

**Datasheet for #sbcw12879 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 bias and positive bias on the specific zones drawn below. To use with an ILX Lightwave LDX-3232 laser driver, or equivalent.

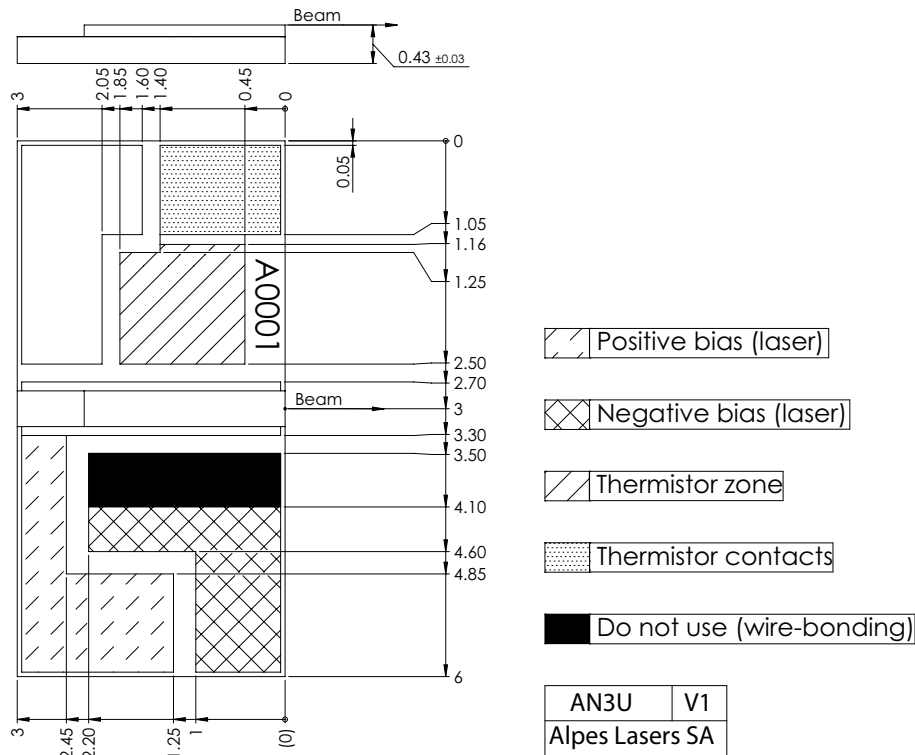


Figure 1: Mechanical and electrical interface for #sbcw12879 DN (please note that AlN submount numbering is A0858)

