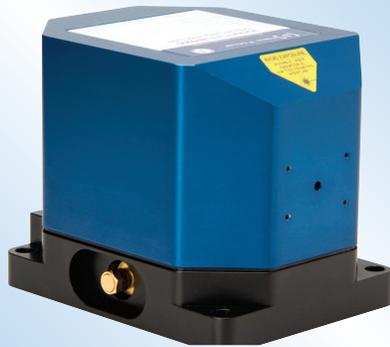


Vortex™ Plus 6800 Precision Tunable Lasers

SIMPLY BETTER PHOTONICS™



Vortex Plus Laser Head

Vortex™ Plus Advantages

- Higher power and narrower linewidth
- 100 MHz current modulation
- Magnetic Damping and Star-Flex Actuation
- Operates with new TLB-6800-LN low noise controller

TLB-6800-LN Advantages

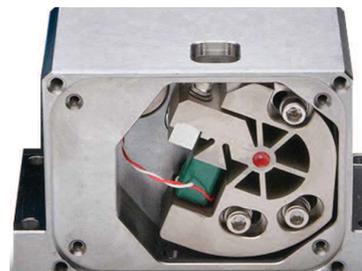
- Built in function generator
- Controller automatically sets temperature and current
- Automatic laser head recognition

The all new Vortex Plus™ Precision Series Single Mode Finely-Tuned Laser is the latest addition to our precision tunable lasers. The Vortex Plus provides higher power than ever, combined with the same stability, mode-hop-free tuning range, and narrow linewidth as the Vortex II. In addition, the Vortex Plus includes an SMA port for direct to diode high speed current modulation. When ordering, please specify the exact center wavelength (to 10 pm) in vacuum. Part number includes complete laser system and the new TLB-6800-LN Laser Controller. Heads and controllers can also be sold separately.

Our Model TLB-6800-LN laser controller is designed to operate with either the TLB-6800 Vortex™ Plus Tunable Lasers or TLB-7100 Vantage™ Tunable Lasers. The controller allows you to easily fine tune and adjust the output power or bias current with the press of a button or via the USB/RS-232 interface with the click of a mouse. There is no need for an external function generator to drive the piezo of your tunable laser with the built in function generator. The TLB-6800-LN controller has an easy to access front panel controls with an included output to synchronize with other devices.



TLB-6800-LN controller.



Star-Flex Actuation

Star-Flex is a motion actuation design like no other. Thermal and finite element analyses led us to the Star-Flex design that provides stiff, reproducible rotational motion without any translation. Further reduction in jitter is accomplished with the patent-pending technique of magnetic damping providing minimal frequency jitter and drift.



Vortex™ Plus 6800 Precision Tunable Lasers

Model Number	Mode-Hop Free Tuning Range	Available Wavelengths ²	Typical Minimum Power
TLB-6802-455	>25 GHz	455-457 nm	40 mW @ 455 nm
TLB-6802	>25 GHz	459-461 nm	40 mW @ 461 nm
TLB-6804	>120 GHz	632.5-640 nm	8 mW @ 638 nm
TLB-6811	>100 GHz	725-741 nm	20 mW @ 737 nm
TLB-6813	>100 GHz	765-781 nm	70 mW @ 780 nm
TLB-6814	>100 GHz	794-806 nm	30 mW @ 795 nm
TLB-6817	>90 GHz	838-853 nm	50 mW @ 852 nm
TLB-6818	>90 GHz	890-910 nm	30 mW @ 895 nm
TLB-6820	>80 GHz	960-995 nm	25 mW @ 965 nm
TLB-6821	>60 GHz	1030-1085 nm	70 mW @ 1064 nm
TLB-6825	>60 GHz	1400-1490 nm	30 mW @ 1400 nm
TLB-6828	>50 GHz	1520-1630 nm	30 mW @ 1550 nm

Specifications ¹	Value	Comment
Linewidth	200 kHz	Integrated over 50 ms
Frequency Stability	2 pm	Over 12 hours ΔT 10°C
Modulation Frequency	>100 Hz >1.5 kHz	100 GHz amplitude >20 GHz amplitude
Optical Output ³	Free-space, Optically-isolated, Fiber-coupled	Fiber coupling efficiency ~30-50%

1. Specifications are subject to change.
2. Select wavelength to 0.01 nm in vacuum. Contact Newport for all available wavelengths.
3. TLB-6802 and TLB-6802-455 only available in Free-Space.

RELATED PRODUCTS



LB1005 Servo Controller

LB1005 High-Speed Servo Controller

The LB1005 High-Speed Servo Controller makes stabilizing the frequency or amplitude of lasers easy and intuitive in a one box solution. This high-speed proportional integral (P-I) controller has an intuitive front panel for the independent control of the P-I corner frequency, overall servo gain, and low-frequency gain limit.

**Eyewear
Required**



Wear protective eyewear at all times. Selection depends on the wavelength and intensity of the radiation, the conditions of use and the visual function required. Protective eyewear vendors are listed in the *Laser Focus World*, *Lasers and Optonics*, and *Photonics Spectra* buyer's guides.

VISIBLE AND INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 3B LASER PRODUCT
WAVELENGTH RANGE 350nm - 5000nm
MAXIMUM OUTPUT POWER 450 mW CW
EN 60825-1 : 2007



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Newport Corporation, Irvine, California and Franklin, Massachusetts; Evry and Beaune-La-Rolande, France and Wuxi, China have all been certified compliant with ISO 9001 by the British Standards Institution. Santa Clara, California is DNV certified.

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