

**Datasheet for #sbcw13367 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**WARNING:** Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

**WARNING:** Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To use with a power-supply ILX Lightwave LDX-3232 or equivalent.



Figure 1: Mechanical and electrical interface for #sbcw13367 DN

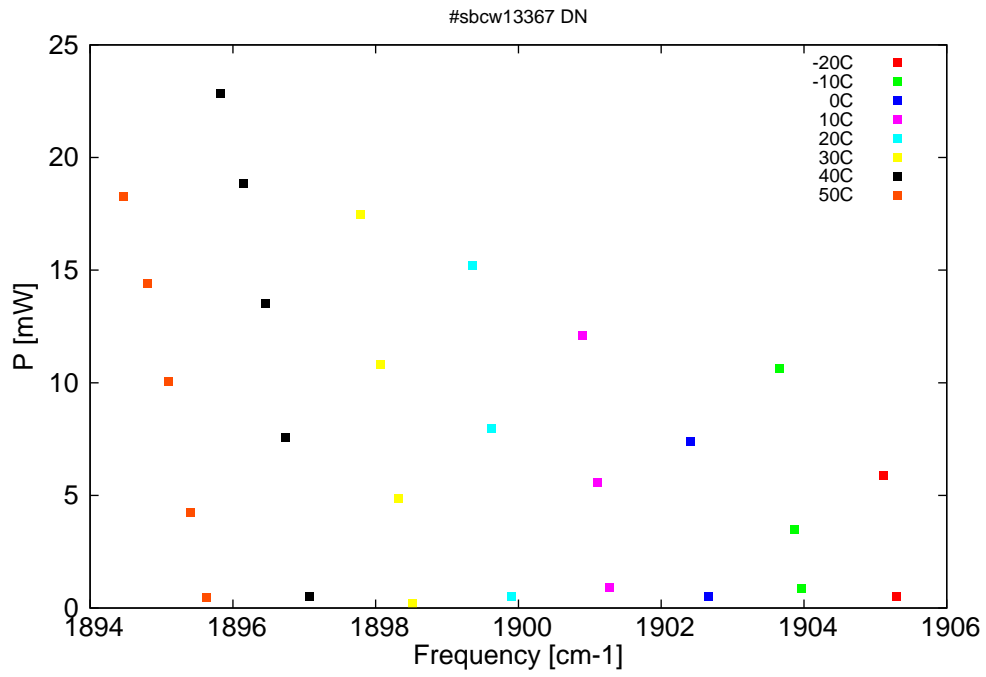


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

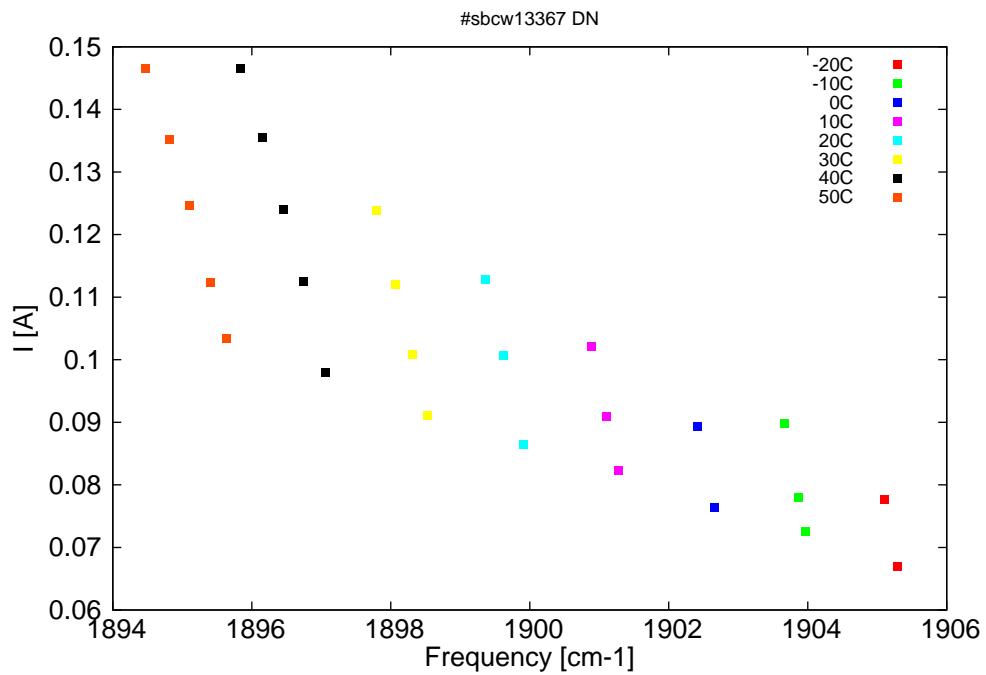


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5248.5	1905.3	0.5	-20	7.5	0.07
5249	1905.1	5.9	-20	7.6	0.08
5252.2	1904	0.8	-10	7.5	0.07
5252.5	1903.9	3.5	-10	7.6	0.08
5253	1903.7	10.6	-10	7.8	0.09
5255.8	1902.7	0.5	0	7.6	0.08
5256.5	1902.4	7.4	0	7.8	0.09
5259.6	1901.3	0.9	10	7.6	0.08
5260.1	1901.1	5.6	10	7.8	0.09
5260.7	1900.9	12.1	10	8	0.1
5263.4	1899.9	0.5	20	7.7	0.09
5264.2	1899.6	7.9	20	7.9	0.1
5264.9	1899.4	15.2	20	8.1	0.11
5267.3	1898.5	0.2	30	7.7	0.09
5267.8	1898.3	4.9	30	7.9	0.1
5268.5	1898.1	10.8	30	8.1	0.11
5269.3	1897.8	17.5	30	8.3	0.12
5271.3	1897.1	0.5	40	7.8	0.1
5272.2	1896.7	7.6	40	8.1	0.11
5273	1896.5	13.5	40	8.3	0.12
5273.8	1896.1	18.8	40	8.5	0.14
5274.7	1895.8	22.8	40	8.7	0.15
5275.3	1895.6	0.5	50	7.9	0.1
5275.9	1895.4	4.2	50	8.1	0.11
5276.8	1895.1	10	50	8.3	0.12
5277.6	1894.8	14.4	50	8.5	0.14
5278.5	1894.5	18.3	50	8.7	0.15

Table 1: Singlemode optical output power as function of operating parameters.

