ALPES LASERS

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Datasheet for #sbcw10564 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.
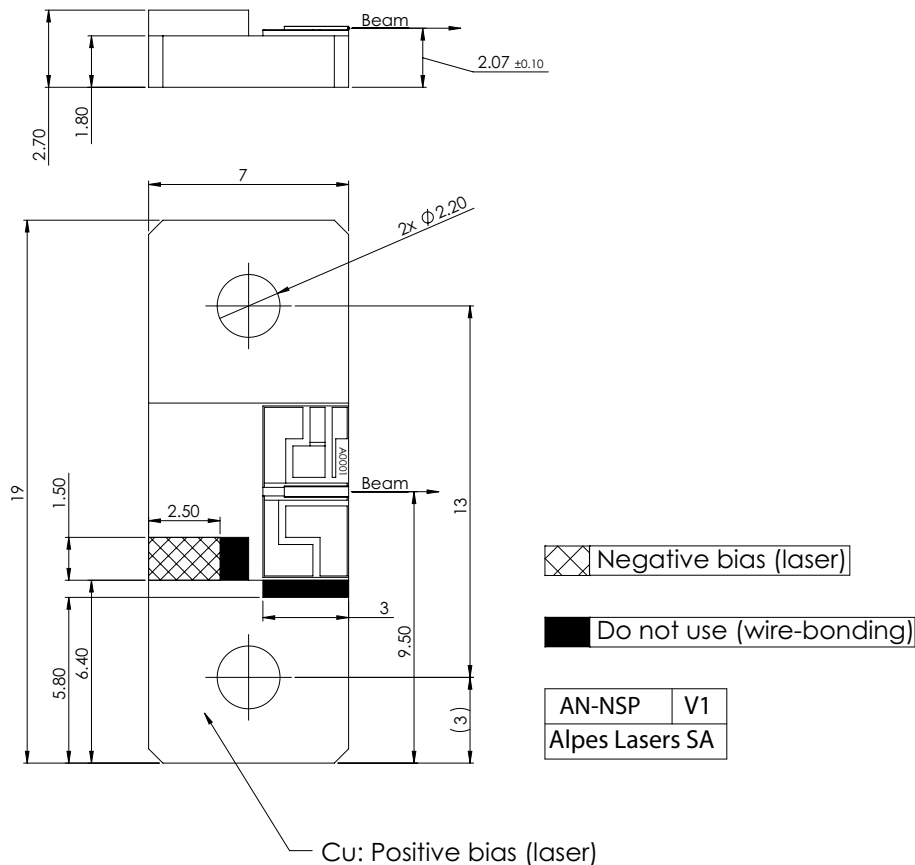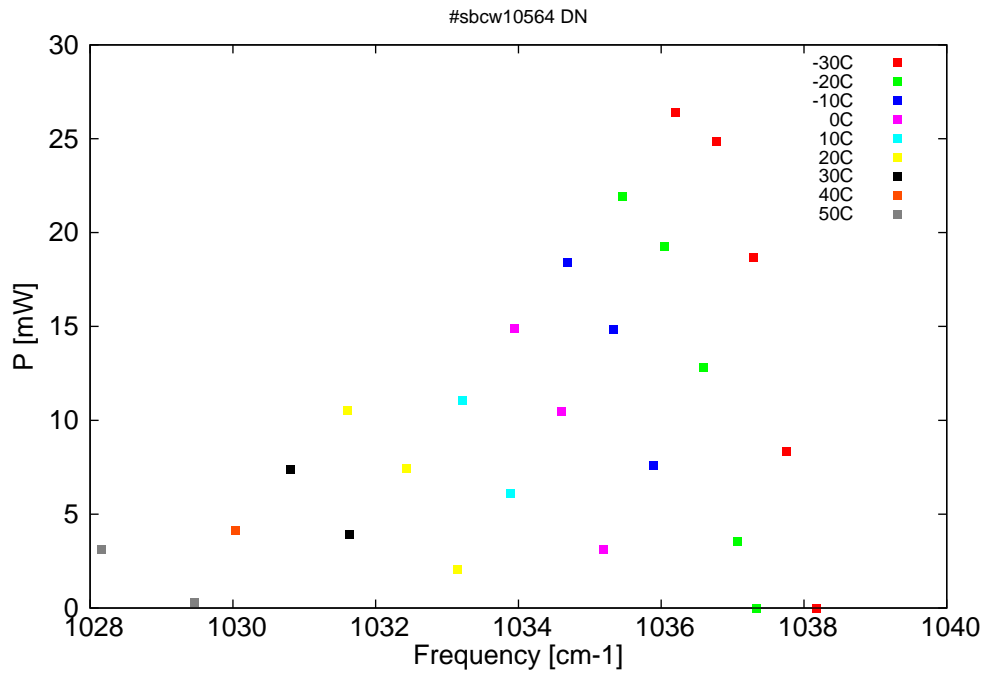

Figure 1: Support mounting for #sbcw10564 DN

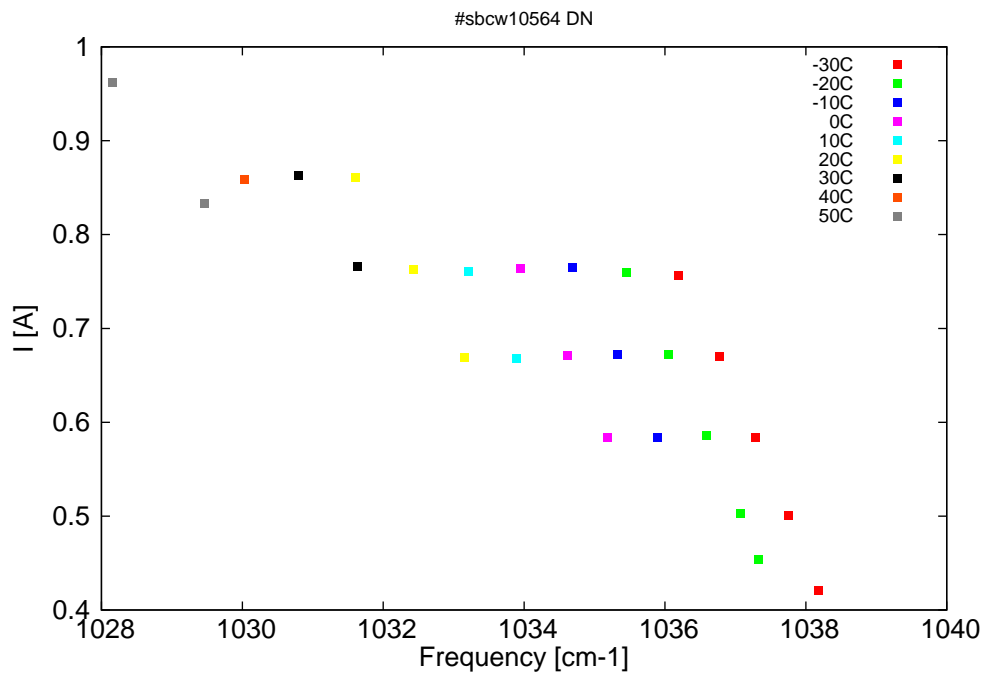Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

