785 nm Wavelength Stabilized Laser

- Wavelength and Power Stability
- Spectral linewidth

Figure 1 shows typical data for wavelength and power stability over time at full power 80 mW. The current and temperature controller is model ITC502 from Thorlabs and the wavelength meter is a Coherent Wavemaster with 0.001nm resolution. The laser diode is run in constant current mode. Figure 2 shows the spectrum, measured with an OSA, exhibiting > 45 dB of Side Mode Suppression. Figure 3 shows the linewidth measured with a Fabry-Perot spectrum analyzer with 1.5 GHz free Spectral range and 7.5 MHz resolution.

Figure 1

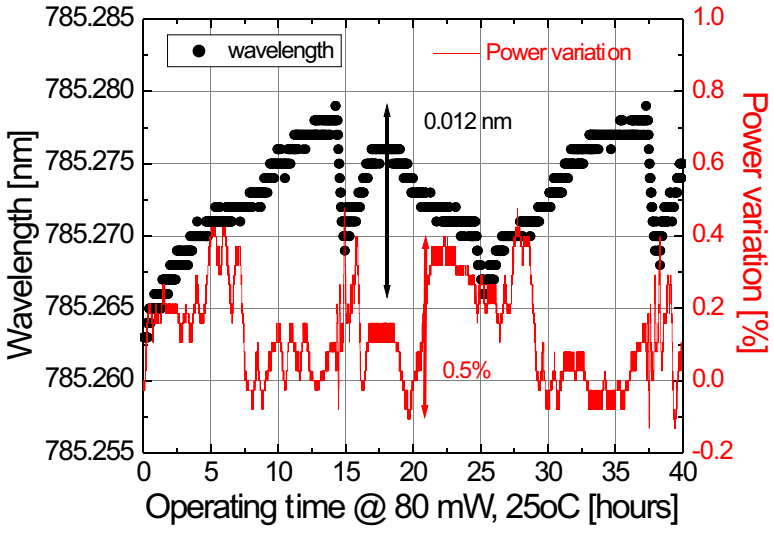

Figure 2

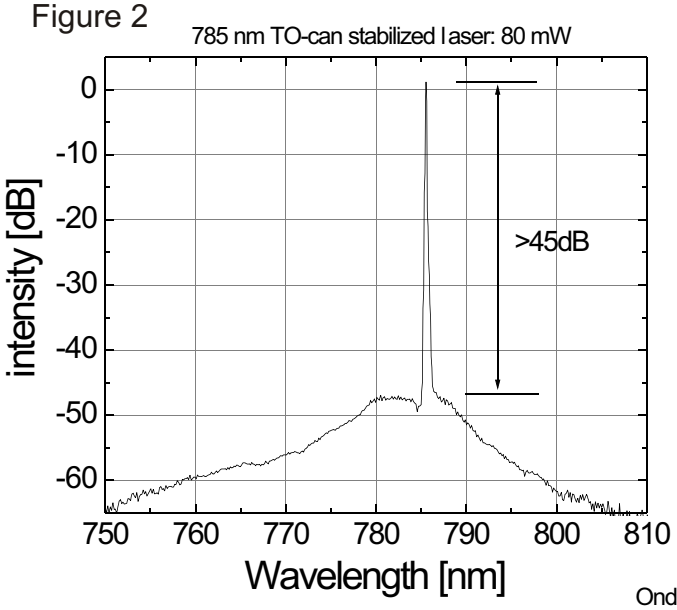

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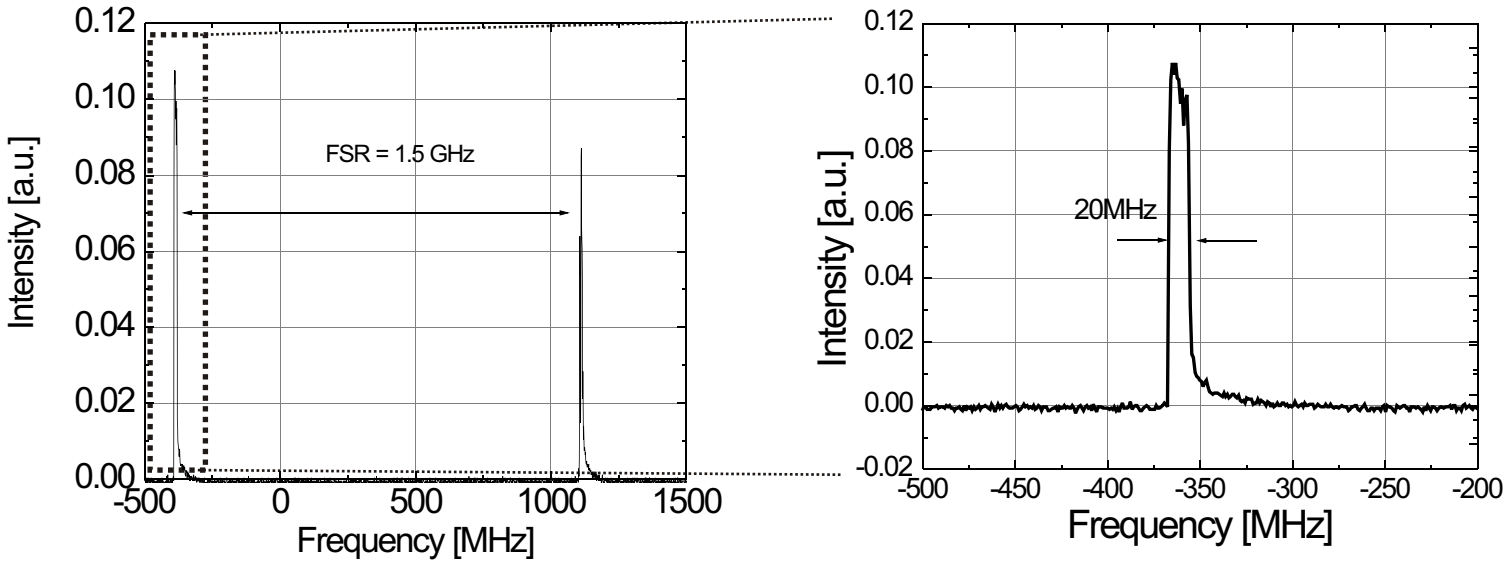
Figure 3