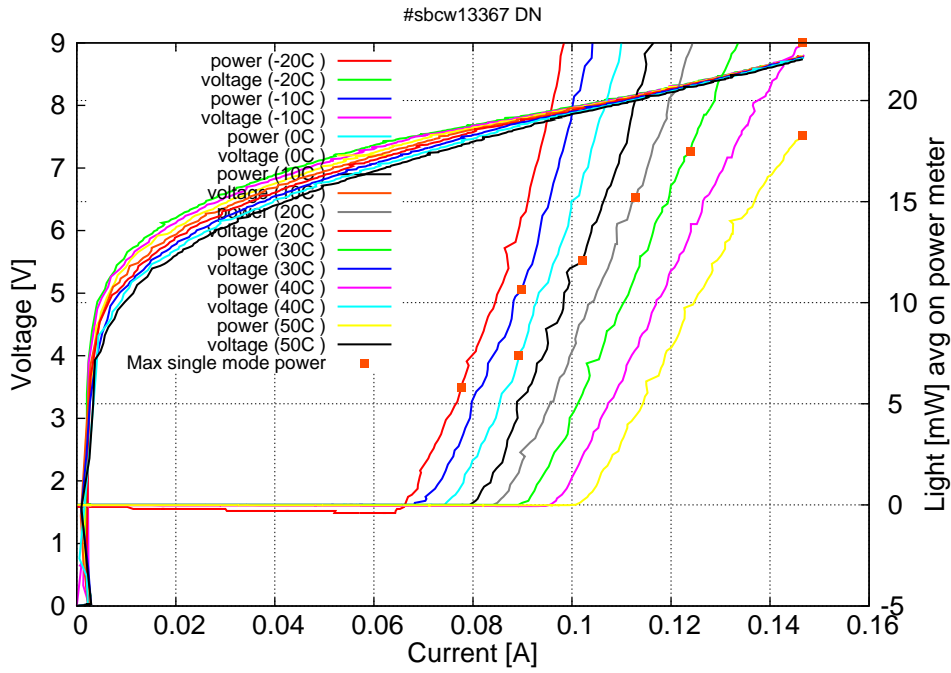


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

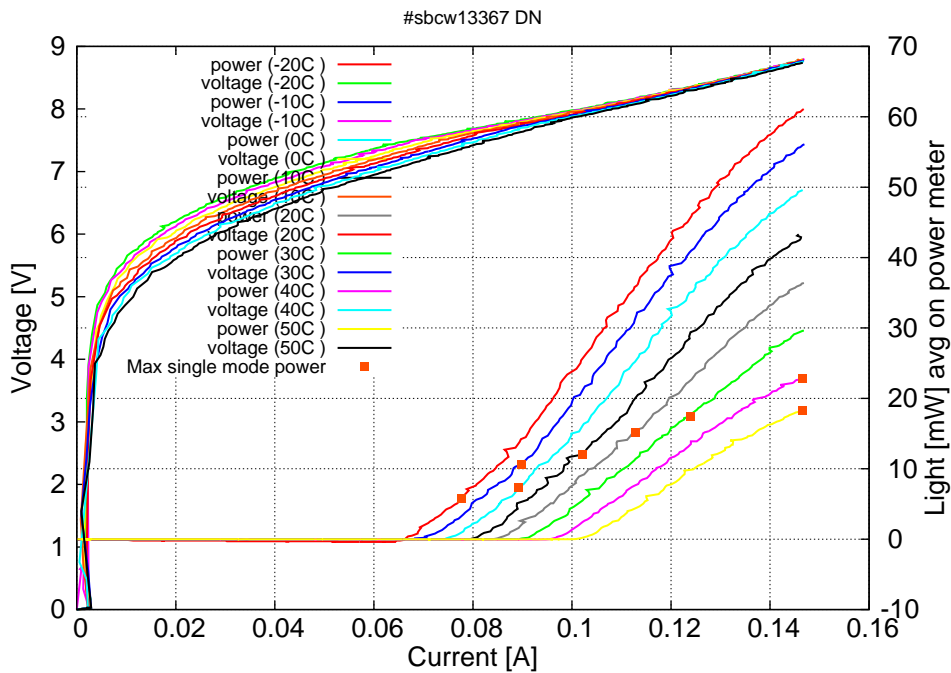
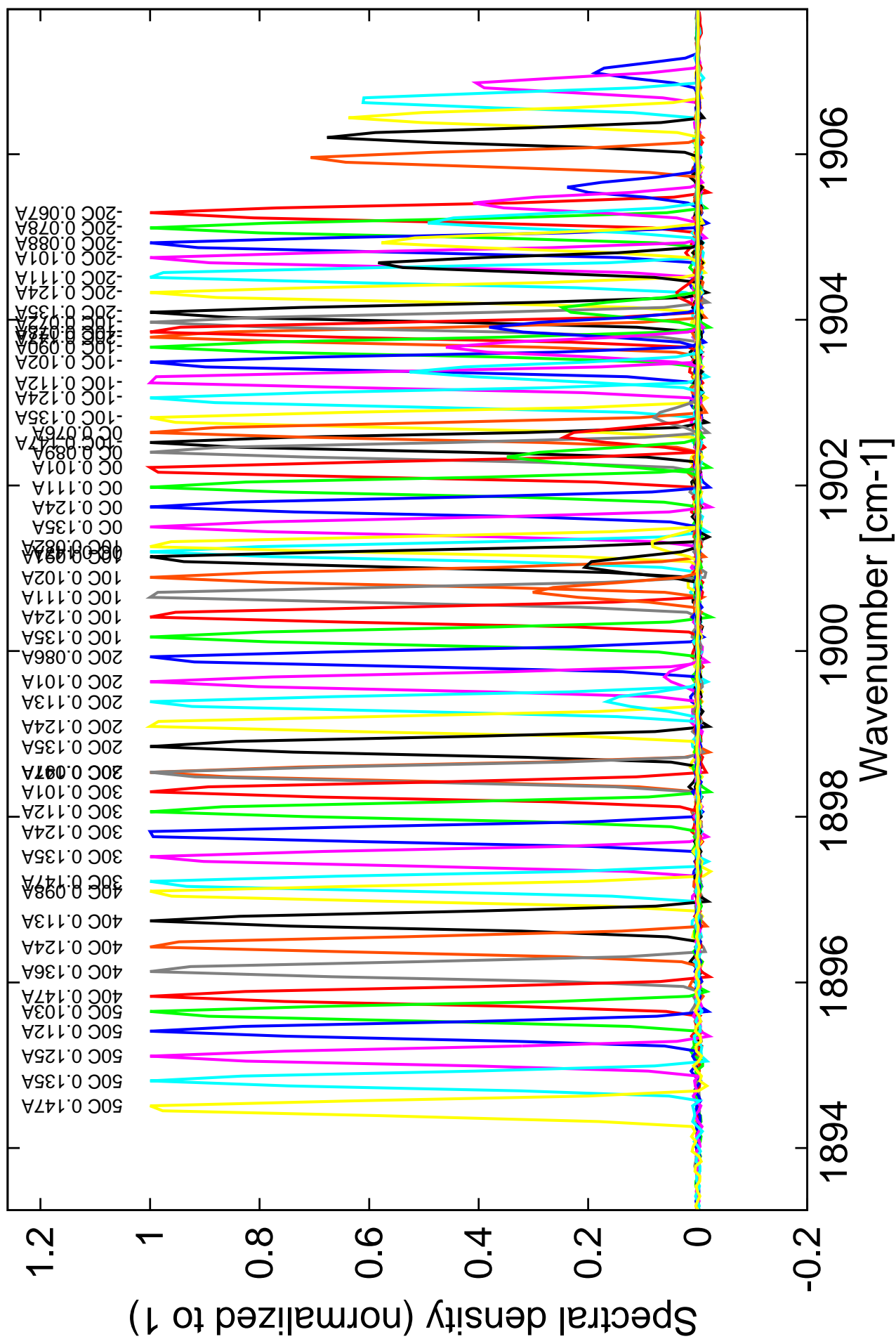


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=7.5V$  (2-wires measurements). Maximum