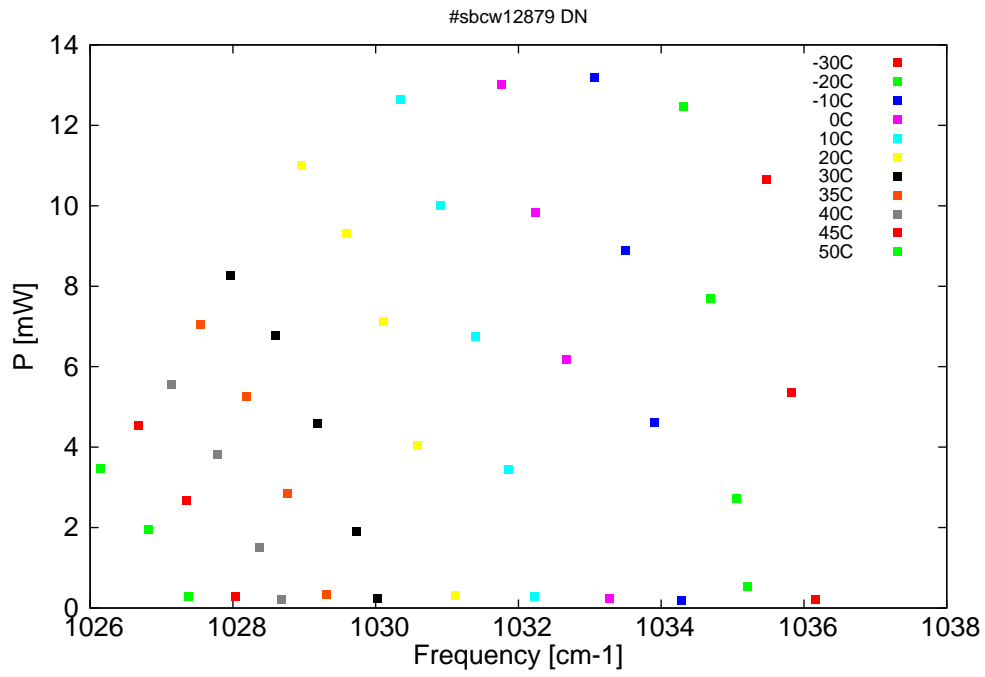


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

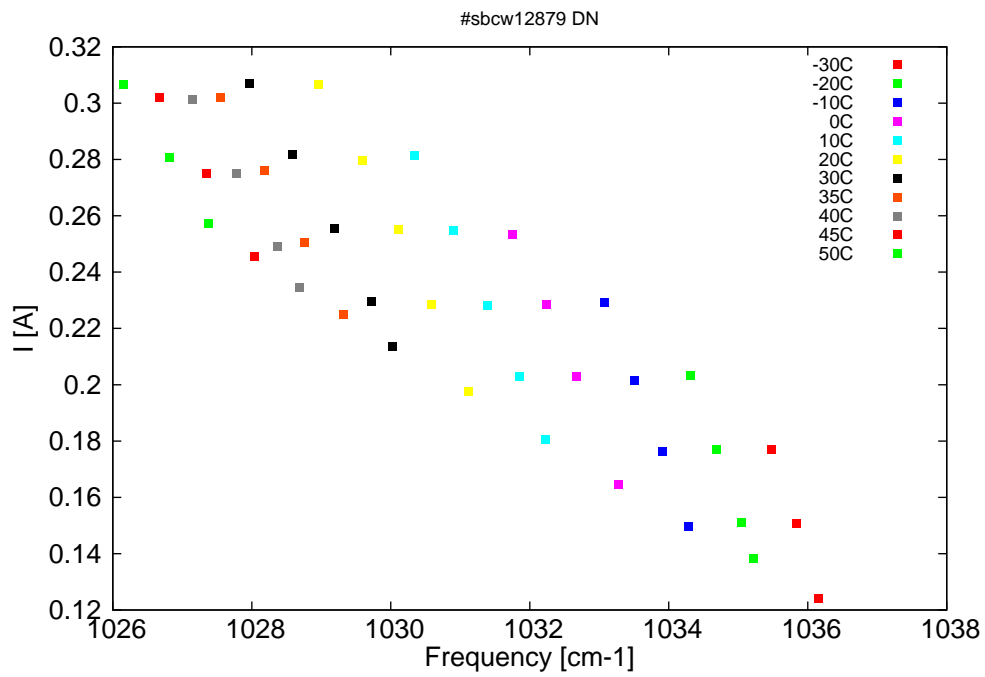


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9651	1036.2	0.2	-30	8.8	0.12
9654.1	1035.8	5.4	-30	9.2	0.15
9657.4	1035.5	10.7	-30	9.6	0.18
9659.8	1035.2	0.5	-20	8.9	0.14
9661.4	1035	2.7	-20	9.1	0.15
9664.7	1034.7	7.7	-20	9.5	0.18
9668.3	1034.3	12.5	-20	9.8	0.2
9668.5	1034.3	0.2	-10	9	0.15
9672.1	1033.9	4.6	-10	9.4	0.18
9675.8	1033.5	8.9	-10	9.7	0.2
9679.9	1033.1	13.2	-10	10.1	0.23
9678	1033.3	0.2	0	9.1	0.16
9683.6	1032.7	6.2	0	9.6	0.2
9687.6	1032.2	9.8	0	10	0.23
9692.2	1031.8	13	0	10.3	0.25
9687.9	1032.2	0.3	10	9.2	0.18
9691.3	1031.9	3.5	10	9.5	0.2
9695.6	1031.4	6.8	10	9.9	0.23
9700.2	1030.9	10	10	10.3	0.25
9705.5	1030.3	12.6	10	10.6	0.28
9698.1	1031.1	0.3	20	9.4	0.2
9703.2	1030.6	4	20	9.8	0.23
9707.7	1030.1	7.1	20	10.2	0.25
9712.6	1029.6	9.3	20	10.5	0.28
9718.6	1029	11	20	11	0.31
9708.5	1030	0.2	30	9.6	0.21
9711.3	1029.7	1.9	30	9.8	0.23
9716.4	1029.2	4.6	30	10.1	0.26
9722	1028.6	6.8	30	10.5	0.28
9727.9	1028	8.3	30	10.9	0.31
9715.2	1029.3	0.3	35	9.7	0.22
9720.4	1028.8	2.8	35	10	0.25
9725.8	1028.2	5.3	35	10.4	0.28
9731.9	1027.6	7.1	35	10.7	0.3
9721.1	1028.7	0.2	40	9.8	0.23
9724.1	1028.4	1.5	40	10	0.25
9729.6	1027.8	3.8	40	10.3	0.28
9735.8	1027.1	5.6	40	10.7	0.3
9727.3	1028	0.3	45	9.9	0.25
9733.8	1027.4	2.7	45	10.3	0.27
9740.2	1026.7	4.5	45	10.7	0.3
9733.5	1027.4	0.3	50	10	0.26
9738.8	1026.8	2	50	10.3	0.28
9745.2	1026.2	3.5	50	10.7	0.31

