

## LASER DIODE FOLD-638-32S-VBG

**FOLD-638-32S-VBG** is a single mode semiconductor laser diode with 32mW CW output power at 638nm. Due to the integrated VBG the wavelength is fixed and the spectral width is very narrow. It is suitable for the use in various opto-electronic applications.

### APPLICATIONS:

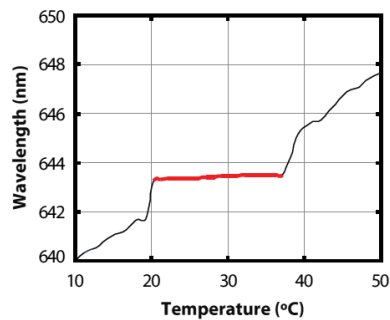
- HeNe Replacement
- Raman Spectroscopy
- Metrology
- Bio-Instrumentation
- Graphic Arts
- Sensing
- Analytical Instrumentation

Optical and electrical characteristics (T = 25°C, P = 32mW):

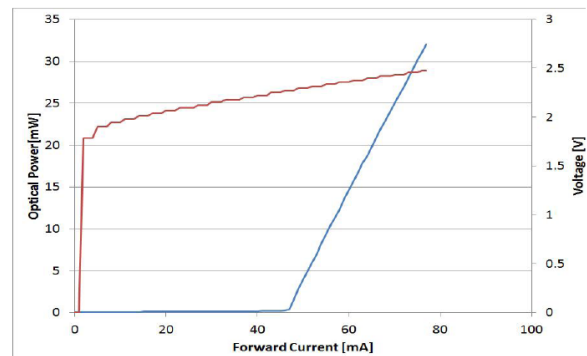
| Operating Parameters           | Symbol           | Min   | Typ  | Max | Unit  |
|--------------------------------|------------------|-------|------|-----|-------|
| Optical Power                  | P <sub>out</sub> | -     | -    | 32  | mW    |
| Wavelength                     | λ                | 637   | 638  | 639 | nm    |
| Line Width                     | Δλ               | -     | 300  | -   | MHz   |
| Threshold Current              | I <sub>th</sub>  | -     | 45   | 60  | mA    |
| Forward Current                | I <sub>f</sub>   | -     | 80   | 105 | mA    |
| Forward Voltage                | V <sub>f</sub>   | -     | 2.4  | 2.6 | V     |
| Reverse Voltage                | V <sub>r</sub>   | -     | -    | 2   | V     |
| Photodiode Reverse Voltage     | V <sub>rp</sub>  | -     | -    | 30  | V     |
| Monitoring Output Current      | I <sub>m</sub>   | 0.07  | 0.15 | 0.2 | mA    |
| Slope Efficiency               | ΔP/ΔI            | -     | 1.0  | -   | mW/mA |
| Beam Divergence, Perpendic.    | Θ <sub>⊥</sub>   | 16    | 21   | 24  | °     |
| Beam Divergence, Parallel      | Θ <sub>  </sub>  | 7     | 10   | 13  | °     |
| Operating Temperature          | T <sub>op</sub>  | -10   | -    | 50  | °C    |
| Central Stabilized Temperature | T <sub>c</sub>   | 15    | -    | 45  | °C    |
| Stabilized Temperature Range   | T <sub>r</sub>   | 10    | 14   | -   | °C    |
| Storage Temperature            | T <sub>s</sub>   | -40   | -    | 80  | °C    |
| Emitter Size                   | E <sub>s</sub>   | 1 x 2 |      |     | μm    |
| Coherence Length               | > 0.5m           |       |      |     |       |
| Polarization                   | 60:1 (TM)        |       |      |     |       |

## PERFORMANCE AND PACKAGE SPECIFICATION

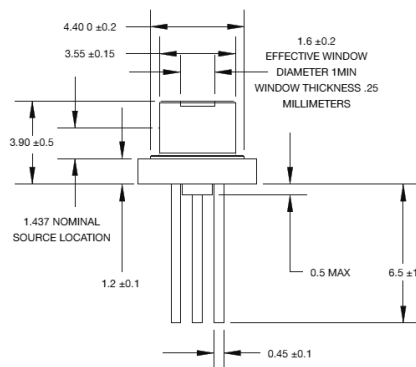
### Stabilized Temperature Range



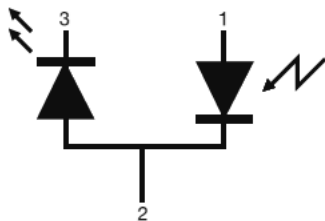
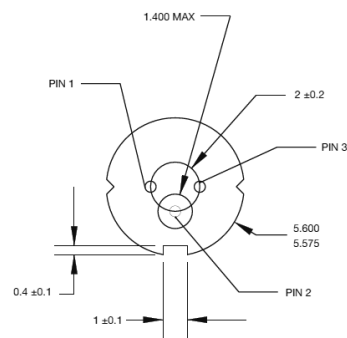
### Output Power vs Forward Current (Typical)



### Side View



### Bottom View



| Pinout |            |
|--------|------------|
| 1      | PD Anode   |
| 2      | Case       |
| 3      | LD Cathode |