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

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λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
9632.2	1038.2	0	-30	8.5	0.42
9636.2	1037.8	8.3	-30	8.9	0.5
9640.5	1037.3	18.7	-30	9.2	0.58
9645.3	1036.8	24.9	-30	9.6	0.67
9650.7	1036.2	26.4	-30	9.9	0.76
9640.1	1037.3	0	-20	8.6	0.45
9642.6	1037.1	3.6	-20	8.8	0.5
9647.1	1036.6	12.8	-20	9.2	0.59
9652	1036.1	19.3	-20	9.5	0.67
9657.6	1035.5	21.9	-20	9.9	0.76
9653.5	1035.9	7.6	-10	9.1	0.58
9658.8	1035.3	14.8	-10	9.5	0.67
9664.8	1034.7	18.4	-10	9.9	0.76
9660.1	1035.2	3.1	0	9.1	0.58
9665.5	1034.6	10.5	0	9.4	0.67
9671.6	1034	14.9	0	9.8	0.76
9672.2	1033.9	6.1	10	9.4	0.67
9678.5	1033.2	11	10	9.8	0.76
9679.1	1033.2	2	20	9.3	0.67
9685.8	1032.4	7.4	20	9.7	0.76
9693.6	1031.6	10.5	20	10.2	0.86
9693.3	1031.6	3.9	30	9.7	0.77
9701.2	1030.8	7.4	30	10.2	0.86
9708.4	1030	4.1	40	10.1	0.86
9713.8	1029.5	0.3	50	10	0.83
9726.1	1028.2	3.1	50	10.6	0.96

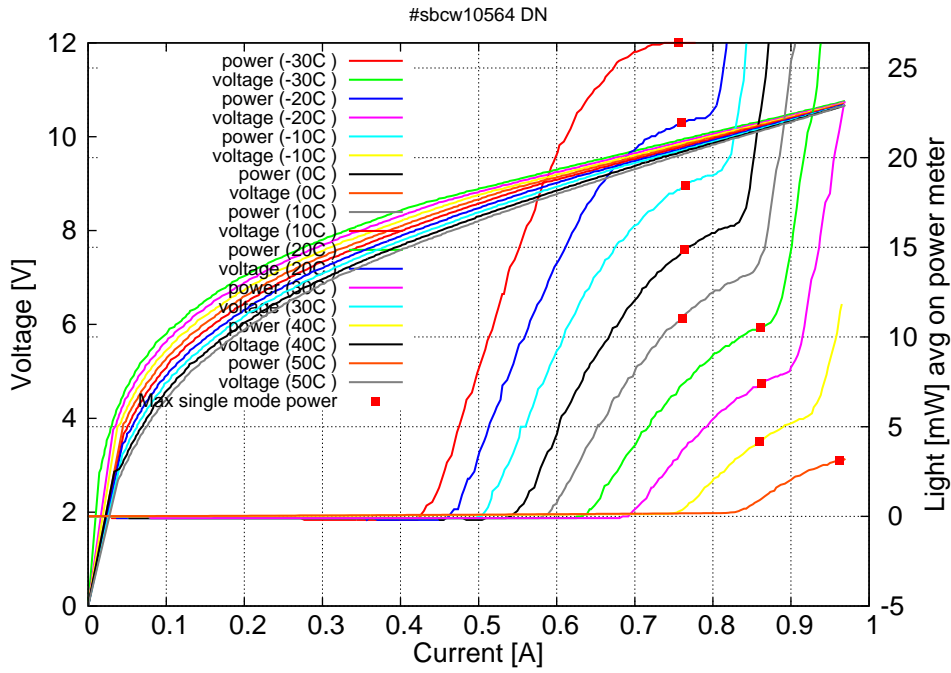Table 1: Singlemode optical output power as function of operating parameters.

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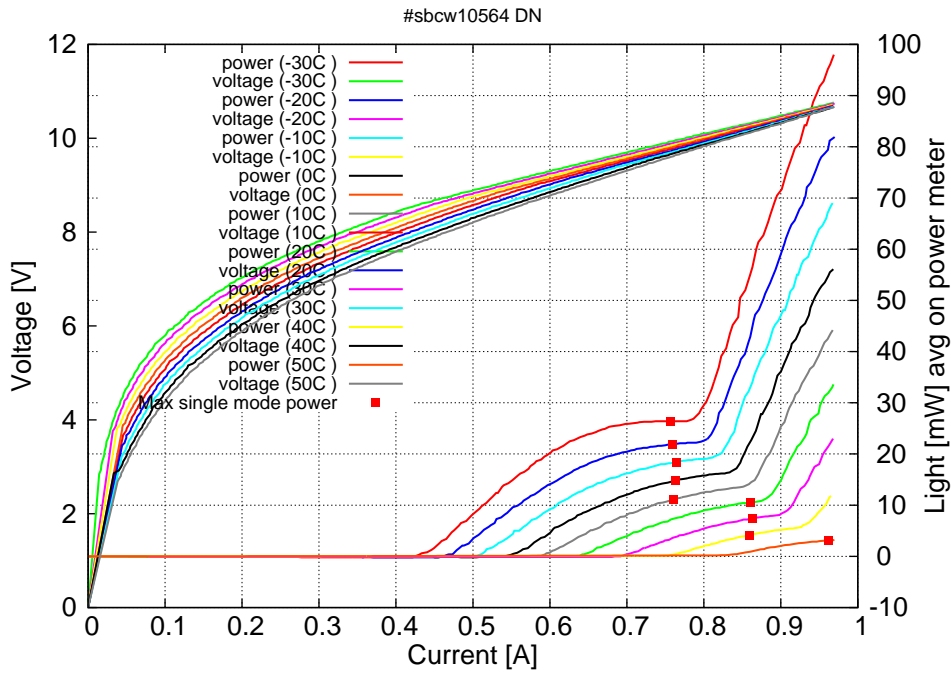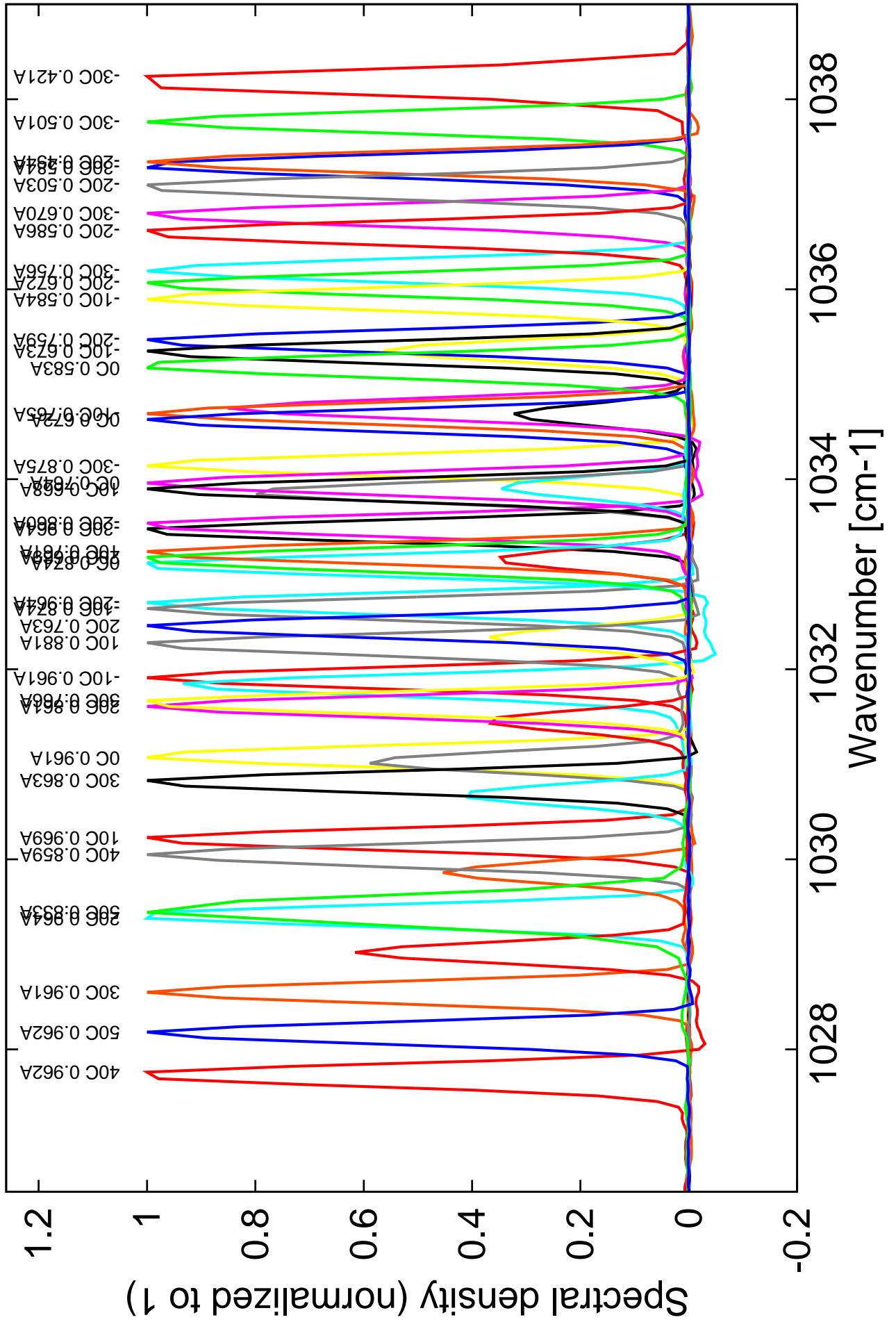

Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -30C: Ith=0.42A / Vth=8.5V (2-wires measurements). Maximum operation current: 0.970A for all temperatures.

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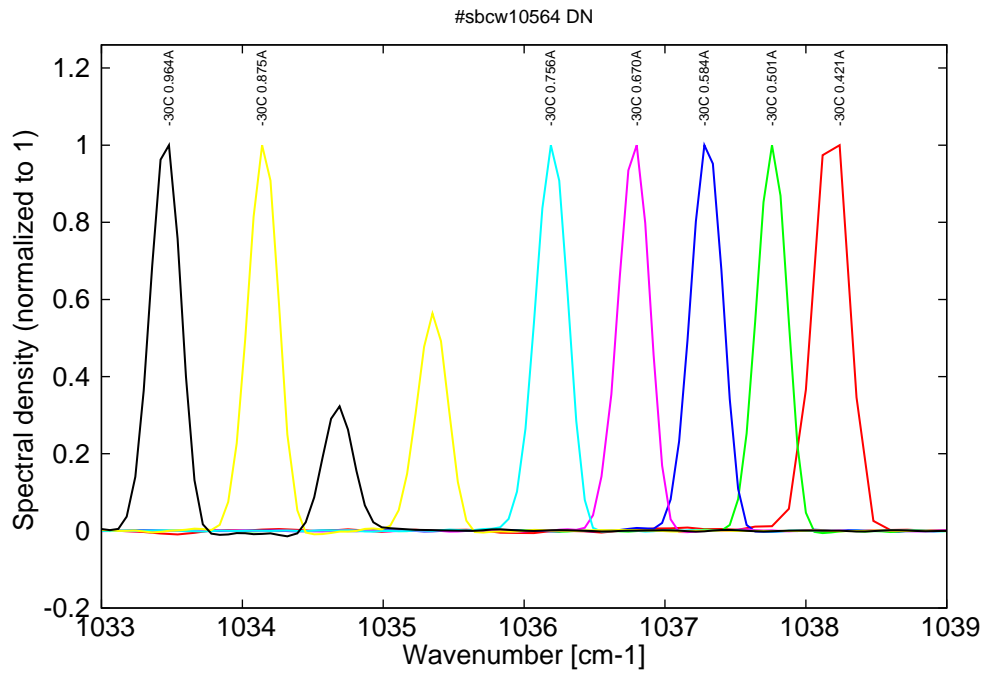Figure 4: spectra at different temperatures for various DC currents