operation current: 0.147A for all temperatures.

Figure 4: spectra at different temperatures for various DC currents



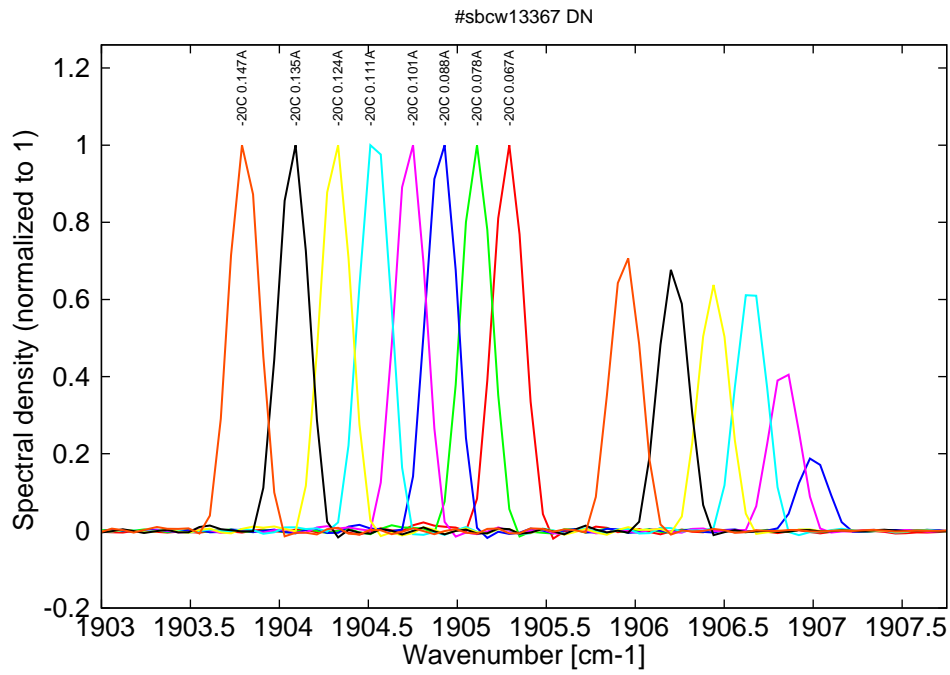


Figure 6: Spectra at -20C for various DC currents (monomode up to 0.078A then becomes binode)