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785nm Wavelength Stabilized Laser: Reliability Data

In the data shown below, three TO-can stabilized laser diodes were operated at 80mW at a temperature of 60 degrees Celsius for up to 5,471 hours.

Figure 1 ,2 and 3 show the wavelength versus temperature measured with an ANDO AQ-6315A Optical Spectrum Analyzer (OSA). After 5,471 hours of operation at full power and elevated temperature, the temperature range over which the laser diode is wavelength stabilized is maintained.

Figure 1

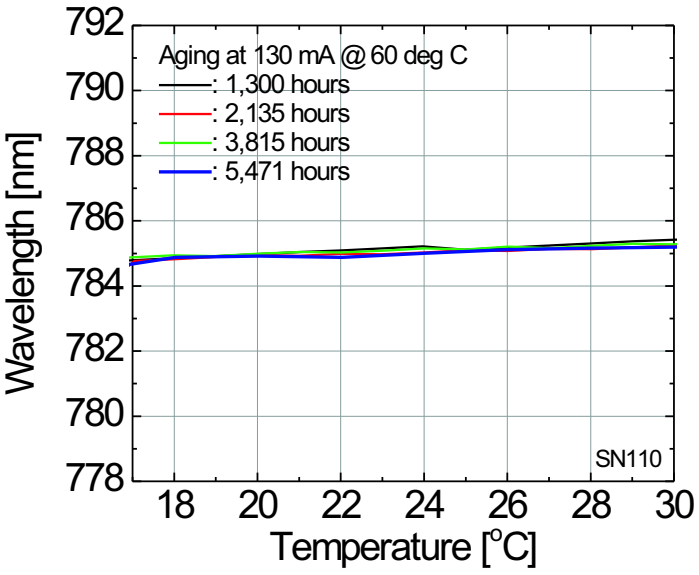


Figure 2

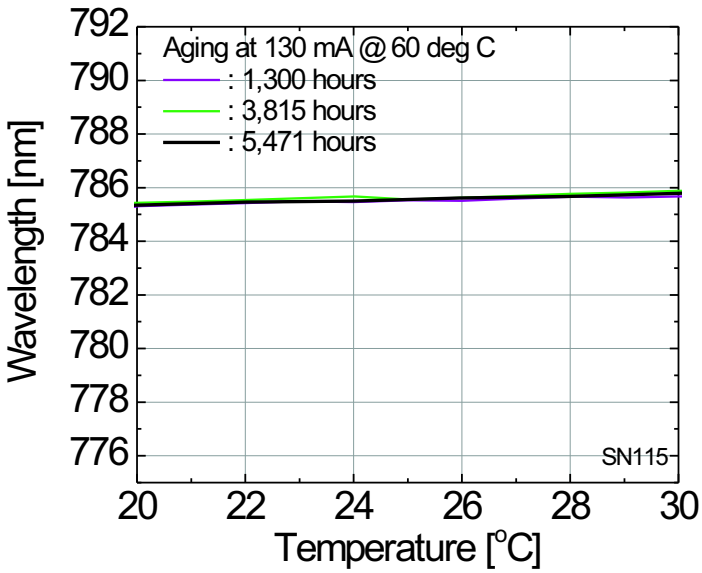
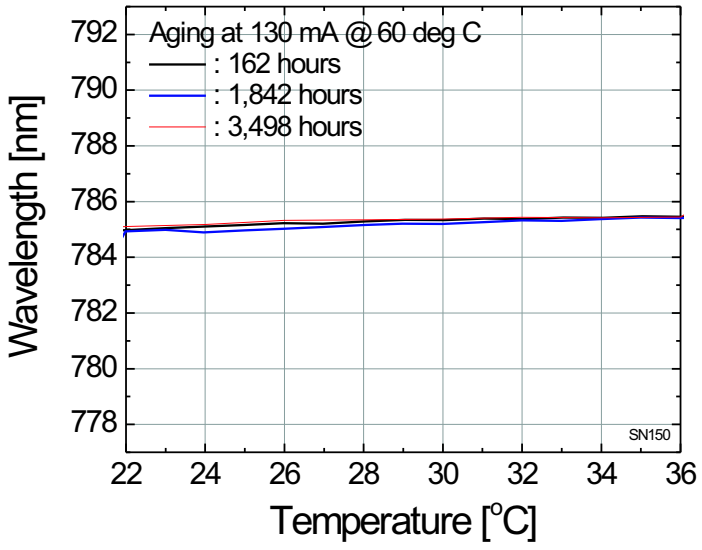


Figure 3



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