

## Tunable Laser Source

(OETLS-300)

The tunable external cavity fiber laser, with model number OETLS-300, can perform continuous, mode-hop-free scanning over up to 90 nm tuning range at various center wavelengths from 780 to 2000 nm range. Both manual and electrical tuning versions are available. In electrical version, the laser is controlled by a computer with a user-friendly interface through the USB port. This compact, rugged laser provides high side-mode suppression ratio (SMSR) and excellent linear wavelength-scanning, which is a cost-effective OEM solution for system integration applications as well as laboratory purposes.

### FEATURES:

- Narrow linewidth
- High SMSR
- Wide tuning range
- Linear wavelength tuning
- User-friendly interface

### SPECIFICATIONS:

| Parameters                 | Unit | OETLS-300        |         |        |
|----------------------------|------|------------------|---------|--------|
| Center wavelength          | nm   | 785 ± 5          | 850 ± 5 | 950± 5 |
| Tuning Range               | nm   | 40               |         |        |
| Wavelength resolution      | pm   | ~ 10             |         |        |
| Wavelength repeatability   | pm   | ± 30             |         |        |
| Wavelength stability       | pm   | <± 50            |         |        |
| Output power*              | mW   | >5               |         |        |
| Output bandwidth           | pm   | < 50             |         |        |
| Output polarization state  | -    | Linear or Random |         |        |
| SMSR                       | dB   | > 50             |         |        |
| Interface                  | -    | USB              |         |        |
| Operation Temperature (°C) | °C   | 10--+60          |         |        |
| Dimensions                 | mm   | 250x250x110      |         |        |
| Weight                     | kg   | < 1.0            |         |        |

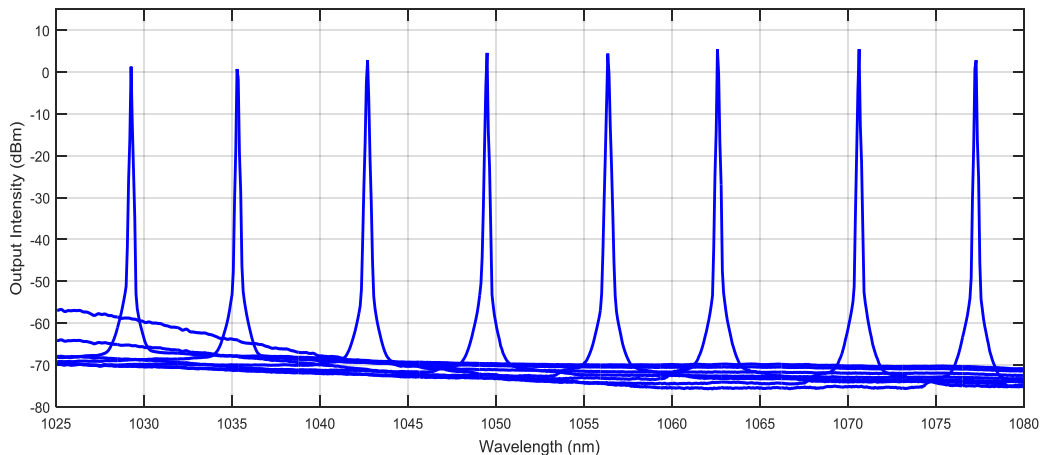
Cont.

| Parameters                 | Unit | OETLS-300        |           |           |           |
|----------------------------|------|------------------|-----------|-----------|-----------|
| Center wavelength          | nm   | 1060 ± 10        | 1310 ± 10 | 1550 ± 10 | 2000 ± 20 |
| Tuning Range               | nm   | Up to 60         | Up to 80  | Up to 90  | Up to 90  |
| Wavelength resolution      | pm   | ~ 10             | ~ 10      | ~ 10      | ~ 10      |
| Wavelength repeatability   | pm   | ± 20             | ± 20      | ± 20      | ± 20      |
| Wavelength stability       | pm   | <± 30            | <± 30     | <± 30     | <± 30     |
| Output power*              | mW   | > 5              | > 5       | > 10      | > 20      |
| Output bandwidth           | pm   | < 50             | < 50      | < 50      | < 50      |
| SMSR                       | dB   | > 60             | > 50      | > 50      | > 50      |
| Output polarization state  | -    | Linear or Random |           |           |           |
| Interface                  | -    | USB              |           |           |           |
| Operation Temperature (°C) | °C   | 10~+60           |           |           |           |
| Dimensions                 | mm   | 250x250x110      |           |           |           |
| Weight                     | kg   | < 1.0            |           |           |           |