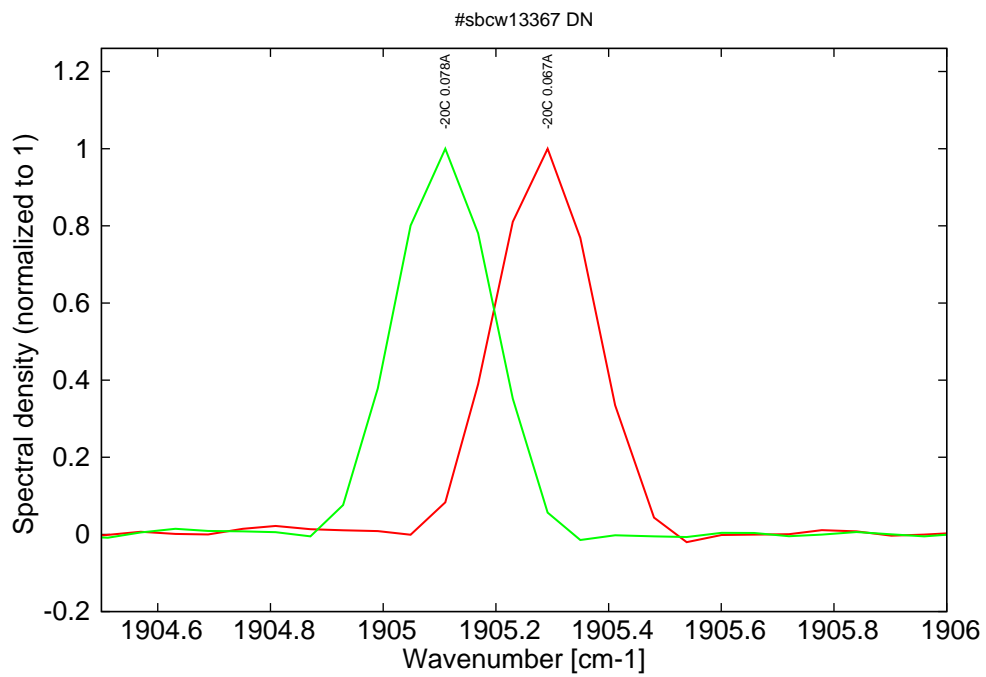


Figure 7: Spectra at -20C for various DC currents (monomode range)

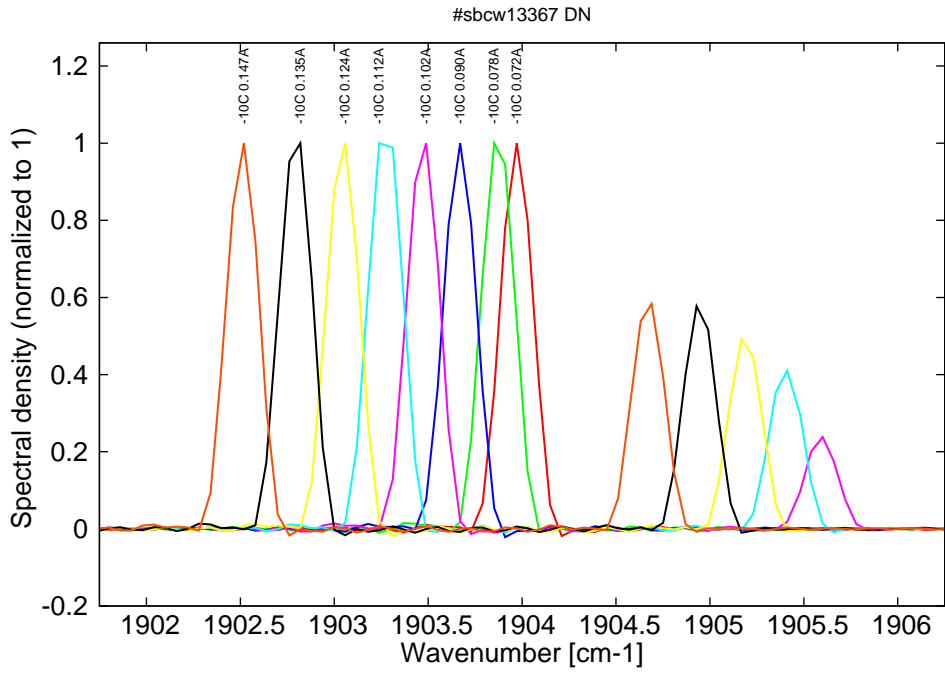


Figure 8: Spectra at -10C for various DC currents (monomode up to 0.090A then becomes binode)