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Figure 6: spectra at -30C for various DC currents (monomode up to 0.76A, then becomes bimode)
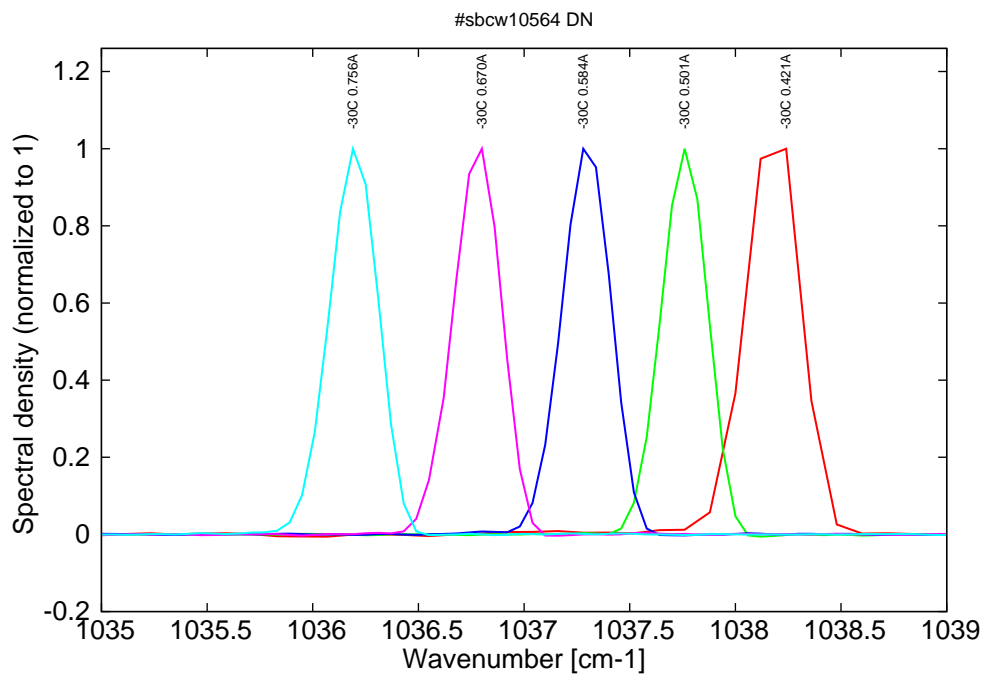
Figure 7: spectra at -30C for various DC currents (monomode range)
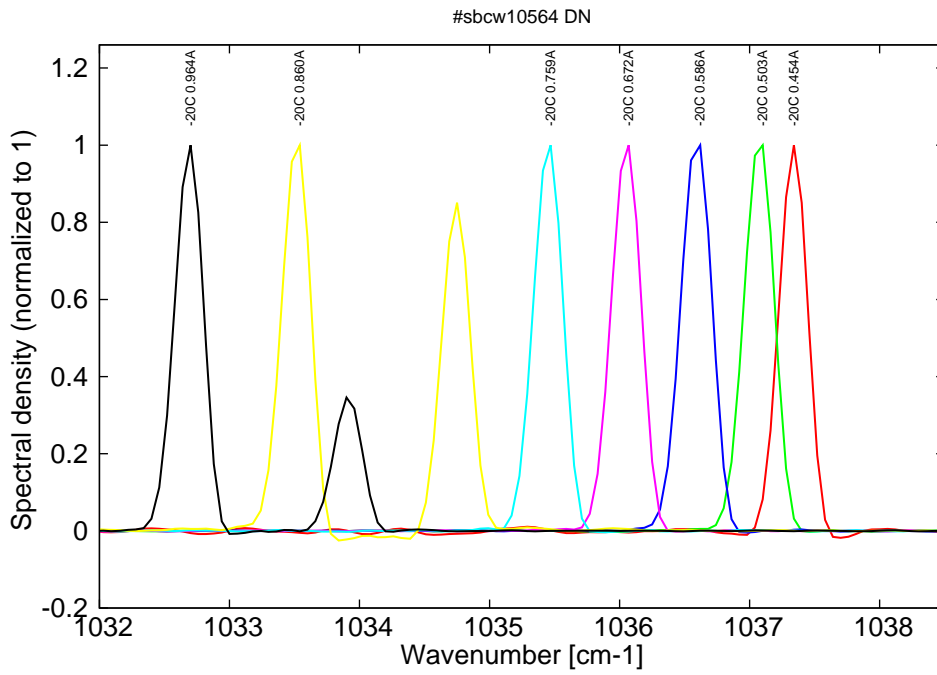
