



# 658nm Wavelength Stabilized Laser: Reliability Data

In the data shown below, two TO-can stabilized laser diodes were operated at 35mW at a temperature of 25 degrees Celsius for up to 5,623 hours and then for 4,948 hours at 60 degrees Celsius.

Figure 1 and 2 show the wavelength versus temperature measured with an ANDO AQ-6315A Optical Spectrum Analyzer (OSA). After more than **10,000 hours** of operation at full power, the temperature range over which the laser diode is wavelength stabilized is maintained.

Figure 1

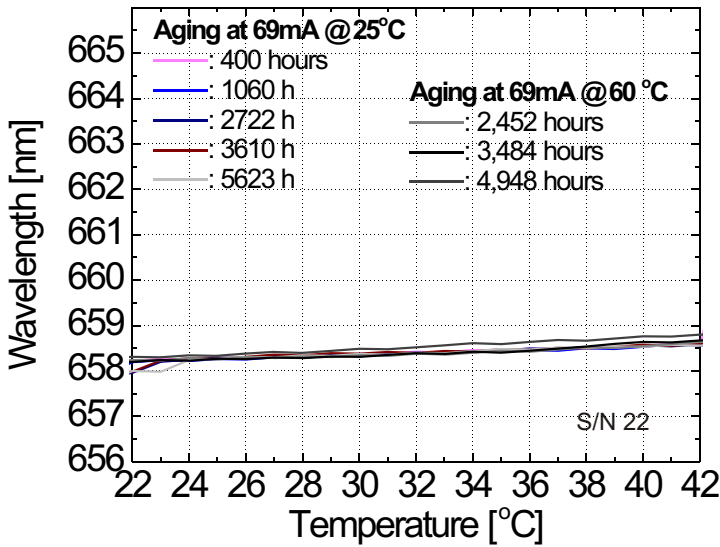
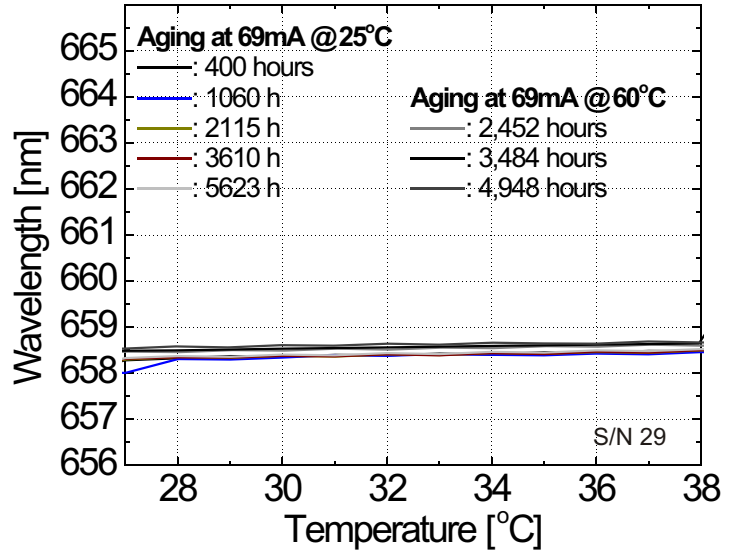


Figure 2



Parameter				SN22	SN29
Central Stabilized Temperature	T <sub>c</sub>	°C	Min	31.50	28.50
			Avg	33.26	32.42
			Max	35.50	34.00
Stabilized Temperature Range	T <sub>r</sub>	°C	Min	18.87	11.00
			Avg	22.09	13.67
			Max	29.00	21.00
Wavelength at Center of the Stabilized Range	W <sub>Tc</sub>	nm	Min	658.37	658.38
			Avg	658.42	658.41
			Max	658.48	658.54
Current @ 25°C to reach 35mW	I	mA	t= 0 hours	68.00	68.00
			t= 10,571 hours	73.00	68.00

Table 1: statistics over 5,623 hour aging period at 25°C plus 4,948 hours aging at 60°C.