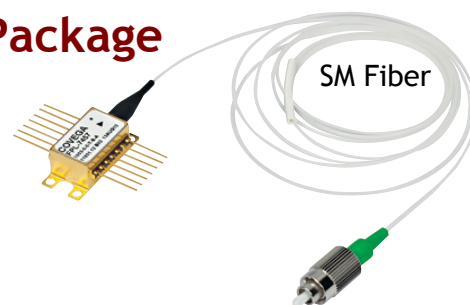


## 1310 nm Fabry-Perot Laser Butterfly Package



**FPL1053S**

### Description

The FPL1053S is a high power, O-band Fabry-Perot Laser (FPL) Diode based on state-of-the-art, quantum-well epitaxial layer growth and reliable ridge waveguide structure.

This butterfly-packaged laser is coupled to 1.5 m of FC/APC-connectorized fiber. The FPL1053S uses non-polarization maintaining single mode fiber. An integrated thermistor allows the laser to be temperature controlled, thus stabilizing the lasing wavelength and power.

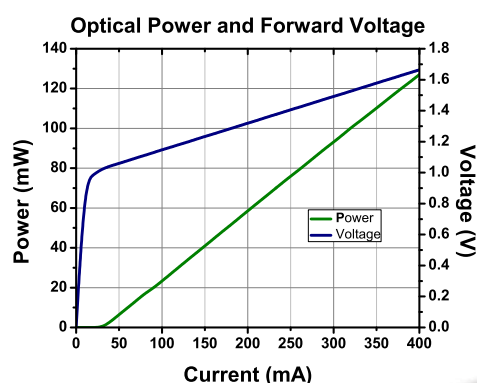
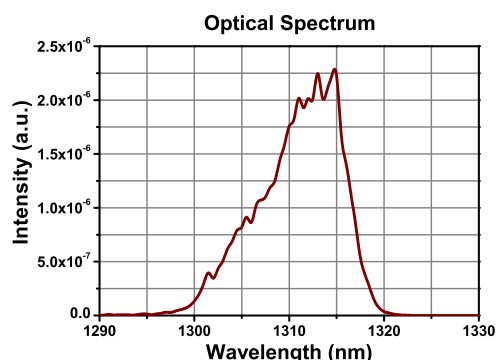
### Specifications

CW;  $T_{CHIP} = 25\text{ }^{\circ}\text{C}$ ,  $T_{CASE} = 0 - 70\text{ }^{\circ}\text{C}$

| FPL1053S                                                                                              |                       |          |               |         |
|-------------------------------------------------------------------------------------------------------|-----------------------|----------|---------------|---------|
|                                                                                                       | Symbol                | Min      | Typical       | Max     |
| Center Wavelength                                                                                     | $\lambda_C$           | 1290 nm  | 1310 nm       | 1330 nm |
| Operating Current                                                                                     | $I_{OP}$              | -        | 400 mA        | 500 mA  |
| Optical Power @ $I_{OP}$                                                                              | $P_{OUT}$             | 100 mW   | 130 mW        | -       |
| Spectral Bandwidth (rms)                                                                              | $\Delta\lambda$       | -        | 5 nm          | 15 nm   |
| Threshold Current                                                                                     | $I_{TH}$              | -        | 35 mA         | 55 mA   |
| Slope Efficiency                                                                                      | $\Delta P / \Delta I$ | 0.25 W/A | 0.35 W/A      | -       |
| Forward Voltage @ $I_{OP}$                                                                            | $V_F$                 | -        | 1.7 V         | 2.5 V   |
| TEC Operation (Typical / Max @ $T_{CASE} = 25\text{ }^{\circ}\text{C} / 70\text{ }^{\circ}\text{C}$ ) |                       |          |               |         |
| - TEC Current                                                                                         | $I_{TEC}$             | -        | 0.25 A        | 1.5 A   |
| - TEC Voltage                                                                                         | $V_{TEC}$             | -        | 0.35 V        | 3.5 V   |
| - Thermistor Resistance                                                                               | $R_{TH}$              | -        | 10 k $\Omega$ | -       |

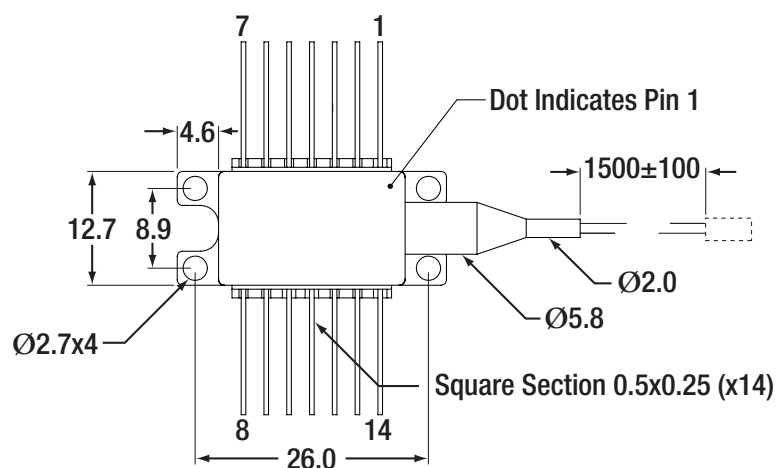


### Performance Plots



## Drawings

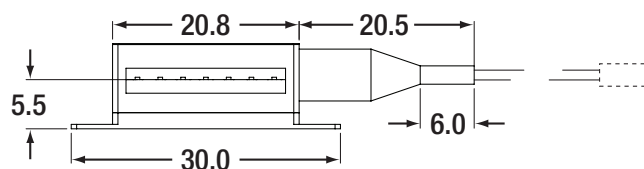
### Butterfly Top View



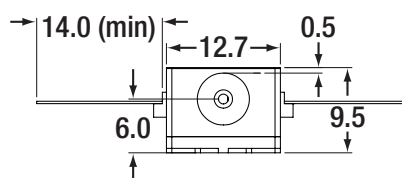
### PIN IDENTIFICATION

|               |                 |
|---------------|-----------------|
| 1. TEC +      | 14. TEC -       |
| 2. Thermistor | 13. Case        |
| 3. NC         | 12. NC          |
| 4. NC         | 11. Dev Cathode |
| 5. Thermistor | 10. Dev Anode   |
| 6. NC         | 9. NC           |
| 7. NC         | 8. NC           |

### Butterfly Side View



### Butterfly Front View



All Dimensions in mm