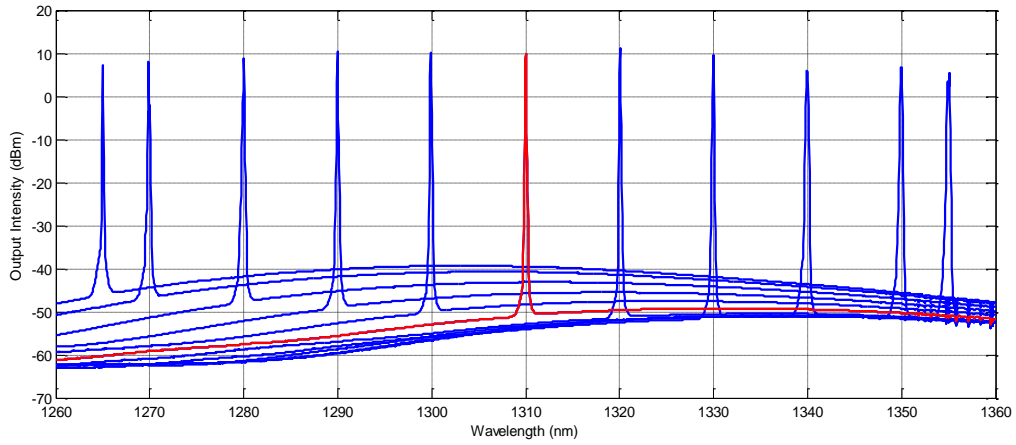
\* A higher output power is also available by using an amplification stage.

Note: All specifications are subject to change without notice.

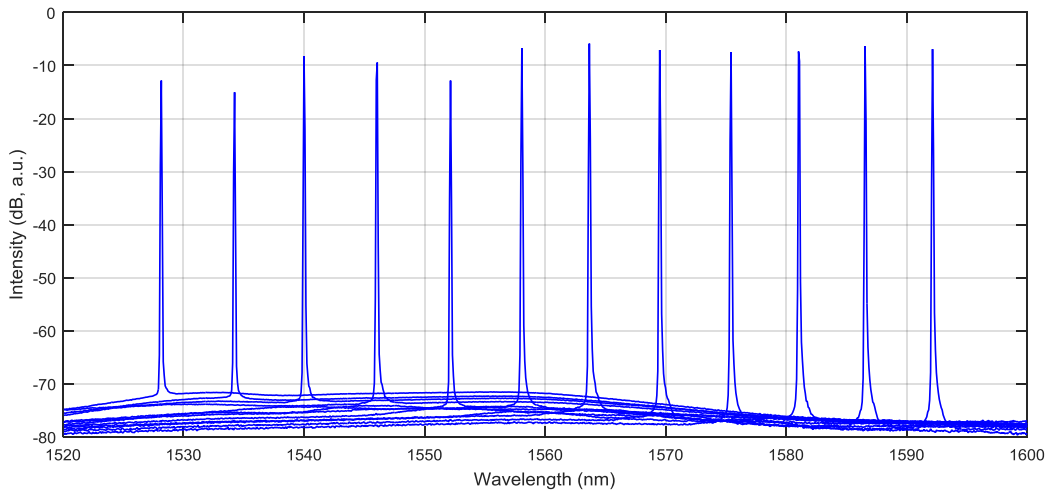
## MEASURED DATA:



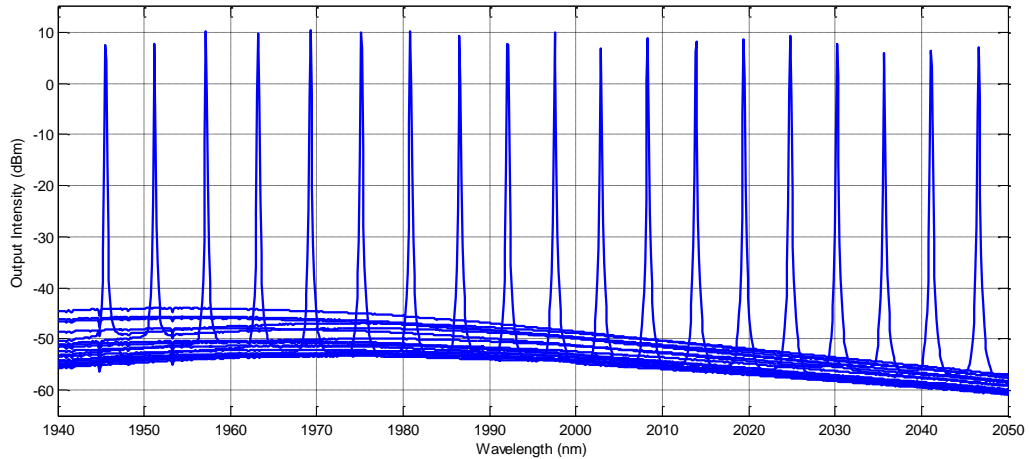
Output spectrum of OETLS-300 at 1060 nm



Output spectrum of OETLS-300 at 1310 nm

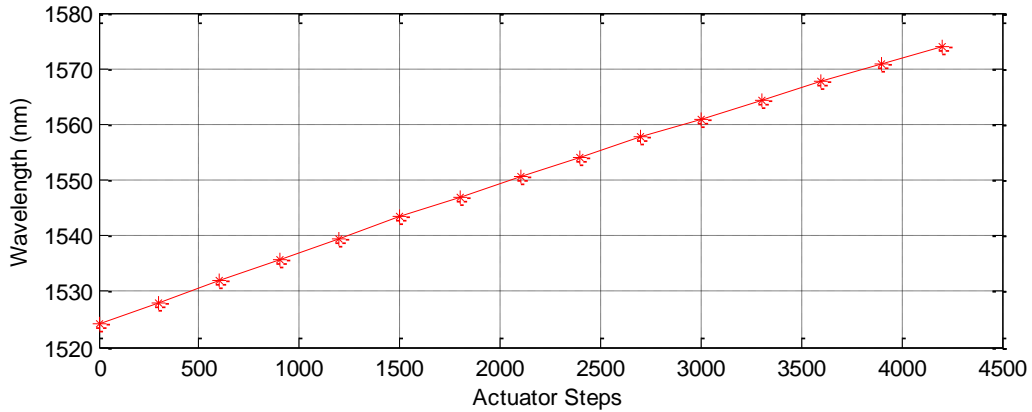


Output spectrum of OETLS-300 at 1550 nm



Output spectrum of OETLS-300 at 2000 nm

**Linear wavelength tuning:**



**Manual / Electrical Tuning:**

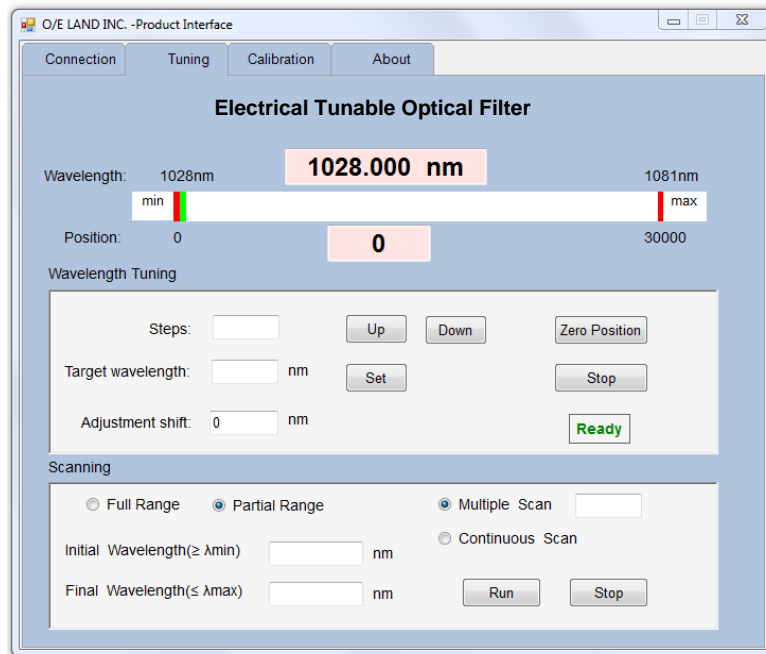
Both manual and electrical tuning fiber lasers have the same specifications. In manual version, a knob is used to change the wavelength, while in electrical version tuning is controlled by an interface. The main windows of the interface in electrical version looks like the following figure, where user can easily set the target wavelength or scan (single or continuous) between two specified wavelengths.



Manual tuning version.



Electrical tuning version.



User Interface for electrical version.

**Ordering Number:** OETLS-300-X-CWL-TR  
 where: X= M or E for Manual or Electrical versions  
 CWL: center wavelength  
 TR: Tuning range  
 Example: OETLS-300-E-1550-90

Please feel free to contact us at (514) 334-4588 or at sales@o-eland.com for more information on this product.