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

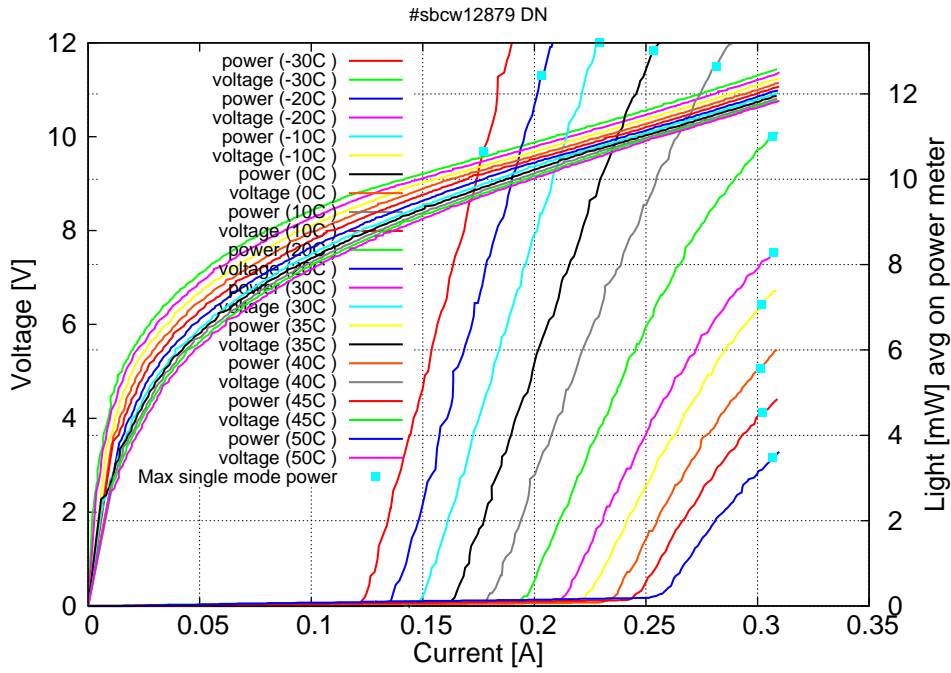


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

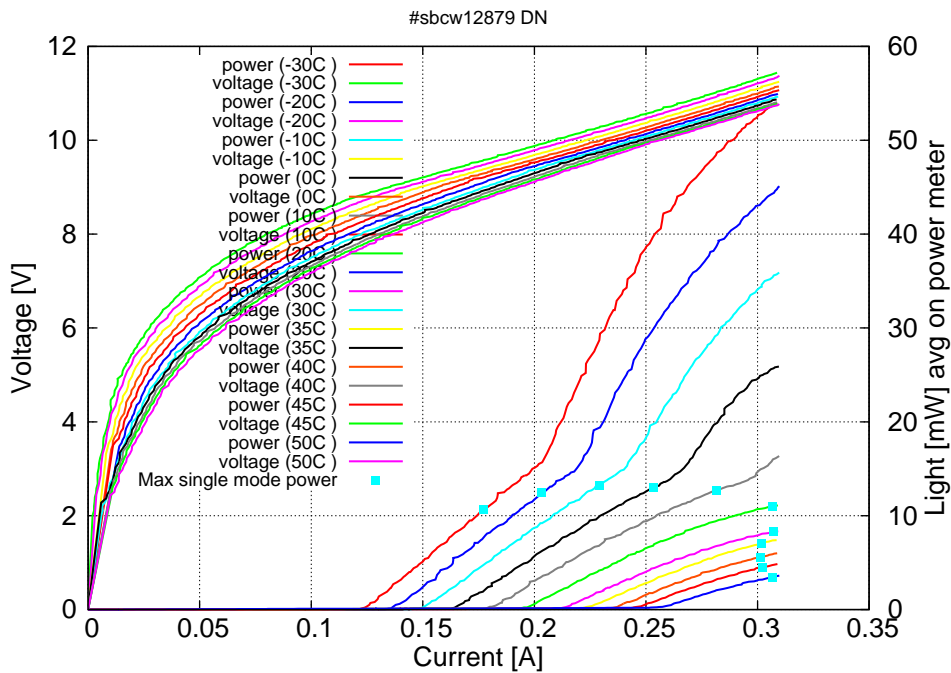
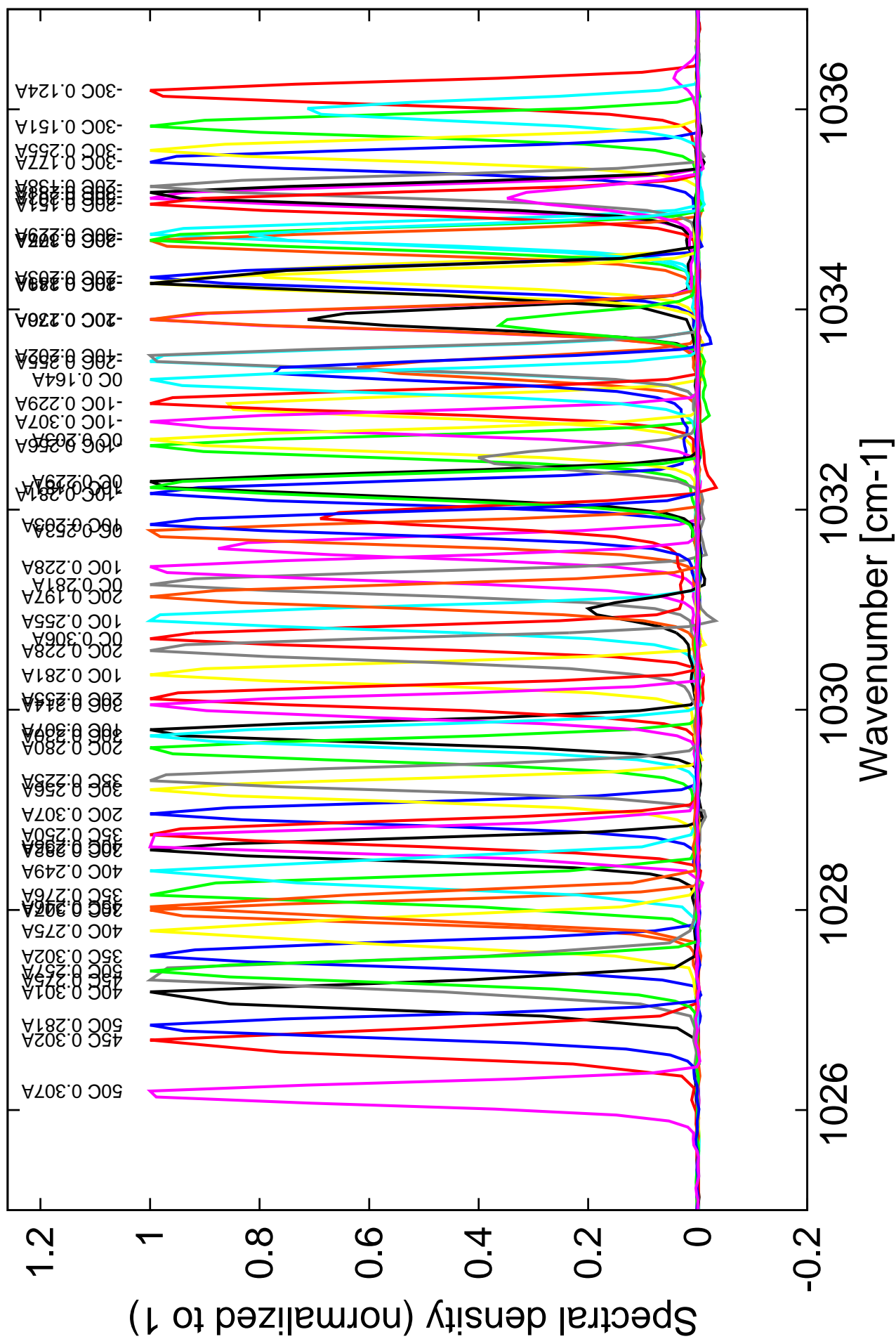