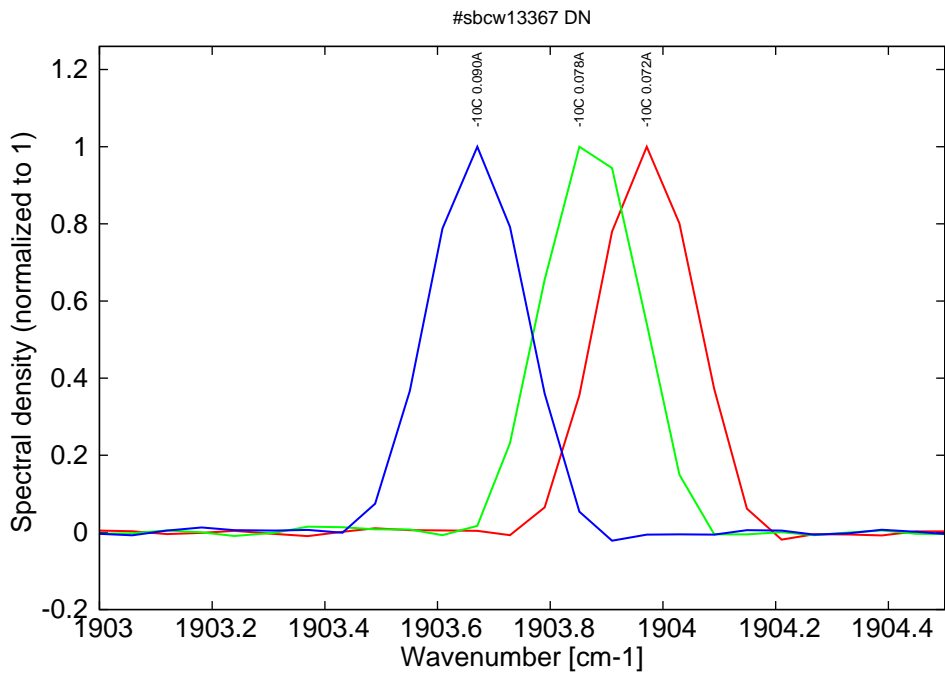


Figure 9: Spectra at -10C for various DC currents (monomode range)

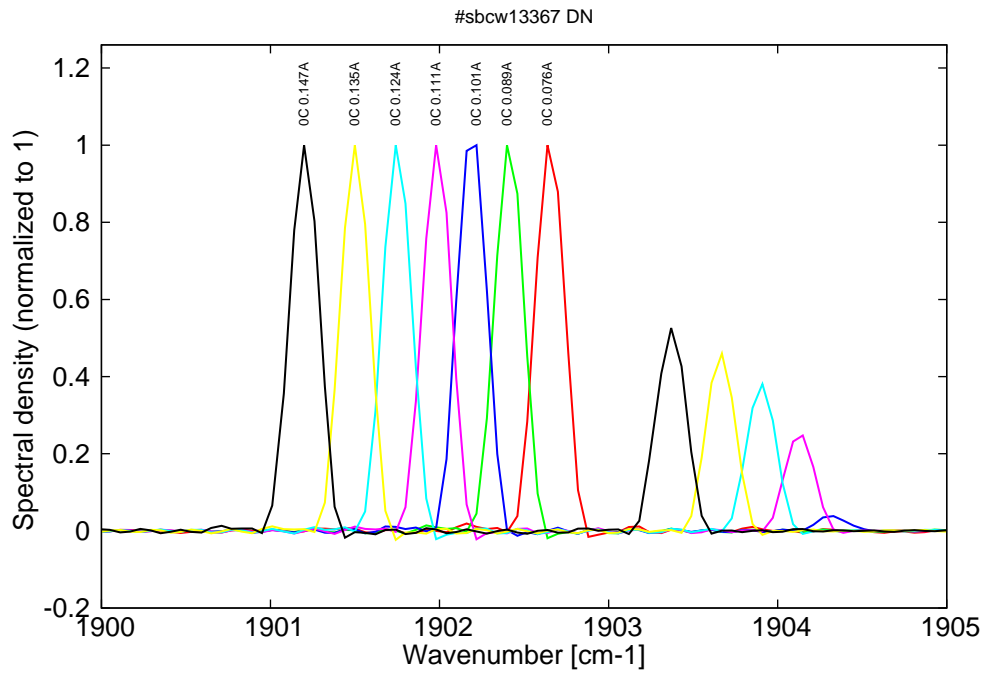


Figure 10: Spectra at 0C for various DC currents (monomode up to 0.089A then becomes binode)

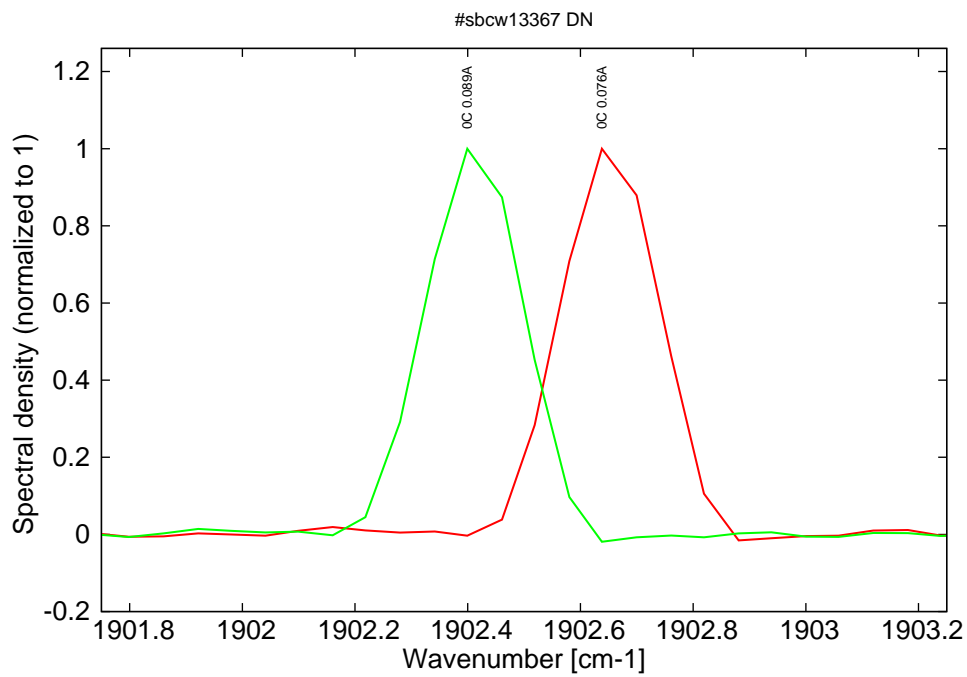


Figure 11: Spectra at 0C for various DC currents (monomode range)



