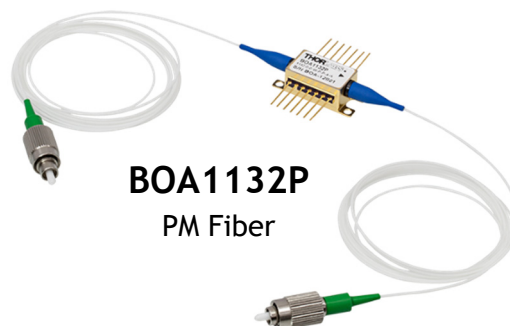




**BOA1132P**

PM Fiber

### Description

Thorlabs' BOA1132P is a high saturation output power, high bandwidth, polarization-maintaining Booster Optical Amplifier. The BOA1132P incorporates a highly efficient InP/InGaAsP Quantum Well (QW) layer structure and a realizable ridge waveguide design. This BOA is housed in a standard 14-pin butterfly package with an integrated thermoelectric cooler (TEC) and thermistor.

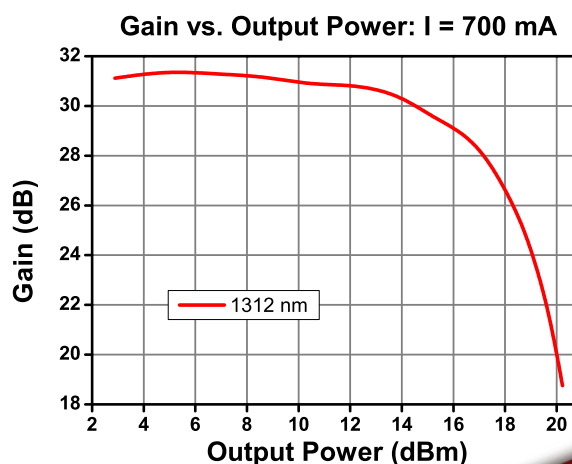
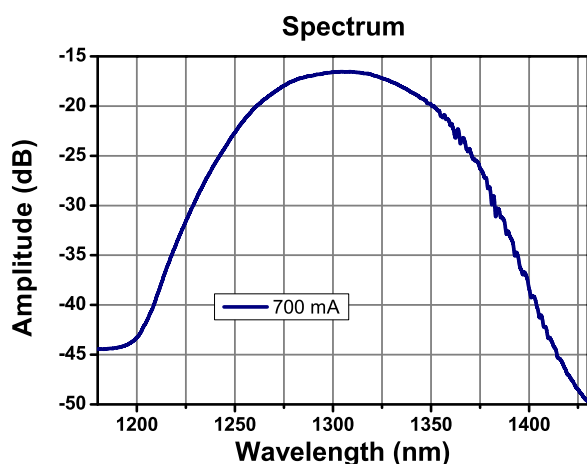
### Specifications

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

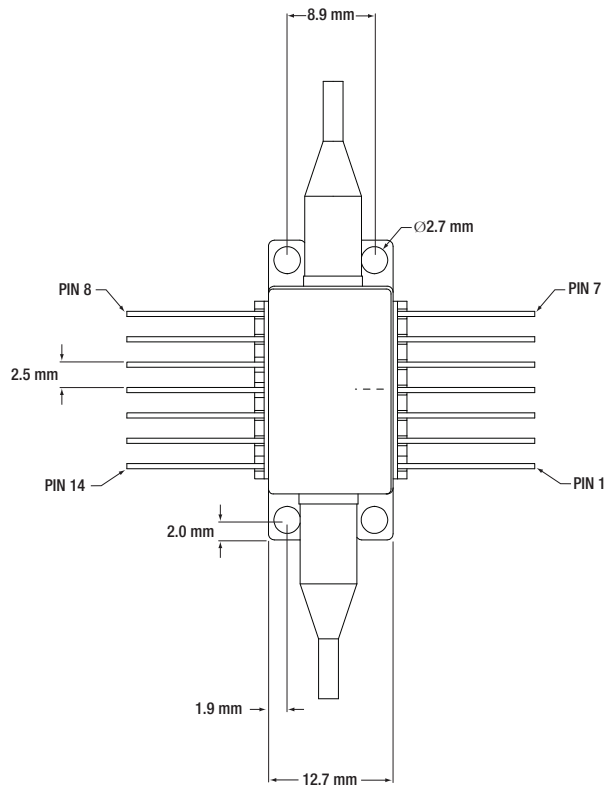


| BOA1132P                                                                                           |             |         |               |         |
|----------------------------------------------------------------------------------------------------|-------------|---------|---------------|---------|
|                                                                                                    | Symbol      | Min     | Typical       | Max     |
| Operating Current                                                                                  | $I_{OP}$    | -       | 700 mA        | 750 mA  |
| Center Wavelength                                                                                  | $\lambda_C$ | 1290 nm | 1300 nm       | 1315 nm |
| Optical 3 dB Bandwidth                                                                             | BW          | 80 nm   | 87 nm         | -       |
| Saturation Output Power @ -3 dB                                                                    | $P_{SAT}$   | 15 dBm  | 17 dBm        | -       |
| Small Signal Gain<br>@ $P_{IN} = -20\text{ dBm}$ , $\lambda = 1312\text{ nm}$                      | G           | 27 dB   | 30 dB         | -       |
| Gain Ripple (RMS) @ $I_{OP}$                                                                       | $\delta G$  | -       | 0.2 dB        | 0.3 dB  |
| Noise Figure                                                                                       | NF          | -       | 7 dB          | 9 dB    |
| Forward Voltage                                                                                    | $V_F$       | -       | 1.6 V         | 2.0 V   |
| TEC Operation (Typ. / Max @ $T_{CASE} = 25\text{ }^{\circ}\text{C} / 70\text{ }^{\circ}\text{C}$ ) |             |         |               |         |
| TEC Current                                                                                        | $I_{TEC}$   | -       | 0.4 A         | 1.5 A   |
| TEC Voltage                                                                                        | $V_{TEC}$   | -       | 0.5 V         | 4.0 V   |
| Thermistor Resistance                                                                              | $R_{TH}$    | -       | 10 k $\Omega$ | -       |

### Performance Plots



## Drawings



### T. Case

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

