



## Series LEP DPSS Lasers

The Series LEP End-Pumped Nd:YAG Lasers represent the newest member of Lee Laser's highly successful diode-pumped solid-state product line. The Series LEP contains both Nd:YAG and Nd:YVO<sub>4</sub> (vanadate) models for a variety of industrial micro-machining applications.

Initial offerings include the Nd:YAG Model LEP-Y6TQ/30 rated at 6 Watts average power at 10 kHz pulse rate, and the Nd:YVO<sub>4</sub> Model LEP-V6TQ rated at 6 Watts at 30 kHz. Both lasers produce a high-quality TEM<sub>00</sub>-mode beam with  $M^2 < 1.3$ .

OEM configurations of both lasers are presently available. The power supply is 19-inch rack-mountable with front panel height of 7 inches (178 mm) and depth of 20 inches (508 mm). The optical assembly is a compact 22.7 inches (576 mm) long with provision for an attached optional beam expander. Optical beam centerline height is 4.25 inches (108 mm). The lasers are totally air cooled and will operate in environments up to 35°C. Laser operation is totally controlled from the user's computer.

The Nd:YAG Model LEP-Y6TQ/30 is intended for a variety of resistor and microcircuit trimming and marking applications where the operational pulse rates are less than 50 kHz. The Nd:YVO<sub>4</sub> (vanadate) Model LEP-V6TQ benefits from highly stable pulse rates from 20 kHz to 200 kHz for high-speed marking, trimming and micro-machining. For both lasers, nominal pulse widths are near 30 ns over their entire range of pulse rates.

For heavier trimming and marking applications, Lee Laser offers the Nd:YAG Model LEP-Y6TQ/70 that produces longer pulse widths: 70 ns at 1 kHz and 150 ns at 10 kHz.

Lee Laser's latest Series LEP introductions for high speed heavy duty marking applications are the low-order mode Vanadate lasers LEP-V13MQ and LEP-V18MQ. The LEPV-13MQ produces 13-Watt CW and 10-Watts at 30-kHz and 15-nsec pulse width. The LEP-V18MQ, Lee Laser's highest power LEP laser produces 15-Watts at 30-kHz and 38-nsec pulse Width

The Series LEP Lasers are designed for total computer control of all laser functions. As such, no control panel is required to operate these lasers. Each laser contains interface circuitry to accept control instructions from a user-supplied computer.

As with Lee Laser's highly popular side-pumped Series LDP lasers, the Series LEP lasers deliver long expected diode lifetime in the range of 20,000 hours. The laser diodes are warranted for two years or 17,500 hours, first occurring.

The laser diodes are installed inside the power supply chassis. A 4-meter single-fiber optical cable delivers the diode pump power to the optical resonator. Replacement of the diode module requires only a few minutes. To simplify diode module replacement and reduce cost, Series LEP lasers permit the reuse of the existing optical fiber cable.

| <u>Model</u> | <u>Medium</u>       | <u>Wavelength</u> | <u>Power</u>  | <u>Freq. Range</u> |
|--------------|---------------------|-------------------|---------------|--------------------|
| LEP-Y6TQ/30  | Nd:YAG              | 1064 nm           | 6 W @ 10 kHz  | 1-100 kHz          |
| LEP-Y6TQ/70  | Nd:YAG              | 1064 nm           | 6 W @ 10 kHz  | 1-100 kHz          |
| LEP-V6TQ     | Nd:YVO <sub>4</sub> | 1064 nm           | 6 W @ 30 kHz  | 20-200 kHz         |
| LEP-V13MQ    | Nd:YVO <sub>4</sub> | 1064 nm           | 10 W @ 30 kHz | 20-200 kHz         |
| LEP-V18MQ    | Nd:YVO <sub>4</sub> | 1064 nm           | 15 W @ 30 kHz | 20-200 kHz         |
| LEP-V6TQG    | Nd:YVO <sub>4</sub> | 532 nm            | 4 W @ 30 kHz  | 20-200 kHz         |

This product is intended  
for **OEM** or **EXPORT**



**VISIBLE AND INVISIBLE  
LASER RADIATION**  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION  
CLASS 4 LASER PRODUCT