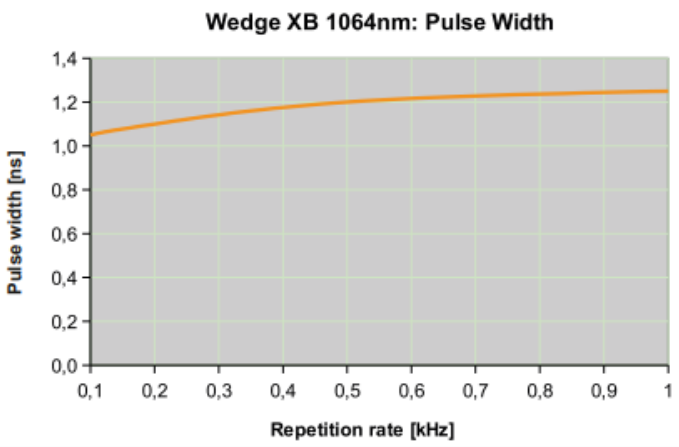
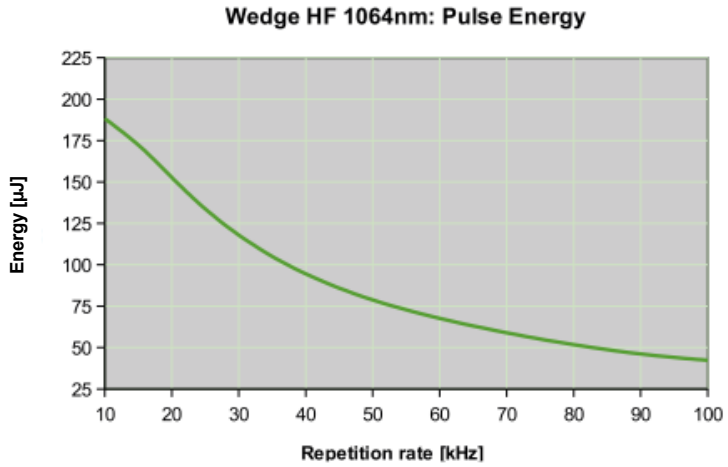
In order to better describe the performances of the Wedge models, please refer to the specific datasheets available for each model.
Below you can find the nominal perfomance curves related to the infrared versions of the Wedge XB 1064nm and of the Wedge HF 1064nm.

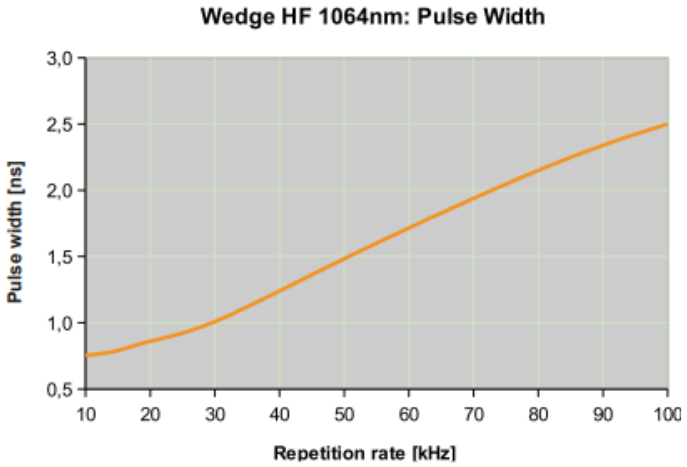
Wedge XB 1064nm – PERFORMANCE CURVES





Wedge HF 1064nm – PERFORMANCE CURVES





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