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -30C:  $I_{th}=0.12A$  /  $V_{th}=8.8V$  (2-wires measurements). Maximum operation current: 0.310A for all temperatures.

Figure 4: spectra at different temperatures for various DC currents



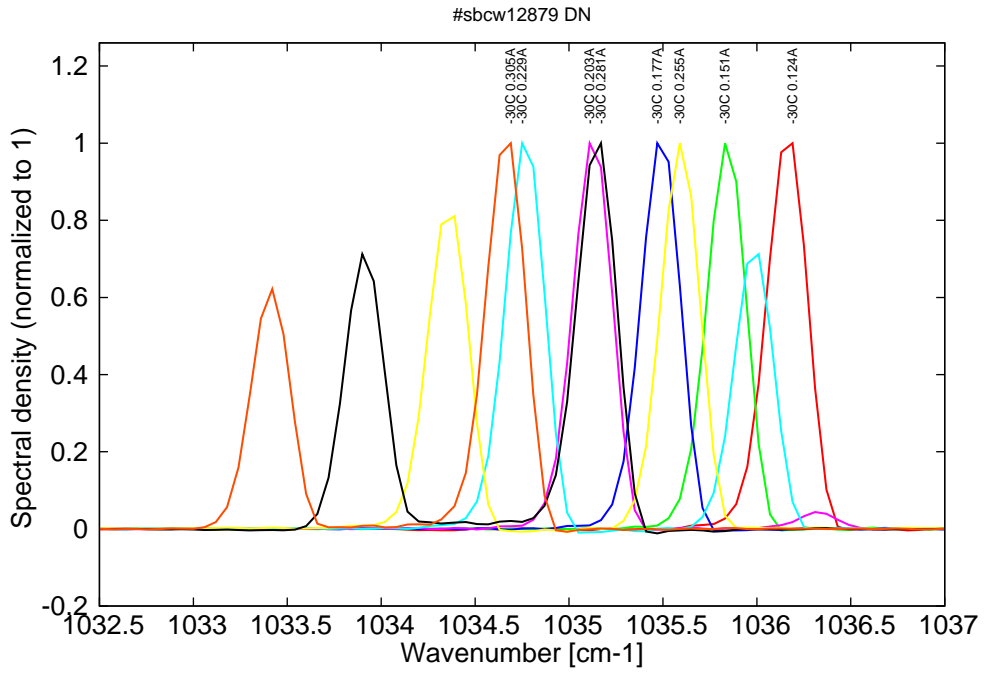


Figure 6: Spectra at -30C for various DC currents (monomode up to 0.18A then becomes bimode)

