VXL™ SERIES LASER DATASHEET

VEXLUM

SINGLE-FREQUENCY LASER *for enterprise*

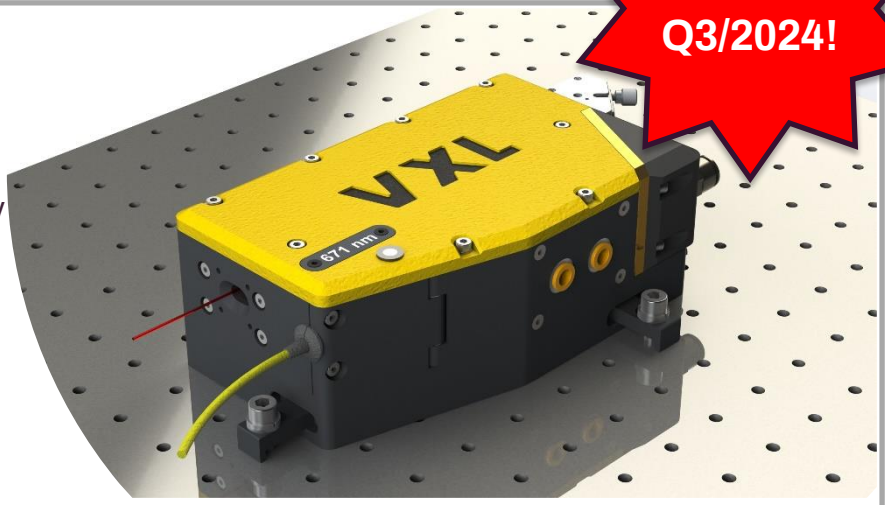
COMING Q3/2024!

Key benefits

- High-output power
- Broad-wavelength coverage
- Narrow-linewidth single frequency
- Excellent beam quality

For system integration

- Compact modular design
- Rugged sealed laser cavity
- Unparalled SWaP-C for watt-level output
- Improved system performance
- High fiber coupling efficiency



Vertical-external-cavity surface-emitting laser (VECSEL)
a.k.a. Optically pumped semiconductor laser (OPSL)

	VXL™ SF	VXL™ SHG
Architecture	Direct emitting VECSEL	Intracavity doubled VECSEL
Gain	Optically-pumped semiconductor	
Wavelength[1]	700 – 2150 nm	350 – 750 nm
Power[2]	0.5 – 12 W	0.1 – 5 W
Additional output[3]	-	Secondary fundamental output for frequency-/phase locking
Beam quality	M^2 < 1.1 TEM_{00}	M^2 < 1.2 TEM_{00}
Free-running linewidth	< 10 kHz (100 µs)	
Mode-hop free tuning range[4]	> 1 GHz	
Coarse tuning	+/- 1 THz	
Frequency locking	Piezo actuator, 10 kHz bandwidth	
Phase locking	Intra-cavity electro-optical modulator, 1 MHz bandwidth	
Laser size	**176 mm x 102 mm x 65 mm (1.2 L)**	
Control electronics[5]	Improved control electronics for CW operation	
Cooling[5]	**Air-cooling or water-cooling**	

[1] Center wavelength can be selected within the provided wavelength range.
[2] Output power is wavelength and cooling dependent. See next page for example power levels with water cooling.
[3] Both outputs can be fiber coupled to polarization maintaining single-mode fiber with high (>75%) coupling efficiency.
[4] Mode-hop free tuning range corresponds to the laser cavity free-spectral range.
[5] The control unit and chiller are 19" rack installable.

