

Datasheet for #sbcw10807 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.

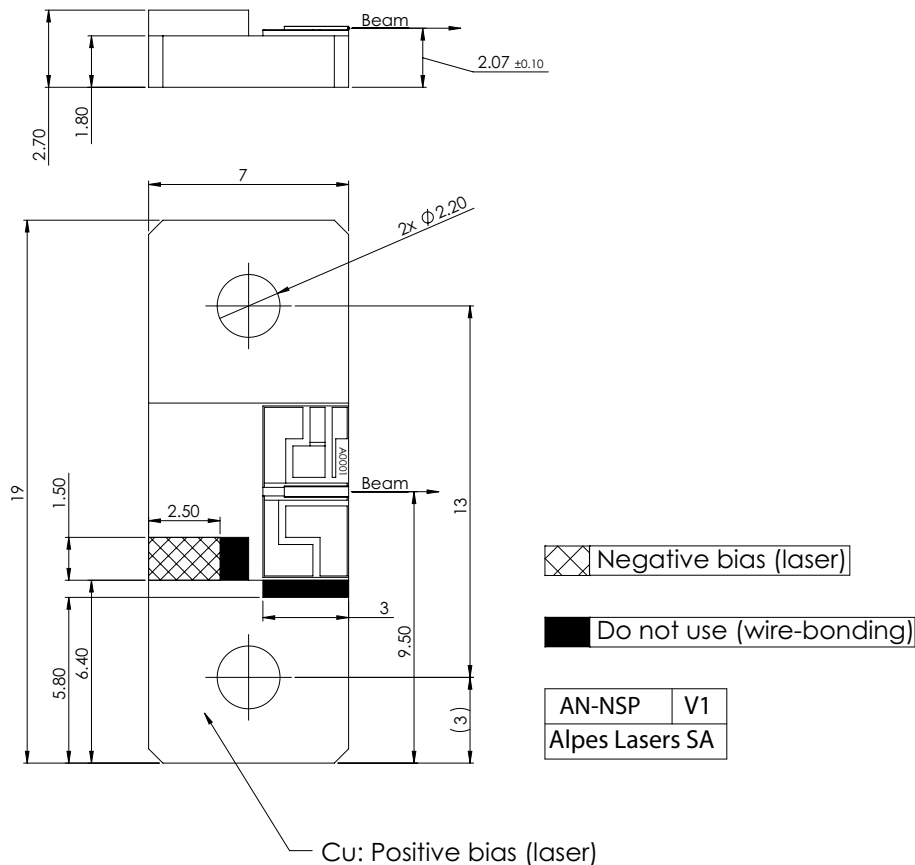


Figure 1: Mechanical and electrical interface for #sbcw10807 DN

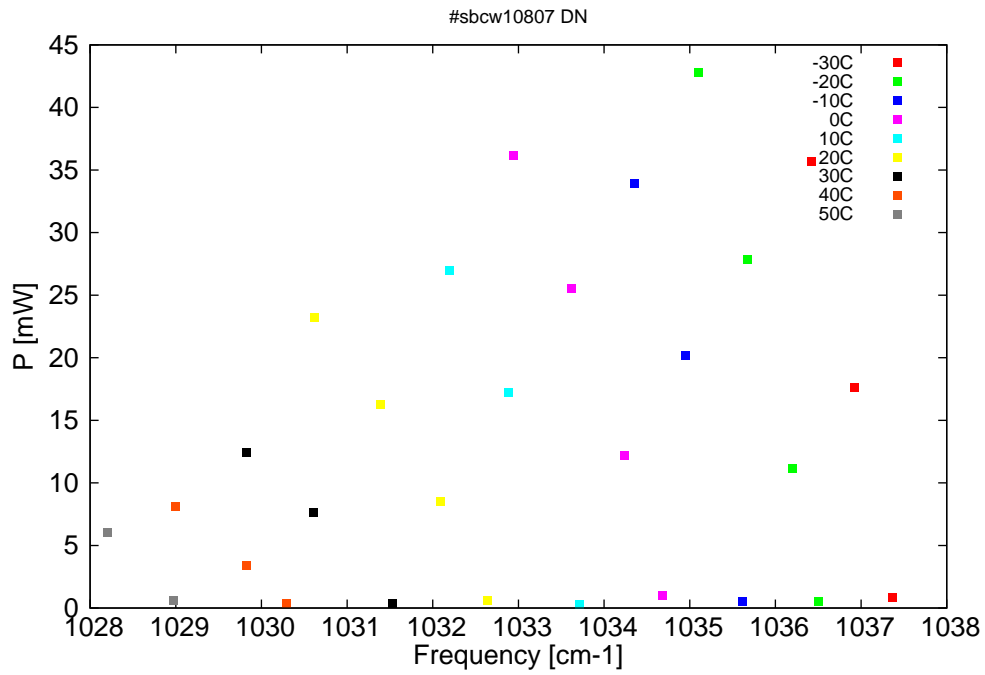


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

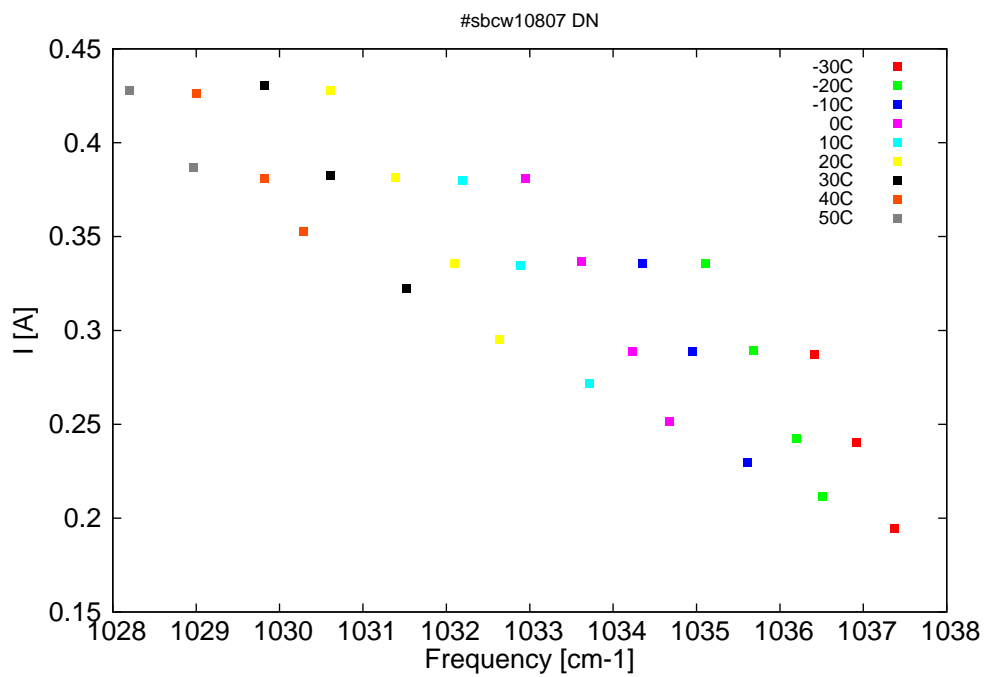


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9639.7	1037.4	0.8	-30	8.8	0.19
9643.9	1036.9	17.6	-30	9.1	0.24
9648.6	1036.4	35.6	-30	9.5	0.29
9647.8	1036.5	0.5	-20	8.8	0.21
9650.7	1036.2	11.2	-20	9.1	0.24
9655.5	1035.7	27.8	-20	9.5	0.29
9660.9	1035.1	42.8	-20	9.9	0.34
9656.1	1035.6	0.5	-10	8.9	0.23
9662.3	1035	20.2	-10	9.4	0.29
9667.9	1034.4	33.9	-10	9.8	0.34
9664.8	1034.7	1	0	9	0.25
9669	1034.2	12.2	0	9.3	0.29
9674.7	1033.6	25.5	0	9.7	0.34
9681	1032.9	36.2	0	10.1	0.38
9673.8	1033.7	0.3	10	9.1	0.27
9681.6	1032.9	17.2	10	9.6	0.33
9688.1	1032.2	27	10	10	0.38
9683.9	1032.6	0.6	20	9.2	0.29
9689	1032.1	8.5	20	9.5	0.34
9695.7	1031.4	16.3	20	9.9	0.38
9702.9	1030.6	23.2	20	10.3	0.43
9694.4	1031.5	0.4	30	9.4	0.32
9703	1030.6	7.7	30	9.9	0.38
9710.4	1029.8	12.4	30	10.2	0.43
9706	1030.3	0.3	40	9.6	0.35
9710.4	1029.8	3.4	40	9.8	0.38
9718.2	1029	8.1	40	10.2	0.43
9718.5	1029	0.6	50	9.8	0.39
9725.7	1028.2	6	50	10.1	0.43