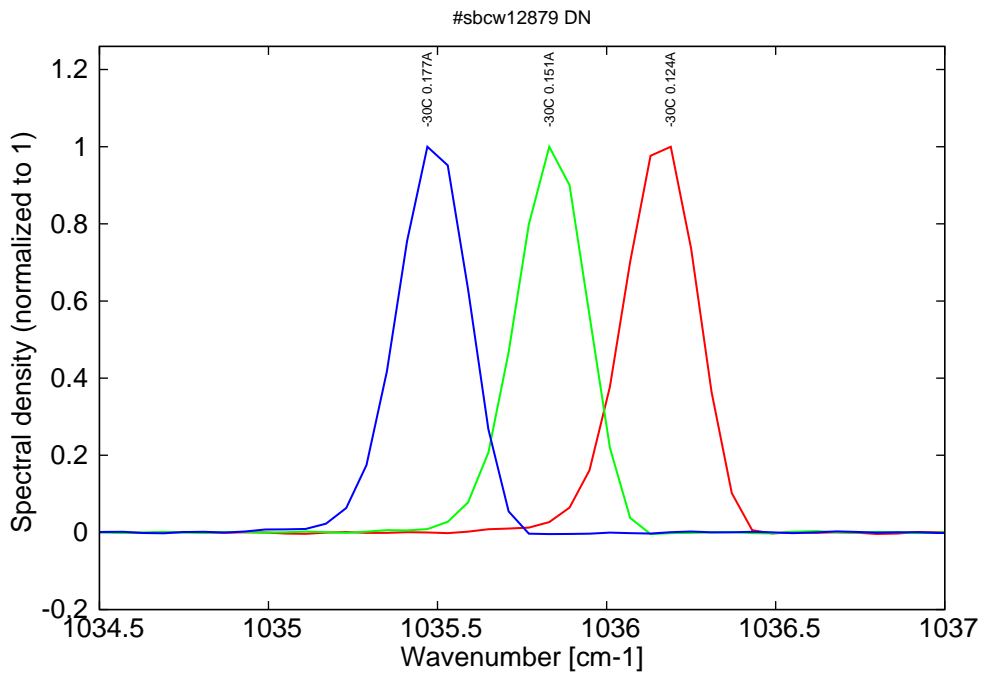


Figure 7: Spectra at -30C for various DC currents (monomode range)

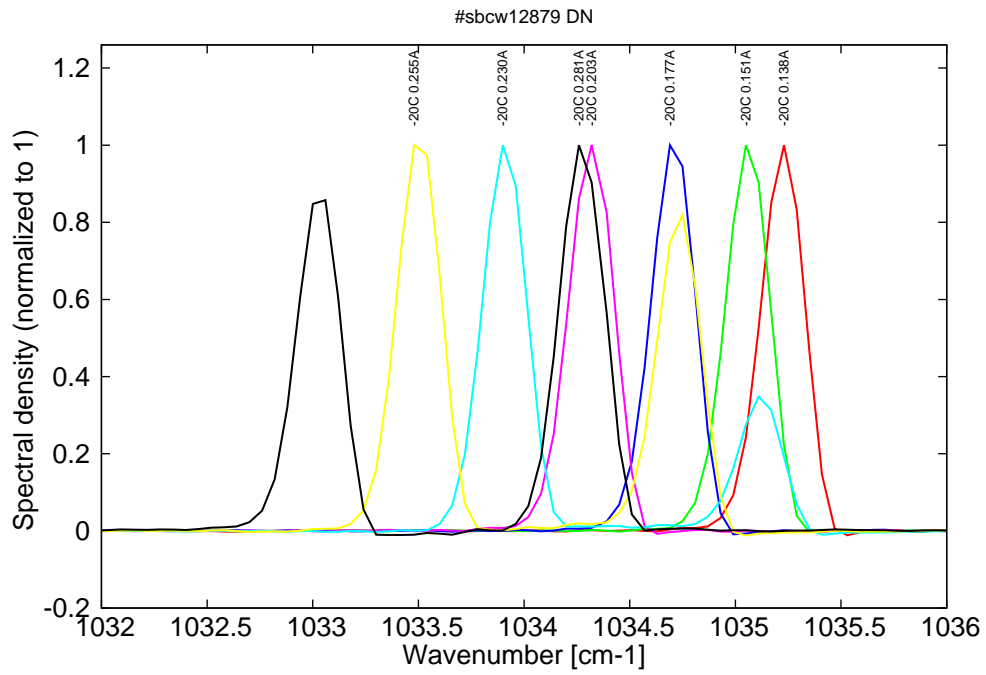


Figure 8: Spectra at -20C for various DC currents (monomode up to 0.21A then becomes bimode)

