

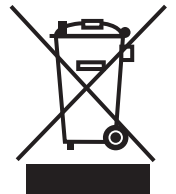
BOA1017P
PM Fiber

Description

Thorlabs' BOA1017P is a high saturation output power, high bandwidth, polarization-maintaining Booster Optical Amplifier. The BOA1017P 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.

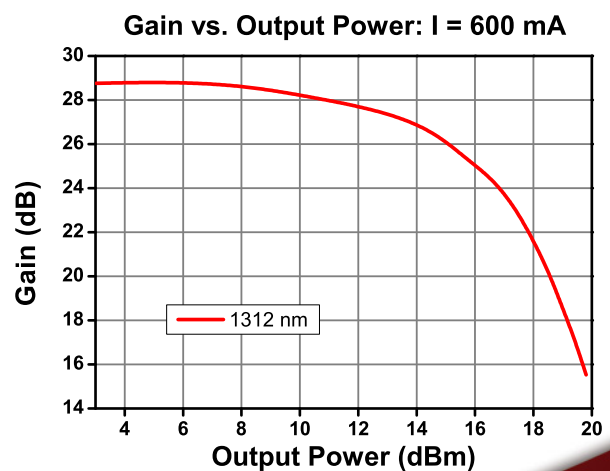
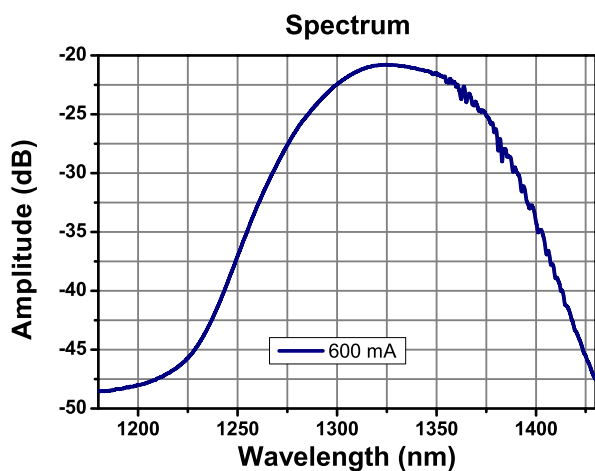
Specifications

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

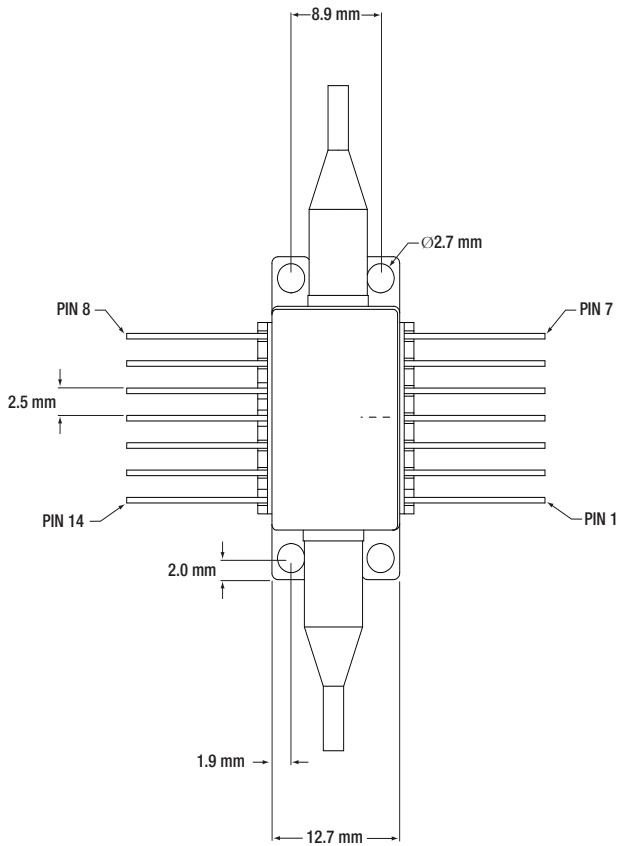


| BOA1017P | | | | |
|--|-------------|---------|---------------|---------|
| | Symbol | Min | Typical | Max |
| Operating Current | I_{OP} | - | 600 mA | 750 mA |
| Center Wavelength | λ_C | 1290 nm | 1310 nm | 1330 nm |
| Optical 3 dB Bandwidth | BW | 60 nm | 70 nm | - |
| Saturation Output Power @ -3 dB | P_{SAT} | 13 dBm | 15 dBm | - |
| Small Signal Gain @ $P_{IN} = -20\text{ dBm}$, $\lambda = 1312\text{ nm}$ | G | 17 dB | 23 dB | - |
| Gain Ripple (RMS) @ I_{OP} | δG | - | 0.1 dB | 0.25 dB |
| Polarization Extinction Ratio | PER | - | 16 dB | - |
| Noise Figure | NF | - | 7.0 dB | 9.0 dB |
| Forward Voltage | V_F | - | 1.4 V | 1.6 V |
| TEC Operation (Typ. / Max @ $T_{CASE} = 25\text{ }^{\circ}\text{C} / 70\text{ }^{\circ}\text{C}$) | | | | |
| -TEC Current | I_{TEC} | - | 0.15 A | 1.5 A |
| -TEC Voltage | V_{TEC} | - | 0.35 V | 4.0 V |
| -Thermistor Resistance | R_{TH} | - | 10 k Ω | - |

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 - |

