

Description:

Ondax's 785nm Wavelength Stabilized Laser is a single mode, miniature laser in a standard TO package. The stabilization is achieved using the Ondax Volume Holographic Grating (VHG) PowerLocker®.

The laser has a very low temperature dependence and precise center wavelength over the locked region.

The narrow linewidth and long coherence length from a standard TO packaged laser enables many applications.

Features:

- Wavelength stability (~0.015nm/°C)
- Single frequency
- Coherence length (>2m)
- Hermetically sealed
- Custom wavelengths available

Applications:

Raman spectroscopy, flow cytometry, metrology, bio instrumentation, graphic arts, analytical instrumentation, sensing, and data storage.

Single Frequency

Wavelength Stability: ~0.015nm/°C



Specifications:

Absolute Maximum Ratings

| Parameter | Symbol | Ratings | Unit |
|------------------------------------|-----------------|-----------|------|
| Light Output ¹ | P _o | 80 | mW |
| Laser Reverse Voltage ¹ | V _{rl} | 2 | V |
| Operating Temperature ² | T _{op} | 0 to 50 | °C |
| Storage Temperature ² | T _s | -10 to 60 | °C |

¹ At a case temperature of 25° C.

² Non-condensing

Operating Specifications

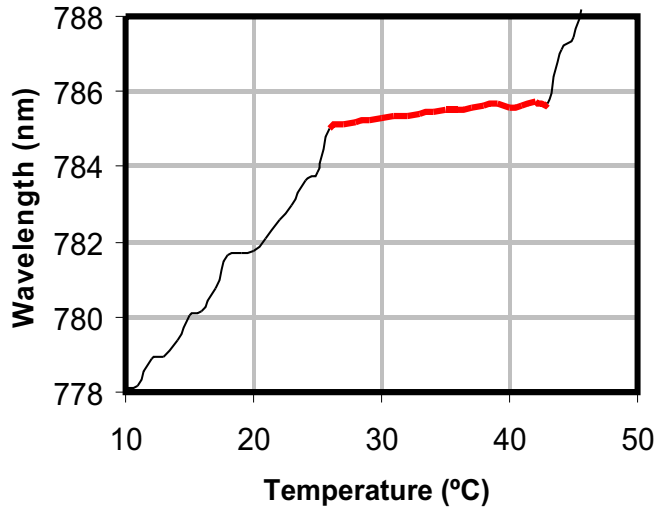
| Parameter | Symbol | Conditions | Min | Typ | Max | Units |
|--------------------------------|-----------------|--|-----------|-----|-----|-------|
| Threshold Current | I _{th} | CW | | 35 | 55 | mA |
| Operating Current | I _{op} | P _o = 80 mW | | 115 | 160 | mA |
| Lasing Wavelengths | L _p | P _o = 80 mW T=T _c | 782 | 783 | 784 | nm |
| | L _p | P _o = 80 mW T=T _c | 784 | 785 | 786 | nm |
| | L _p | P _o = 80 mW T=T _c | 786 | 787 | 788 | nm |
| Linewidth | | P _o = 80 mW T=T _c | | | 50 | MHz |
| Central Stabilized Temperature | T _c | P _o = 80 mW | 15 | 30 | 40 | °C |
| Stabilized Temperature Range | T _r | P _o = 80 mW | 10 | 15 | | °C |
| Beam Divergence, Perpendicular | Q _v | P _o = 80 mW | 15 | 17 | 19 | deg. |
| Beam Divergence, Parallel | Q _h | P _o = 80 mW | 8 | 9 | 10 | deg. |
| Emitter Size | | | 2.1 X 0.9 | | | um |
| Differential Efficiency | DE (dP/dI) | | | 1.1 | | mW/mA |

Specifications are with case temperature of 25° C and non-condensing, unless otherwise noted.