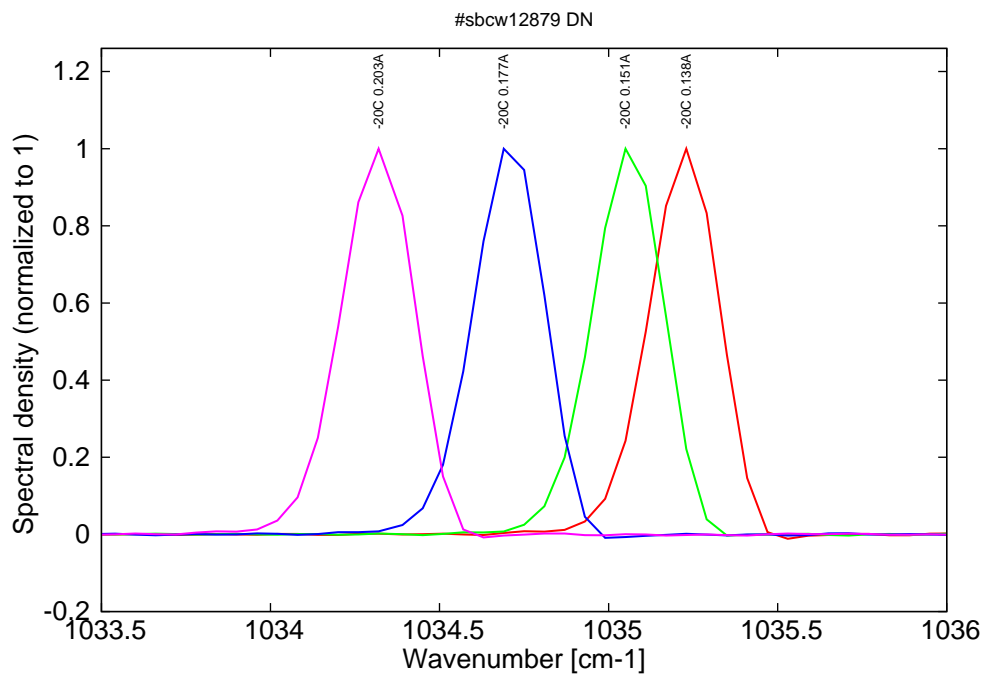


Figure 9: Spectra at -20C for various DC currents (monomode range)

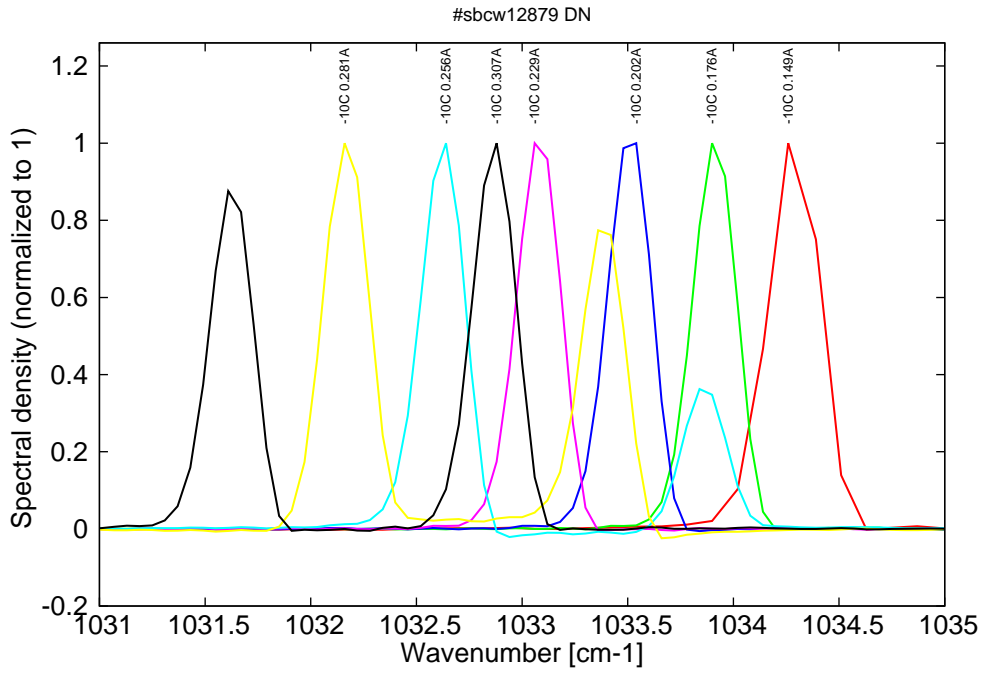


Figure 10: Spectra at -10C for various DC currents (monomode up to 0.23A then becomes bimode)