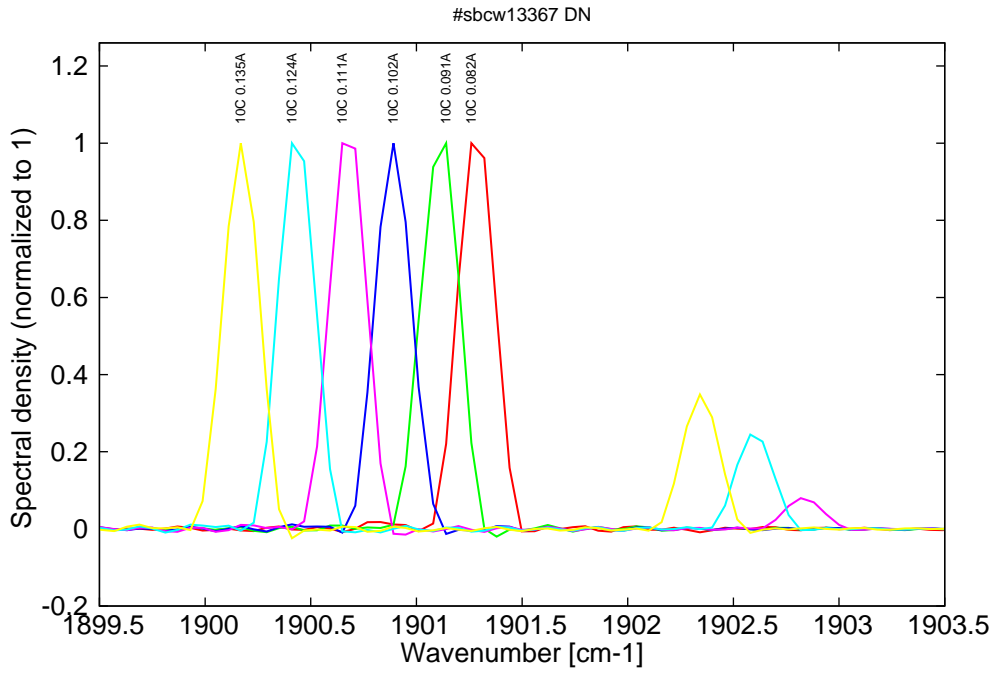


Figure 12: Spectra at 10C for various DC currents (monomode up to 0.102A then becomes binode)

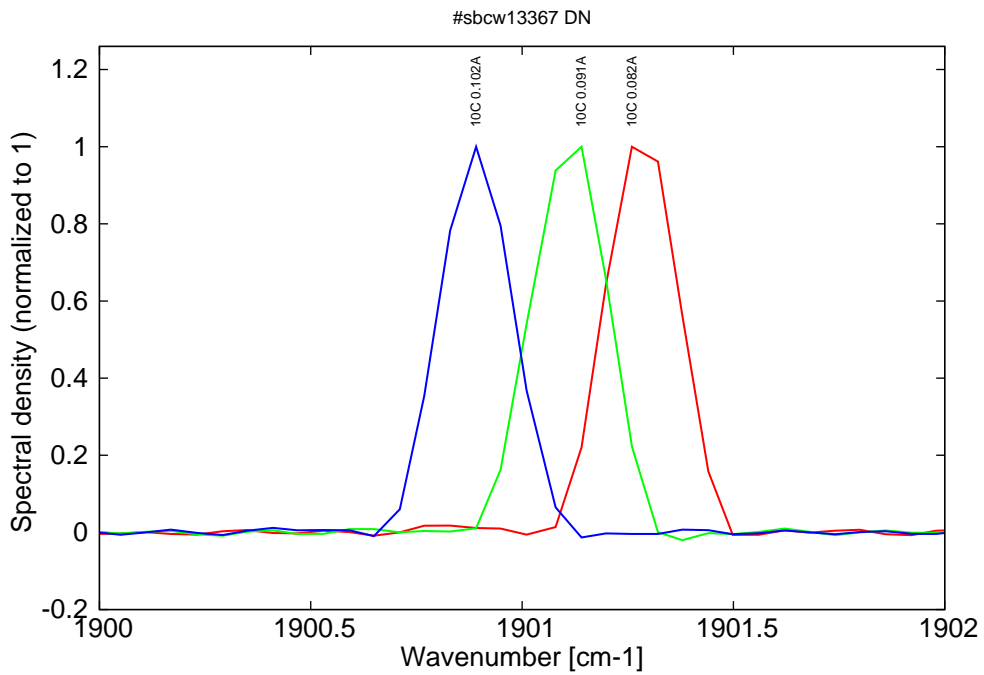


Figure 13: Spectra at 10C for various DC currents (monomode range)