Figure 8: spectra at -20C for various DC currents (monomode up to 0.76A, then becomes bimode)
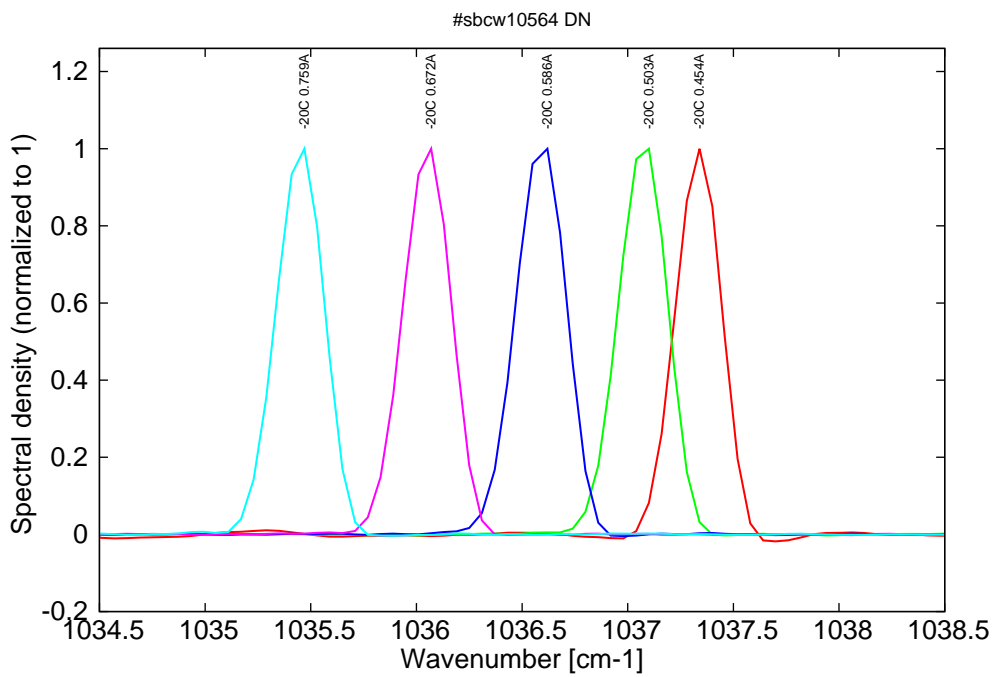
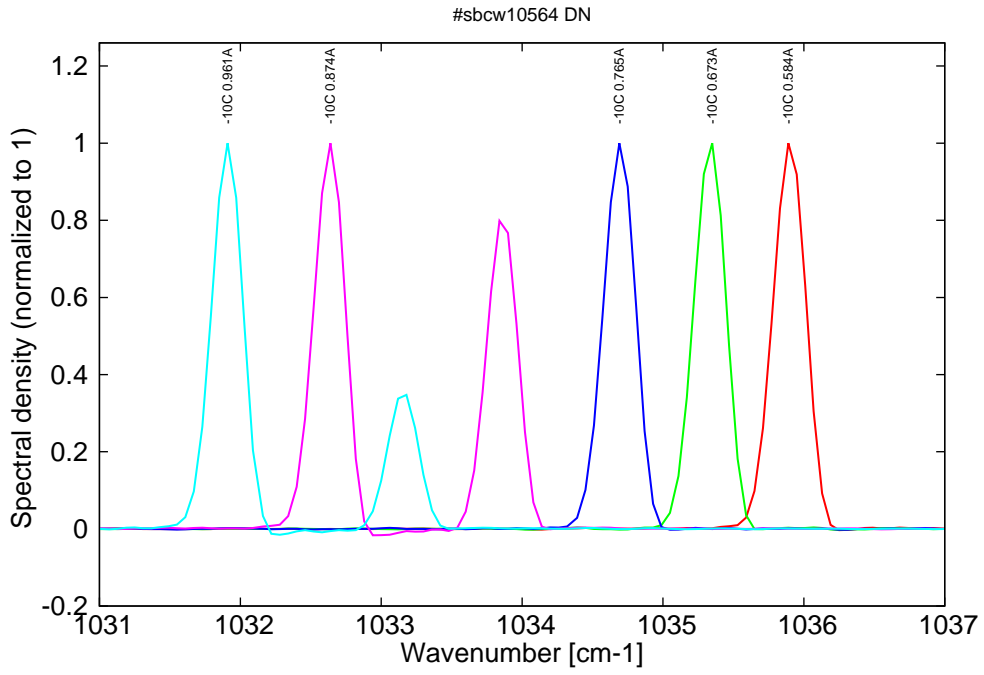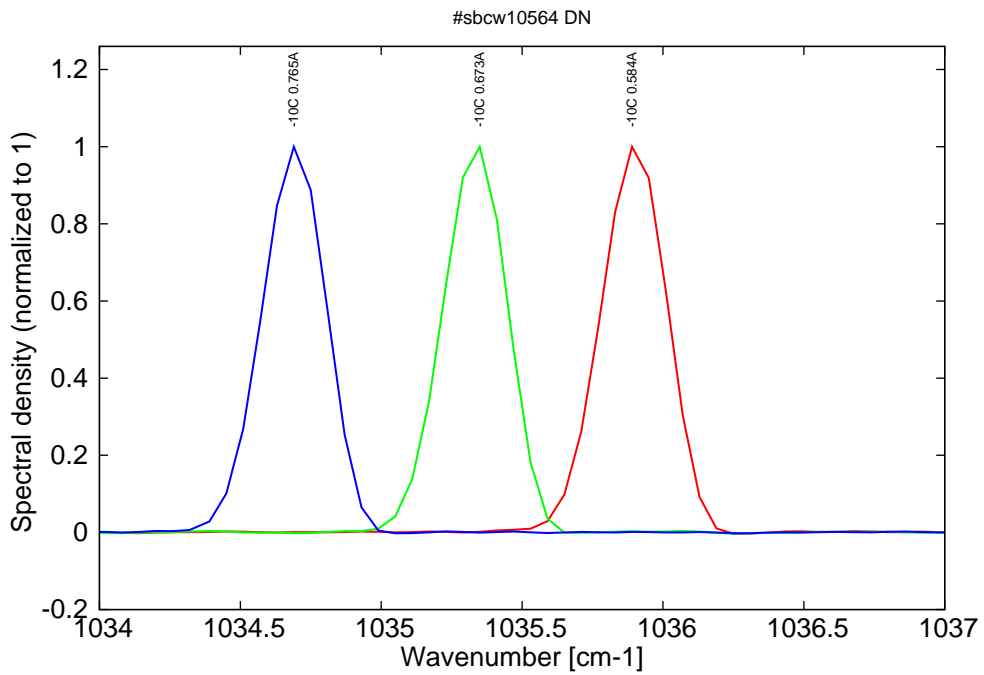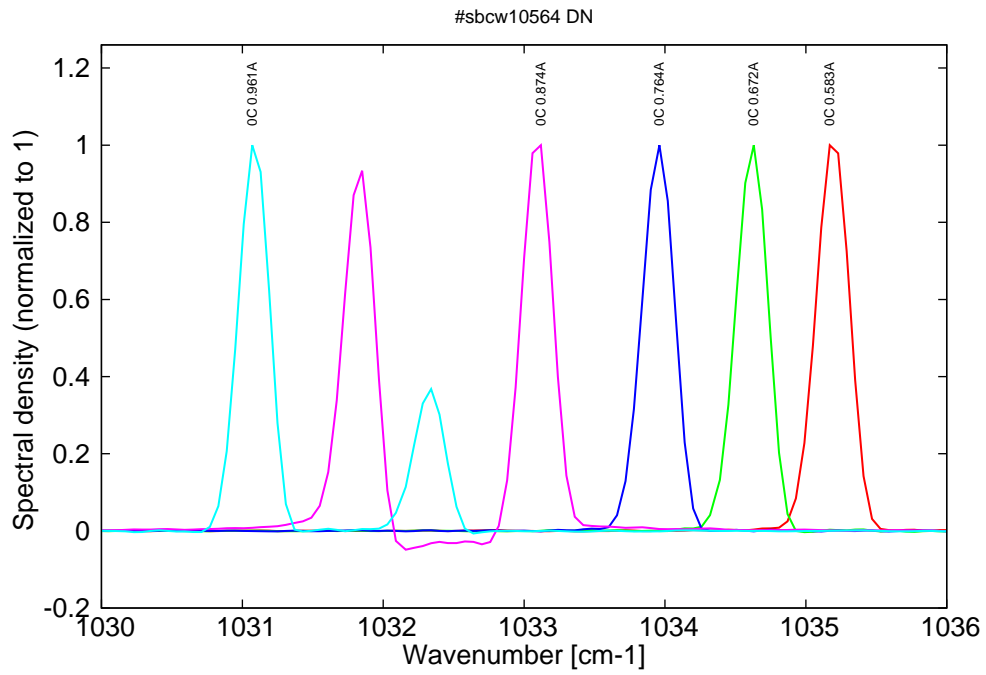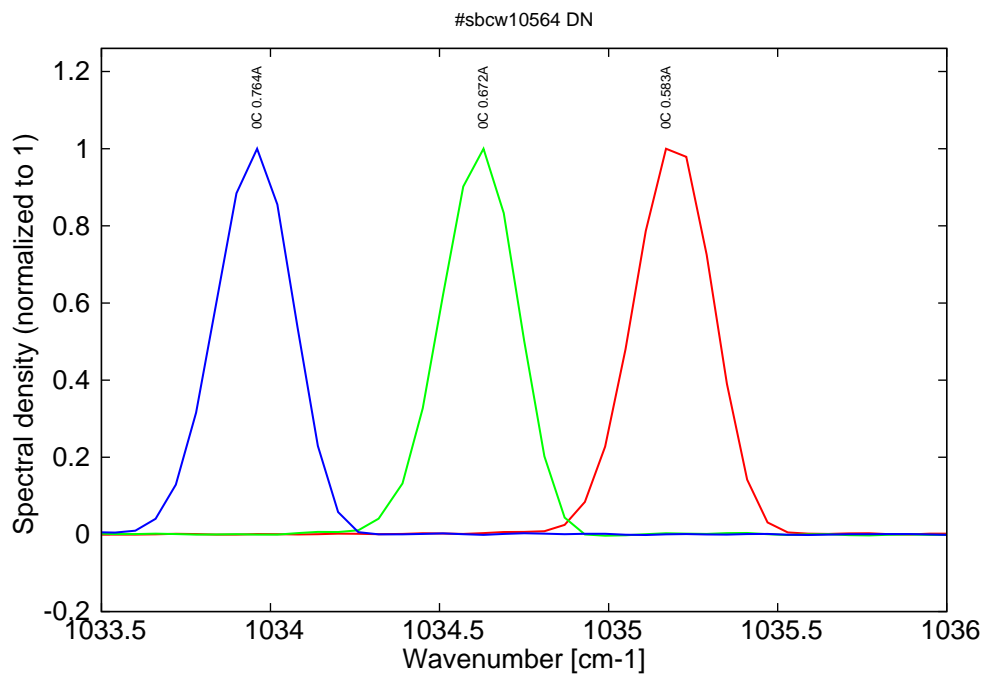Figure 9: spectra at -20C for various DC currents (monomode range)