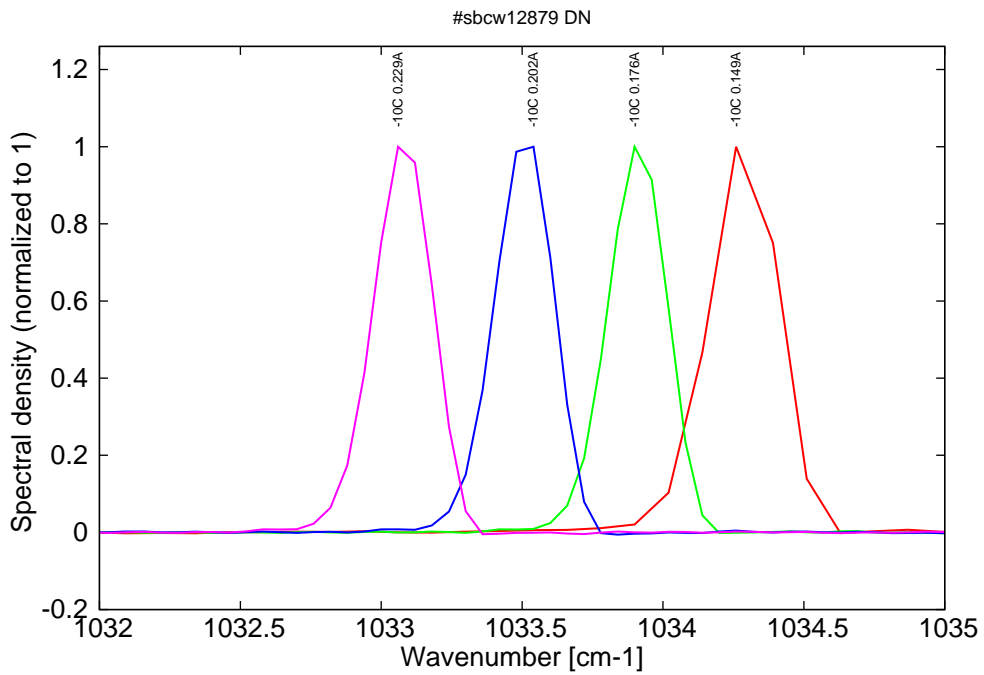


Figure 11: Spectra at -10C for various DC currents (monomode range)



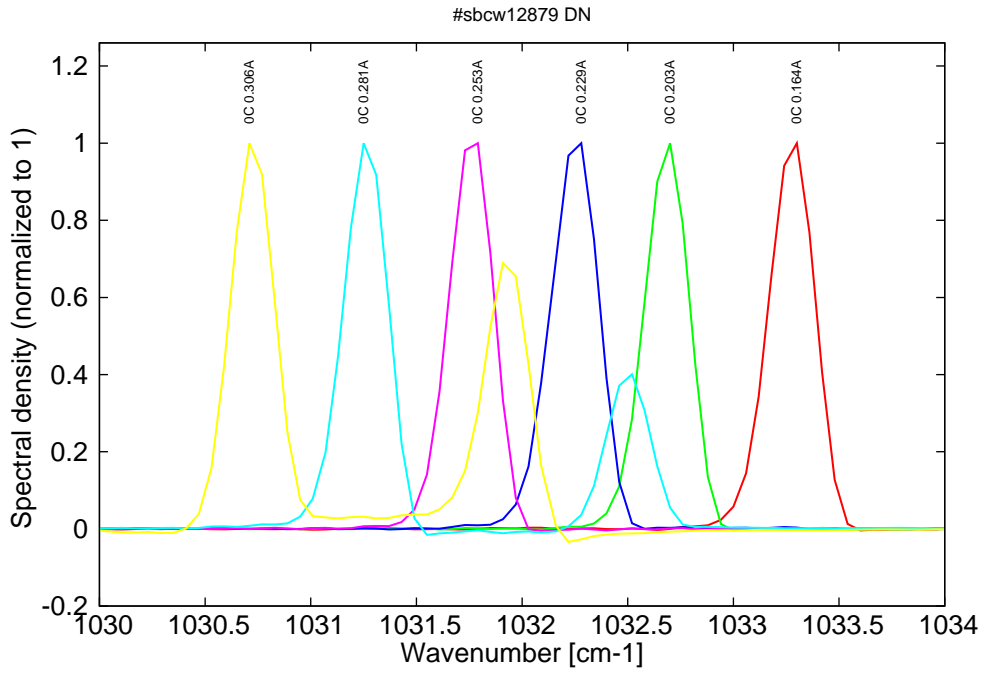


Figure 12: Spectra at 0C for various DC currents (monomode up to 0.26A then becomes bimode)

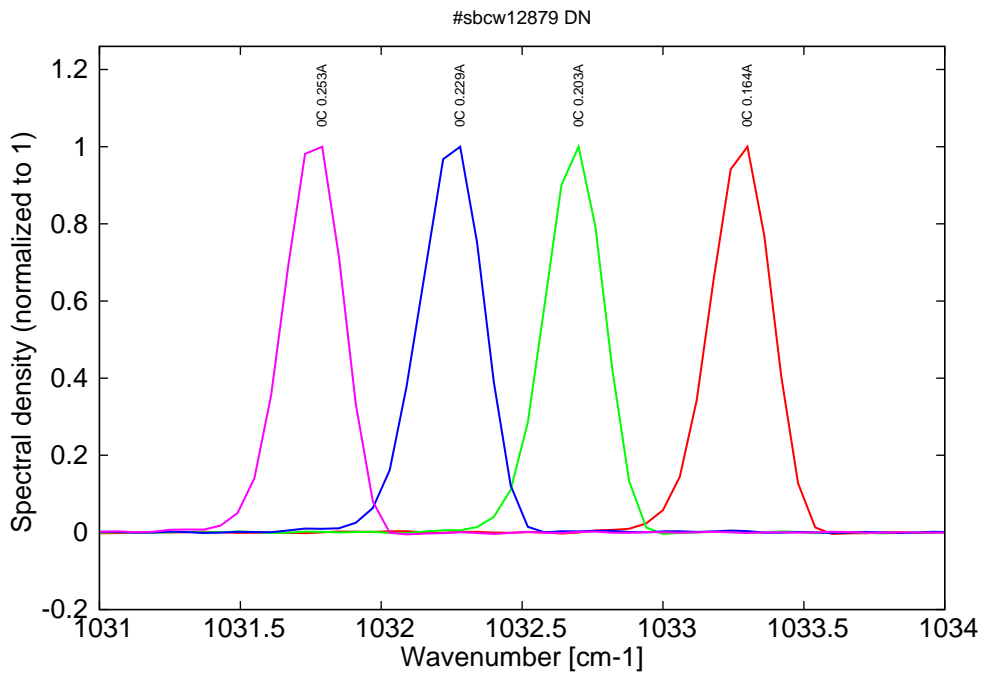


Figure 13: Spectra at 0C for various DC currents (monomode range)