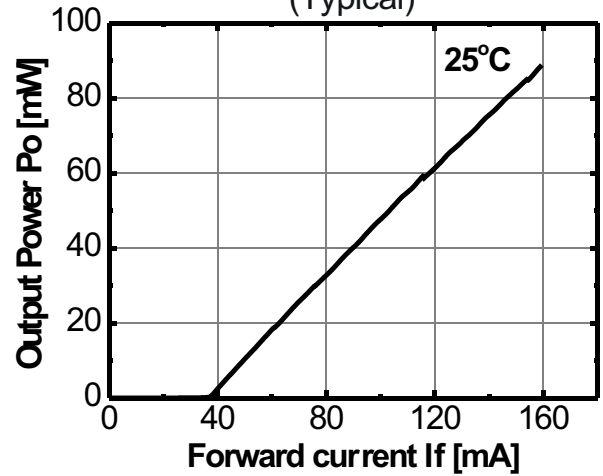
Specifications are subject to change without notice. Each purchased laser is provided with test data. Please refer to this data before using the laser.

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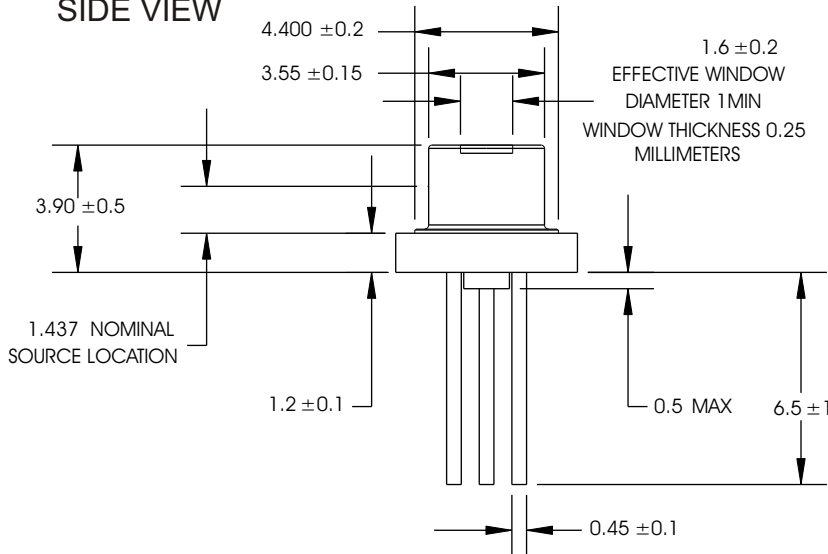
Stabilized Temperature Range



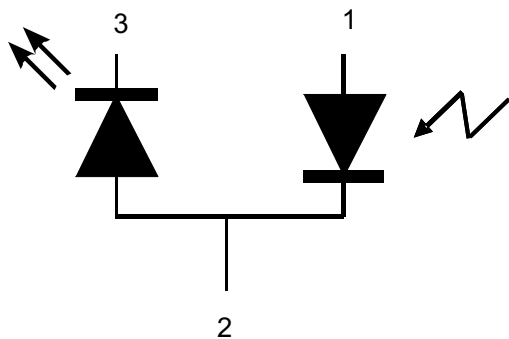
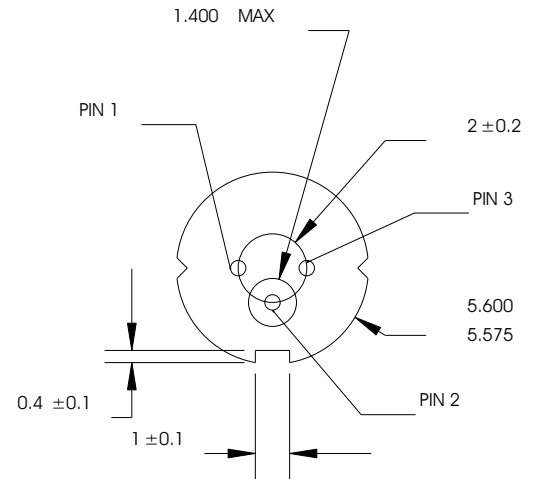
Output Power vs Forward Current (Typical)



SIDE VIEW



BOTTOM VIEW

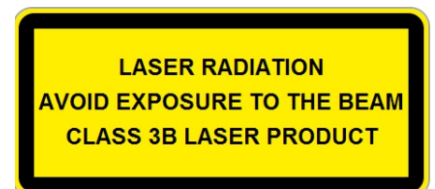


Pinout

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

Model Numbers:

TO-783-PLR80
TO-785-PLR80
TO-787-PLR80



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