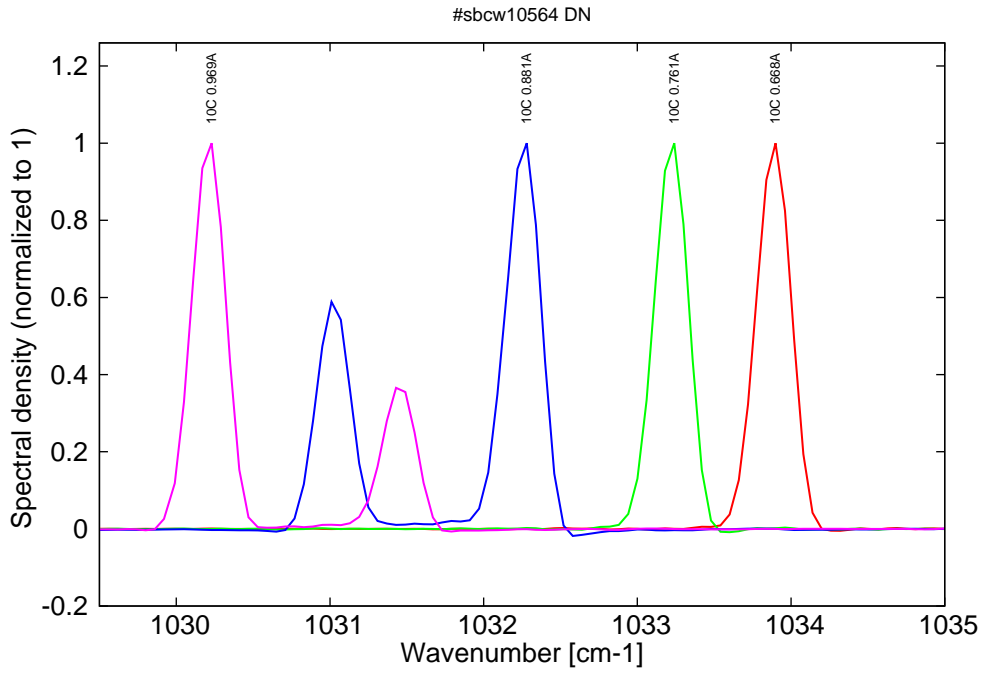
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Figure 10: spectra at -10C for various DC currents (monomode up to 0.765A, then becomes bimode)
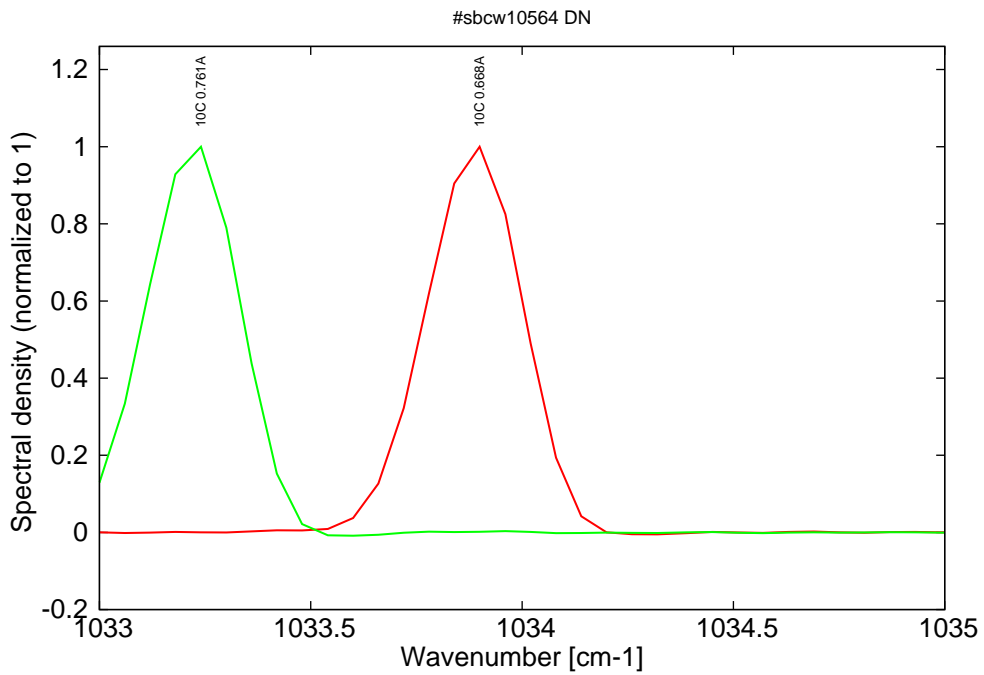
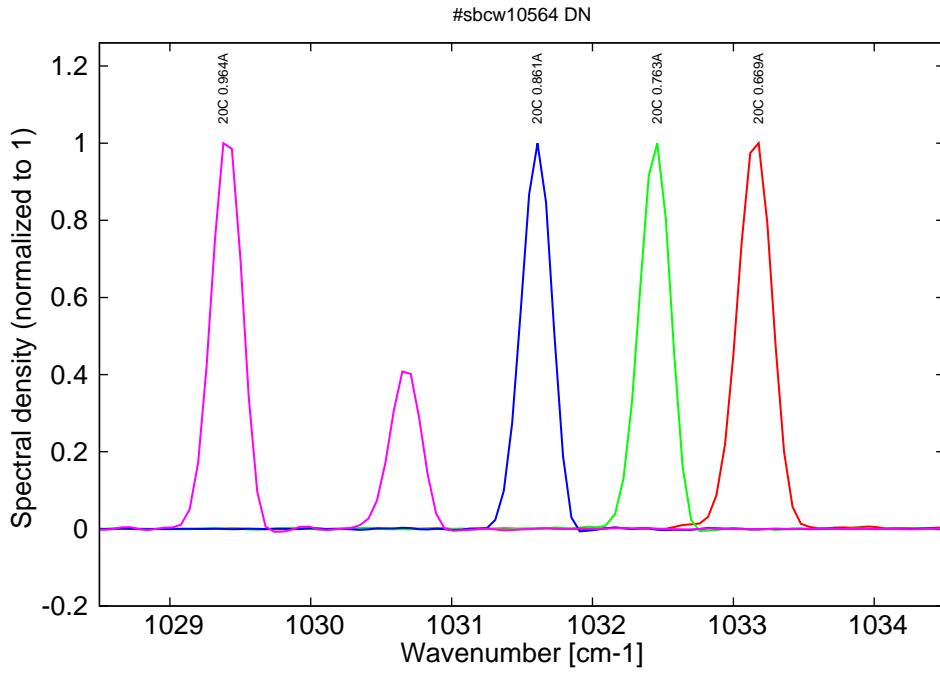Figure 11: spectra at -10C for various DC currents (monomode range)

