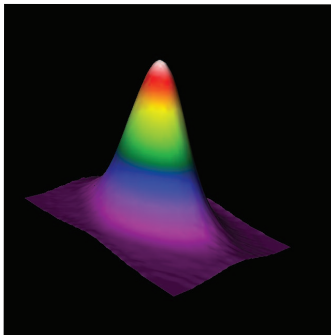


# VAMP™ Semiconductor Tapered Amplifier

## High Power, High Stability



TA-7600 VAMP Tapered Amplifier



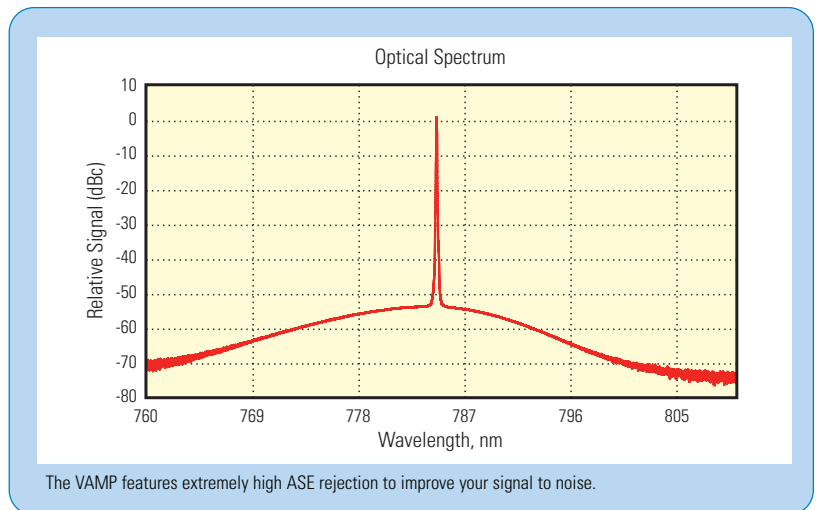
When using the free-space version, you can count on an excellent beam profile due to our post-amplifier beam shaping. Beam profile measured at 60 cm.



The New Focus VAMP™ series Tapered Amplifiers is your solution for high-power tunable and fixed-wavelength applications such as atomic cooling, spectroscopy, and Bose-Einstein Condensation. The VAMP is designed to produce up to 2 W of tunable single frequency radiation at a variety of infrared wavelengths and will faithfully amplify tunable single-frequency light produced by External Cavity Diode Lasers as well as other light sources of appropriate wavelength. All New Focus tapered amplifiers include an isolator on the output as standard.

### HIGHLIGHTS

- Up to 2 W of amplified power
- Fiber-coupling input ensures fast, easy, and reliable alignment
- Active input power monitoring ensures that self lasing won't damage the tapered amplifier chip
- Power locking loop reduces amplitude noise and drift
- Post-amplification beam shaping provides a high quality beam



### TAPERED AMPLIFIER CONTROL

Control of the TA-7600 is done through the recently re-designed TA-7600-LN controller. Simple intuitive controls mean you are up and running immediately. Front panel operation allows you to run your tapered amplifier without the need for a computer, however USB and RS232 connectors are also provided.



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### SEEDING THE VAMP

When seeded with a low-ASE source such as the Vortex™ Plus or Velocity™ lasers the VAMP faithfully reproduces the narrow linewidth and high contrast ratio. The VAMP will also accept other seed sources, including many home-built ECDLs. Contact our tech support for help in seeding the VAMP.



The VAMP is designed to accept many fiber-coupled seed sources, including the New Focus Vortex Plus Precision Laser and the Velocity TLB-6700 Laser.

	TA-7612	TA-7613	TA-7613-H	TA-7614-H	TA-7616	TA-7618
Wavelength Range (nm) <sup>1</sup>	755-775	775-785	779-790	787-805	825-855	910-920
Center Wavelength (nm)	765	780	780	795	850	915
Max Output Power <sup>2/3</sup>	>1.5 W	>1 W	>2 W	>1.8 W	>1 W	>1 W
Output Power (fiber-coupled) <sup>2/3</sup>	> 0.5 W	> 0.5 W	N/A	>0.5 W	> 0.5 W	N/A
Beam Divergence (mrad)	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Min Input at FC/APC Connector	See Comments Below <sup>3</sup>					
Beam Pointing Stability	<50 $\mu$ rad ( $\pm 2^\circ$ C)					
ASE (at maximum power)	<-45 dB (0.01 mm OSA resolution)					
Long Term Stability (Power, closed loop)	<1%					
Operating Temperature Range ( $^\circ$ C)	15-30					
Max Input at FC/APC Connector	100 mW					
Linewidth	Seed Laser Dependent					
Frequency Jitter	Seed Laser Dependent					

<sup>1</sup>The TA-7600 series of Tapered Amplifiers is available at many wavelengths. If you do not see your target wavelength, please contact your regional sales manager or representative for further information.

<sup>2</sup>At Center Wavelength. Contact factory for power at your specific wavelength. Specifications (other than output power) are when seeded by a New Focus Vortex Plus or Velocity laser. Minimum fiber-coupled seed power is required to reach specified output power. All specifications subject to change without notice.

<sup>3</sup>Minimum seed power is 15 mW for TA-7612, TA-7616, 20 mW for TA-7613, TA-7613-H, TA-7614-H and 10 mW for TA-7618 to achieve full specified power output. The tapered amplifier has a safety shutoff feature, activated below 10 mW, that prevents damage to the tapered chip.

Don't see your wavelength range? Speak to your Newport regional sales manager or New Focus technical support. We are always expanding our capabilities.



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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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