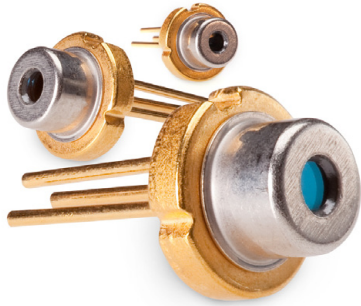


# 826nm, 170mW Wavelength Stabilized Lasers



Single Frequency  
Wavelength Stability:  $\sim 0.015\text{nm}/^\circ\text{C}$

Ondax's 826nm Wavelength Stabilized Laser is a single mode, single frequency laser packaged in an ultra-compact, TO-can footprint. The extremely narrow linewidth, broad temperature operating characteristics, and low power consumption deliver affordable, portable instrument-quality performance for a broad range of instrumentation applications.

All SureLock™ Series lasers are stabilized using the Ondax PowerLocker® Volume Holographic Grating (VHG), ensuring precise, ultra-stable center wavelengths, low temperature dependence, and consistent optical performance over the locked region.

## Specifications:

### Specification Summary

| Parameter                               | Symbol          | Min | Typ | Max | Unit             |
|---|-----------------|-----|-----|-----|------------------|
| Output Power                            | $P_o$           |     |     | 170 | mW               |
| Center Wavelength (vacuum) <sup>1</sup> | $L_p$           | 825 | 826 | 827 | nm               |
| Linewidth (MHz)                         | $\Delta\lambda$ |     | 250 |     | MHz              |
| Central Stabilized Temperature          | $T_c$           | 15  |     | 45  | $^\circ\text{C}$ |
| Stabilized Temperature Range            | $T_r$           | 10  | 15  |     | $^\circ\text{C}$ |

## Features:

- Single frequency performance
- Narrow linewidth <50 MHz
- Wavelength stability across operating range  $0.015\text{nm}/^\circ\text{C}$
- Coherence length >2m
- Compact, hermetically sealed TO footprint
- NoiseBlock™ narrow-band ASE suppression filters and beamsplitters available in matching wavelengths to further reduce linewidth and ASE noise

## Applications:

- Solid State Laser Pumping
- Photodynamic Therapy
- Bio-instrumentation
- Sensing
- Analytical Instrumentation

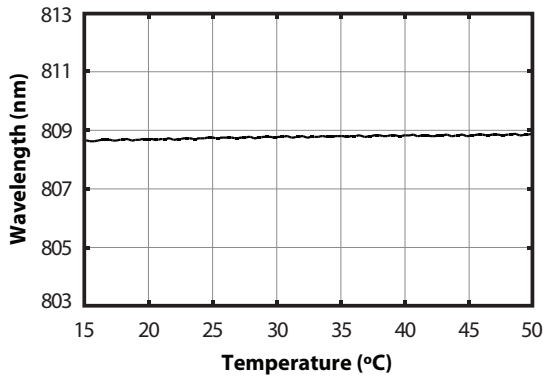
### Operating Specifications

| Parameter                          | Symbol     | Min | Typ   | Max | Unit             |
|------------------------------------|------------|-----|-------|-----|------------------|
| Threshold Current (CW)             | $I_{th}$   | 30  | 40    | 60  | mA               |
| Operating Current                  | $I_{op}$   |     | 220   | 300 | mA               |
| Operating Voltage                  | $V_{op}$   |     | 2.5   | 3.0 | V                |
| Laser Reverse Voltage              | $V_{rl}$   |     |       |     | V                |
| Monitoring Output Current          | $I_m$      |     | 0.5   |     | mA               |
| Beam Divergence, Perpendicular     | $Q_v$      |     | 27    |     | Degrees          |
| Beam Divergence, Parallel          | $Q_h$      |     | 9     |     | Degrees          |
| Emitter Size                       |            |     | 1 x 3 |     | $\mu\text{m}$    |
| Differential Efficiency            | DE (dP/dI) |     | 1     |     | mW/mA            |
| Operating Temperature <sup>2</sup> | $T_{op}$   | 0   |       | 50  | $^\circ\text{C}$ |
| Storage Temperature <sup>2</sup>   | $T_s$      | -10 |       | 60  | $^\circ\text{C}$ |
| Polarization                       |            |     | 100:1 |     |                  |
| Polarization Orientation           |            |     | TE    |     |                  |

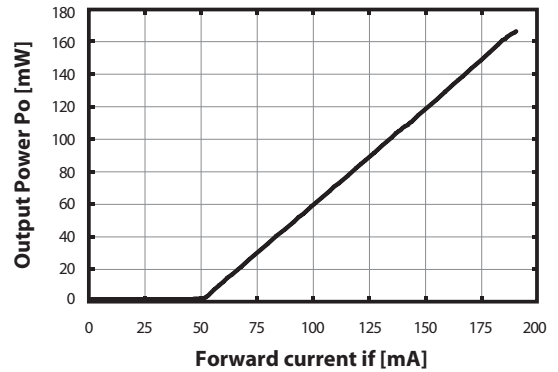
<sup>1</sup>Please specify wavelength at time of ordering <sup>2</sup>Non-condensing All specifications are at rated power with a case temperature of  $25^\circ\text{C}$  unless otherwise noted

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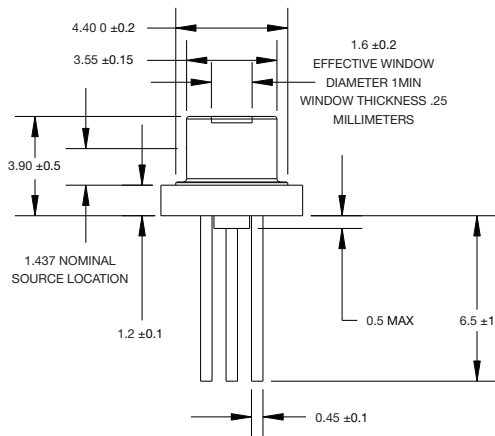
## Stabilized Temperature Range



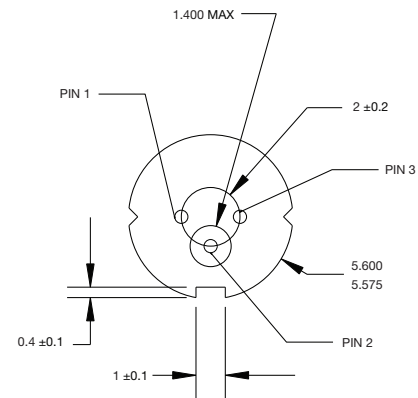
## Output Power vs Forward Current (Typical)



## Side View

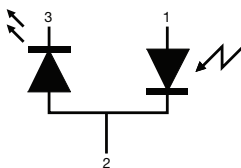


## Bottom View



## Pinout

| Pin | Description         |
|-----|---------------------|
| 1   | Photodiode Anode    |
| 2   | Case                |
| 3   | Laser Diode Cathode |



## Model Number

TO-826-PLR170