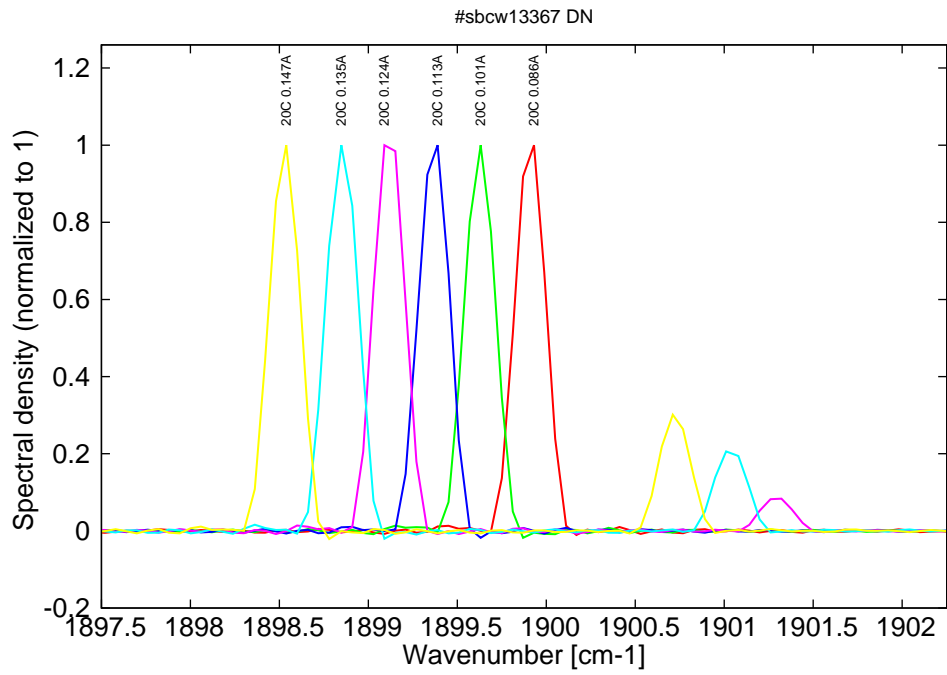


Figure 14: Spectra at 20C for various DC currents (monomode up to 0.113A then becomes binode)

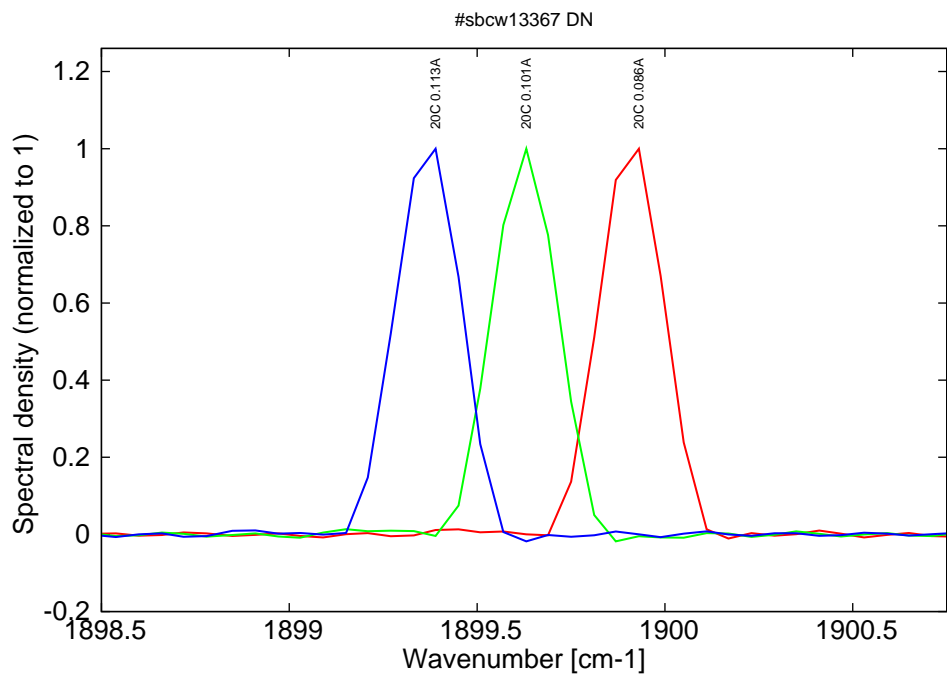


Figure 15: Spectra at 20C for various DC currents (monomode range)