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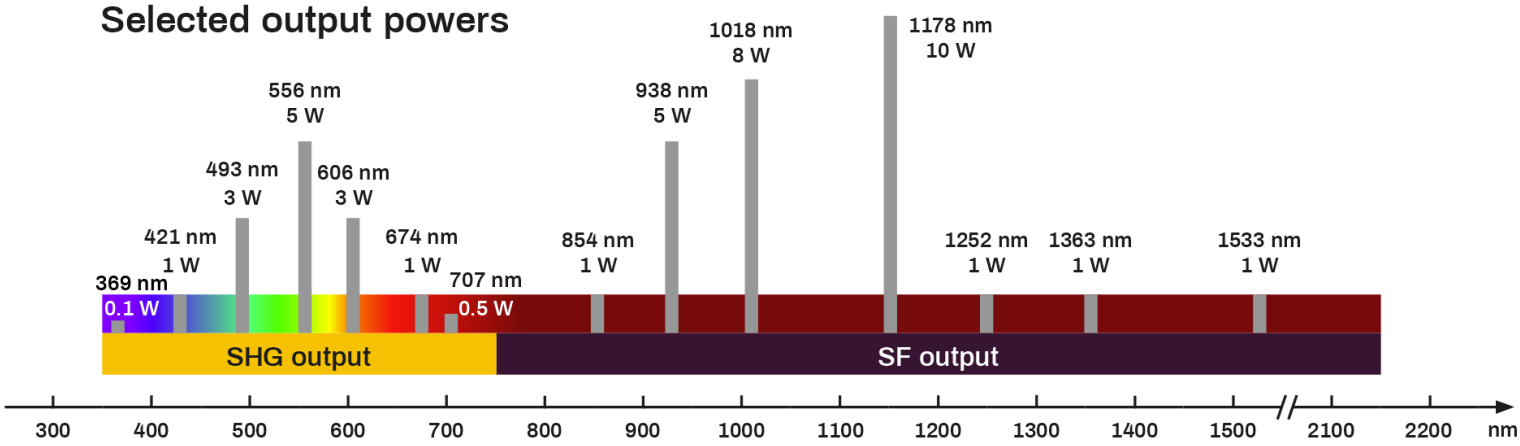
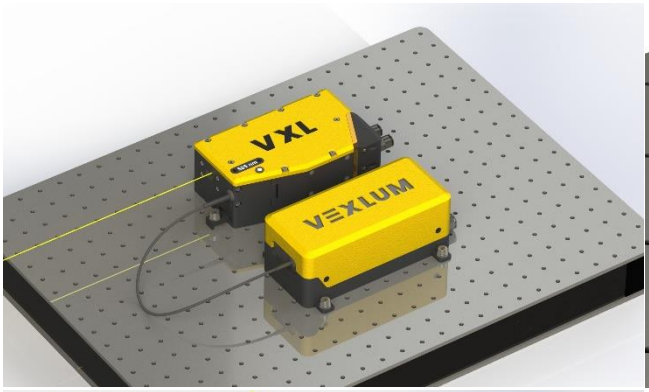
Compact single-frequency laser for system integration

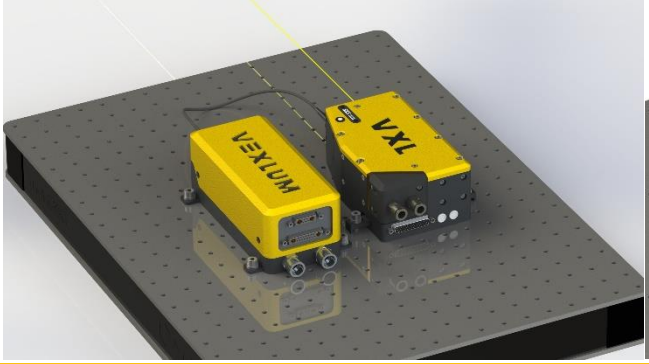
Next generation VECSEL platform

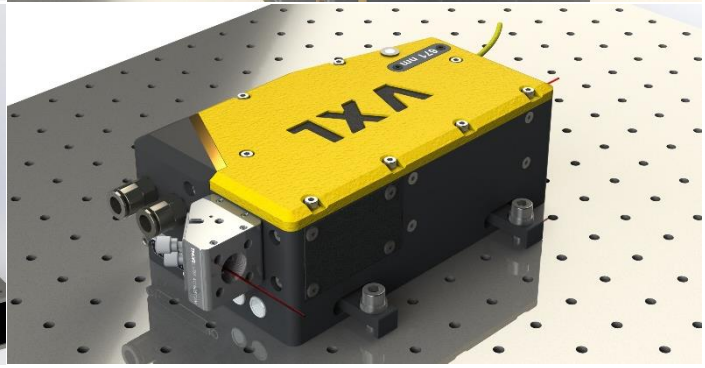
- Designed for system integration and for 24/7 operation
- Reduced system size, weight, power consumption and cost (SWaP-C)
- Modular design for easy and fast servicing with spares
- Fiber-in & fiber-out geometry with remote control for fieldable applications

Selected output powers









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