Figure 12: spectra at 0C for various DC currents (monomode up to 0.765A, then becomes bimode)

Figure 13: spectra at 0C for various DC currents (monomode range)

Figure 14: spectra at 10C for various DC currents (monomode up to 0.765A, then becomes bimode)
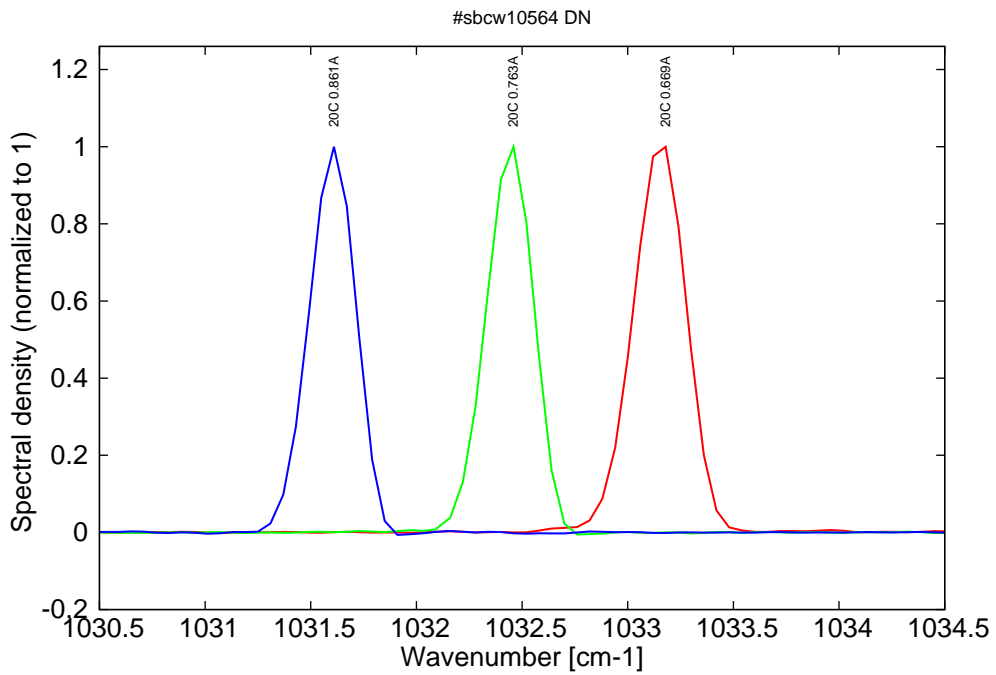

Figure 15: spectra at 10C for various DC currents (monomode range)

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Figure 16: spectra at 20C for various DC currents (monomode up to 0.86A, then becomes bimode)

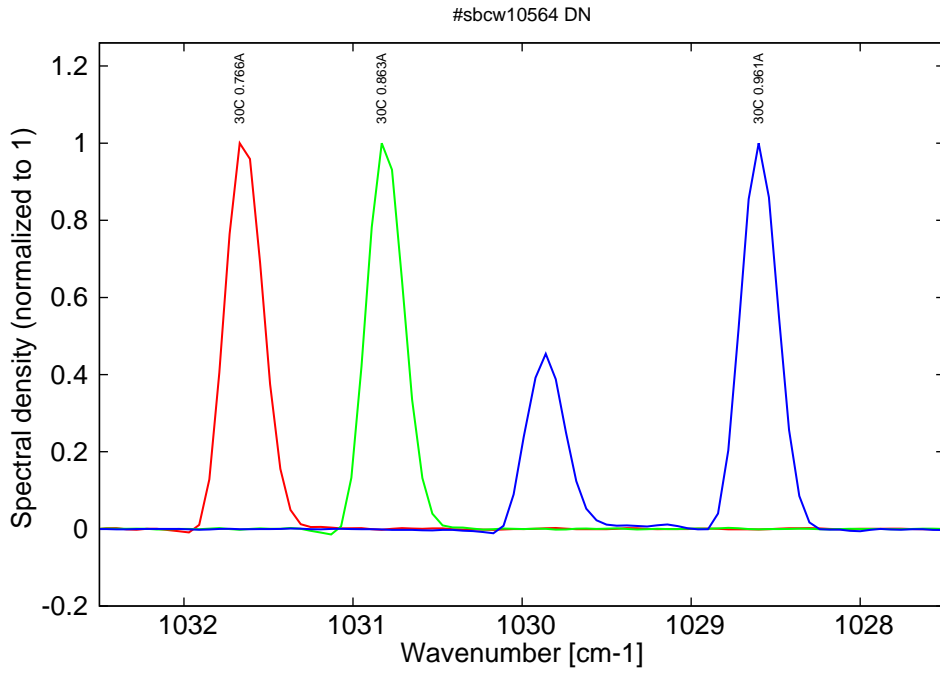Figure 17: spectra at 20C for various DC currents (monomode range)

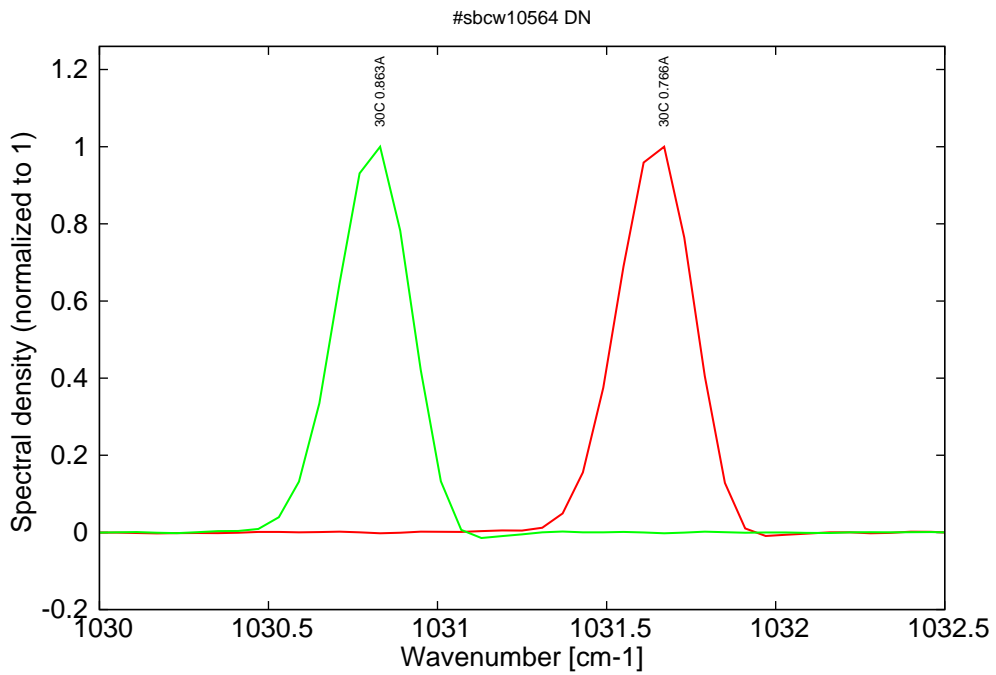Figure 18: spectra at 30C for various DC currents (monomode up to 0.865A, then becomes bimode)