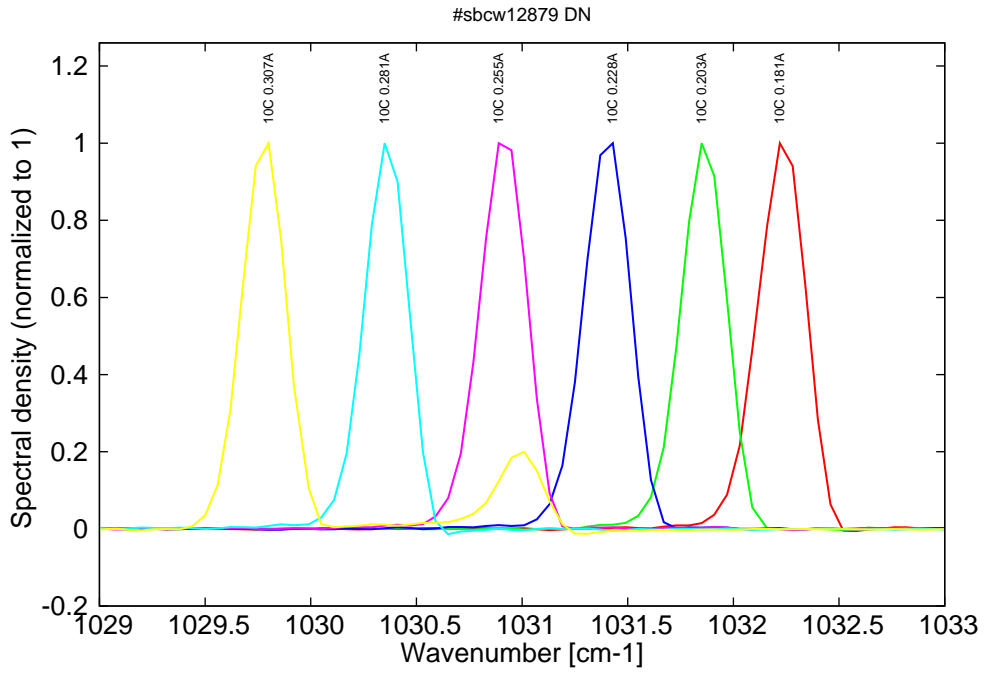


Figure 14: Spectra at 10C for various DC currents (monomode up to 0.29A then becomes bimode)

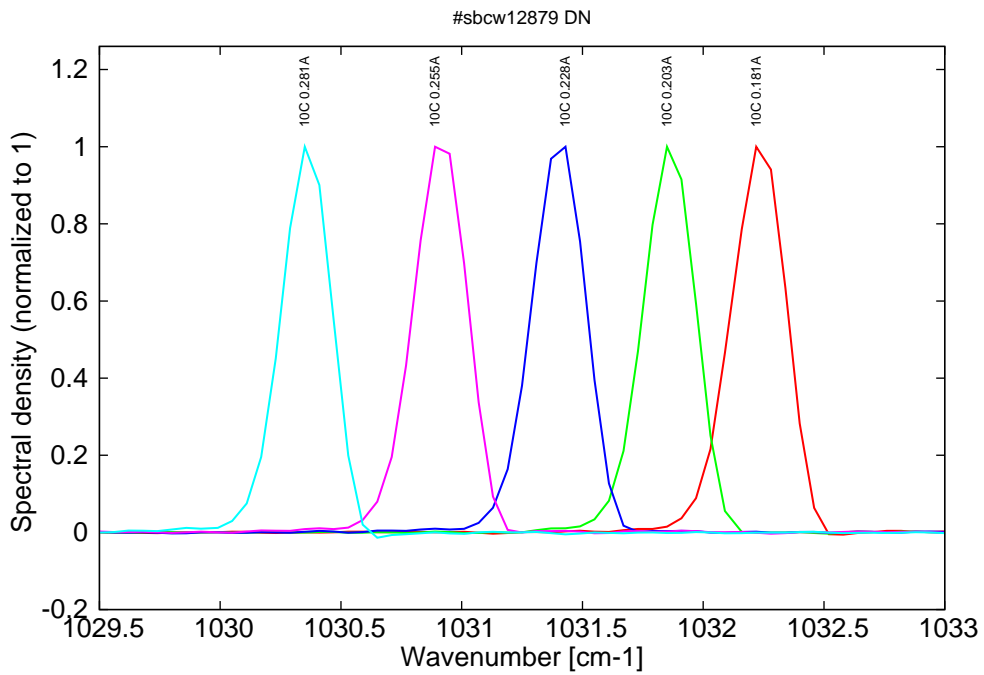


Figure 15: Spectra at 10C for various DC currents (monomode range)

Figure 15: Spectra from 20C to 50C for various DC currents (monomode)