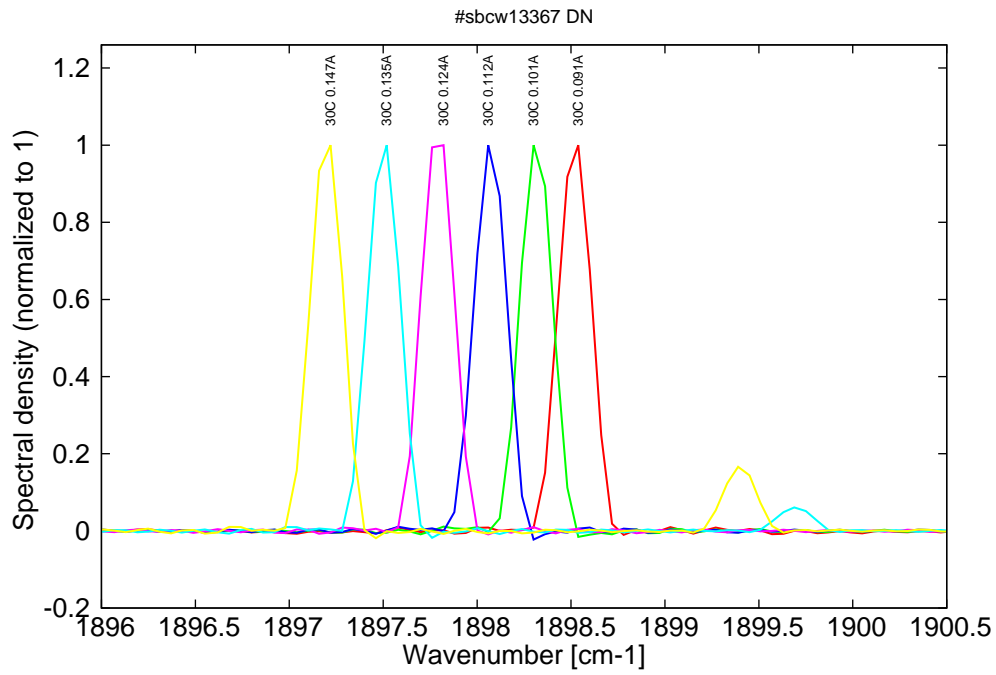


Figure 16: Spectra at 30C for various DC currents (monomode up to 0.124A then becomes binode)

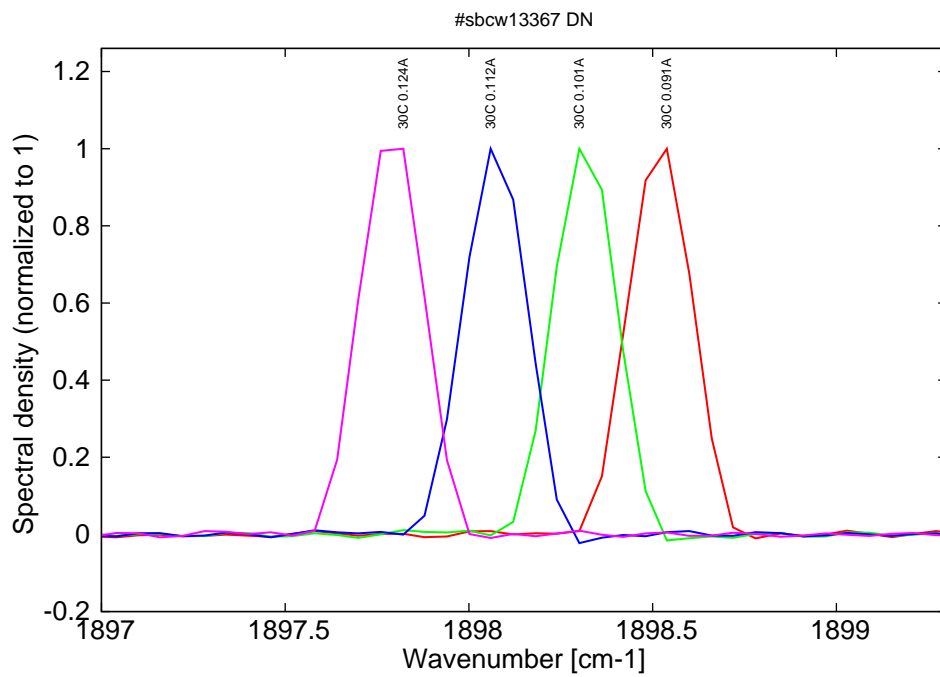


Figure 17: Spectra at 30C for various DC currents (monomode range)

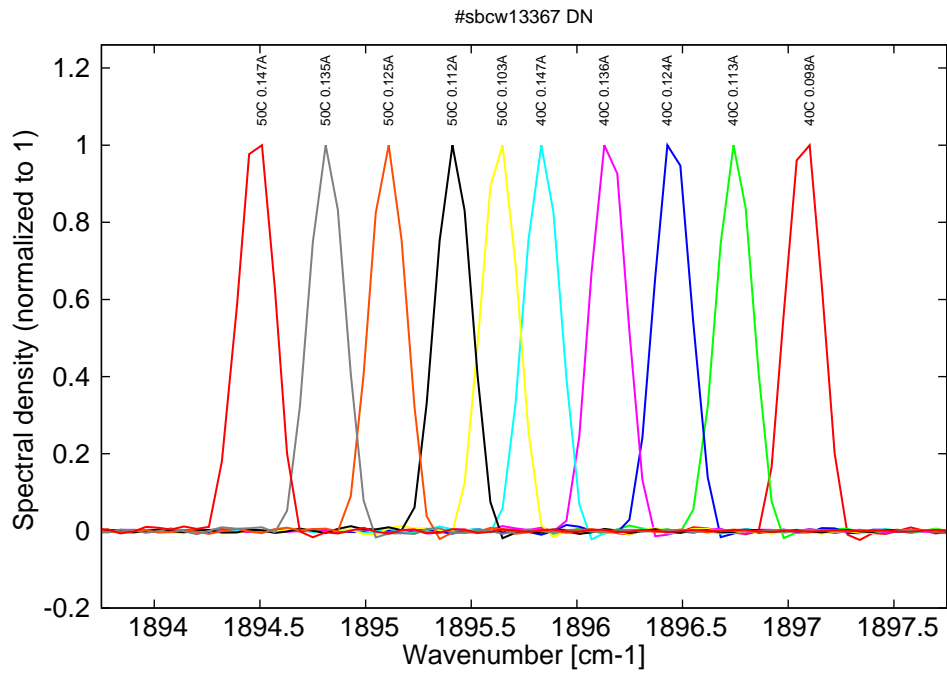


Figure 18: Spectra from 40C to 50C for various DC currents (all monomode)