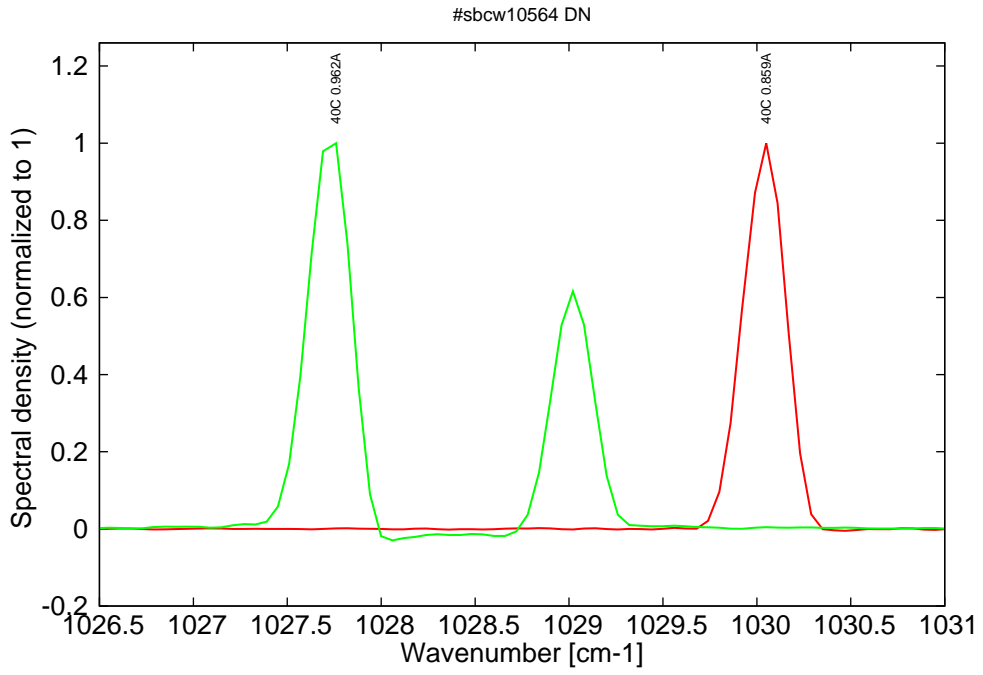Figure 19: spectra at 30C for various DC currents (monomode range)

Figure 20: spectra at 40C for various DC currents (monomode up to 0.865A, then becomes bimode)
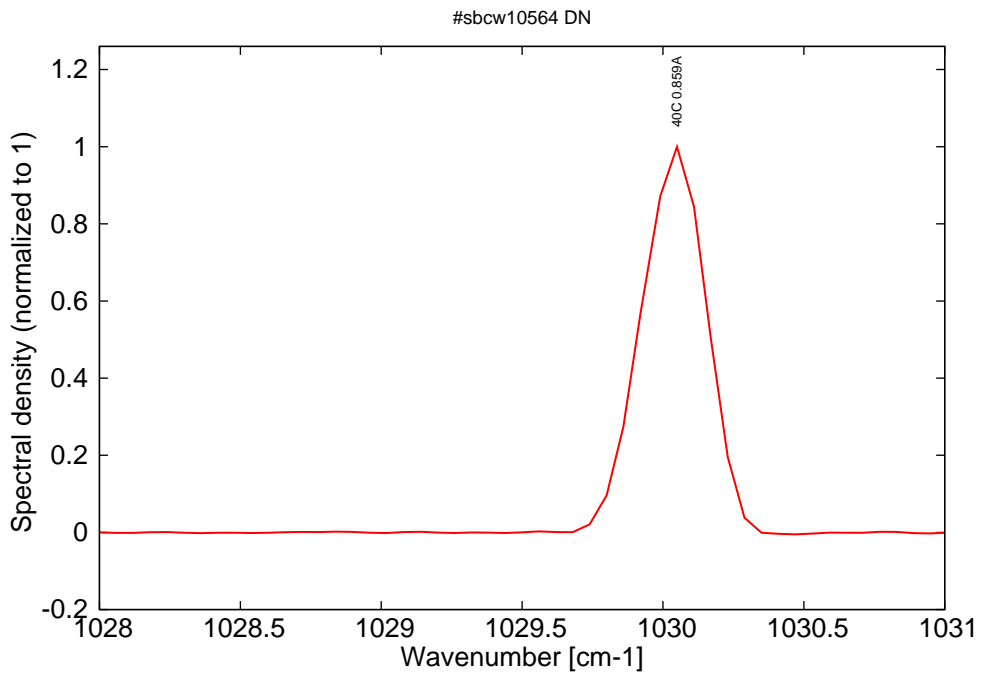

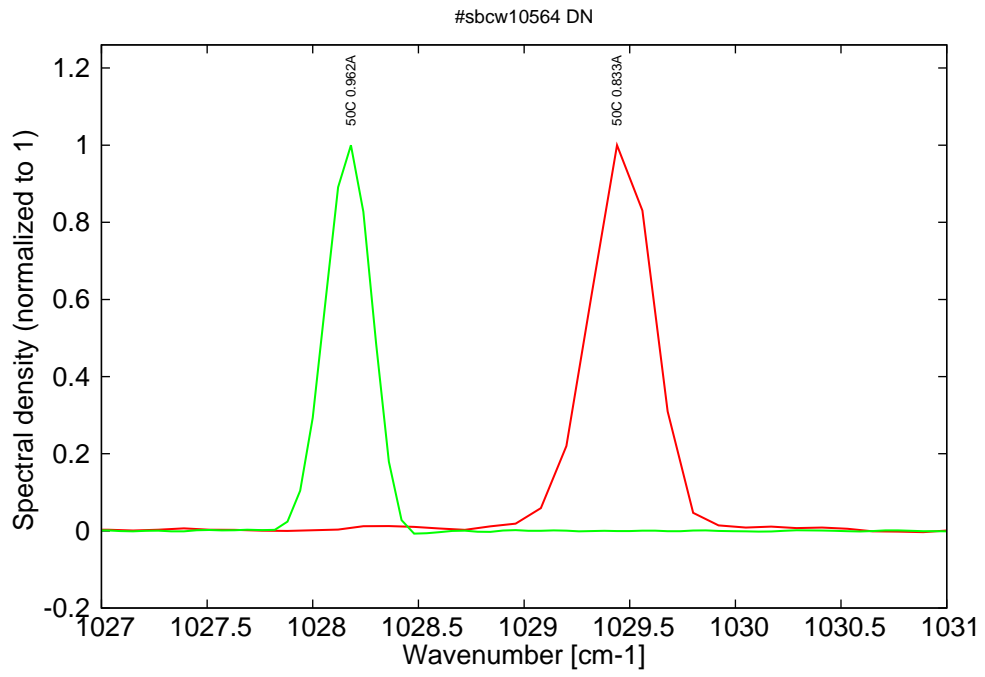Figure 21: spectra at 40C for various DC currents (monomode range)

Figure 22: spectra at 50C for various DC currents (all monomode)