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

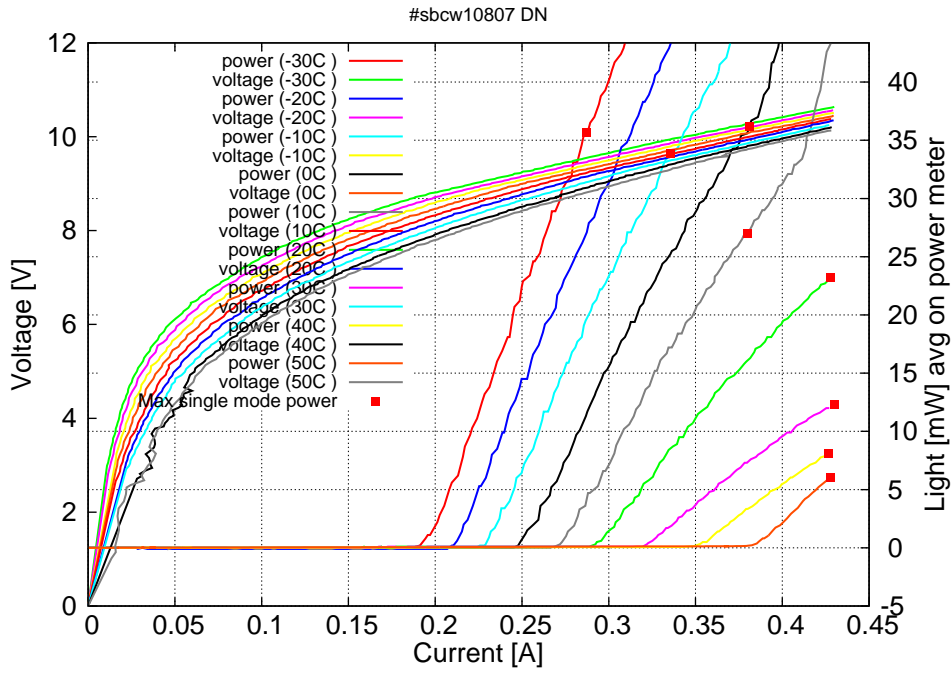


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

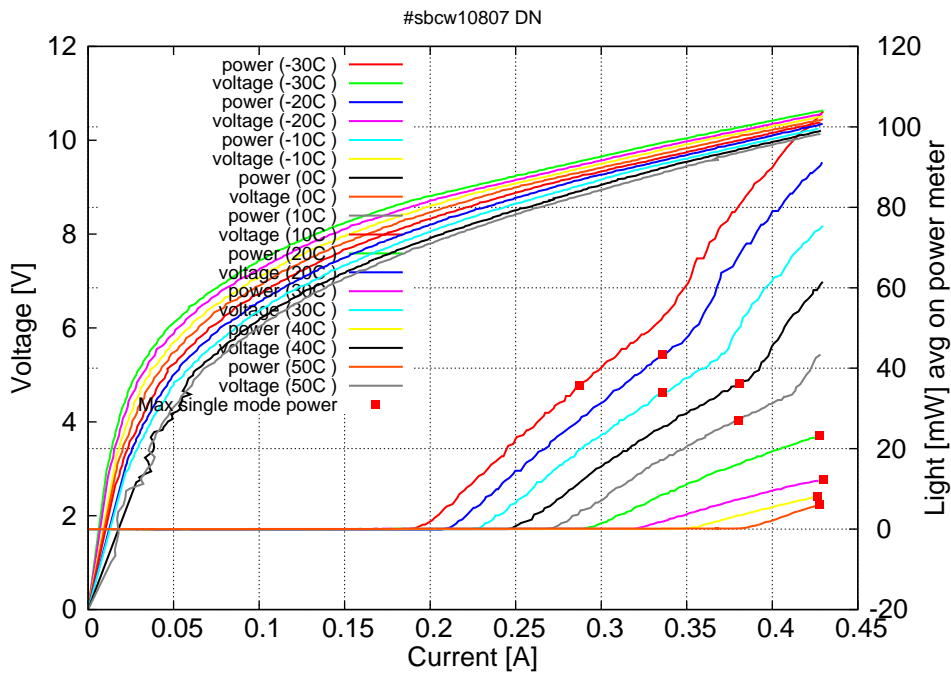
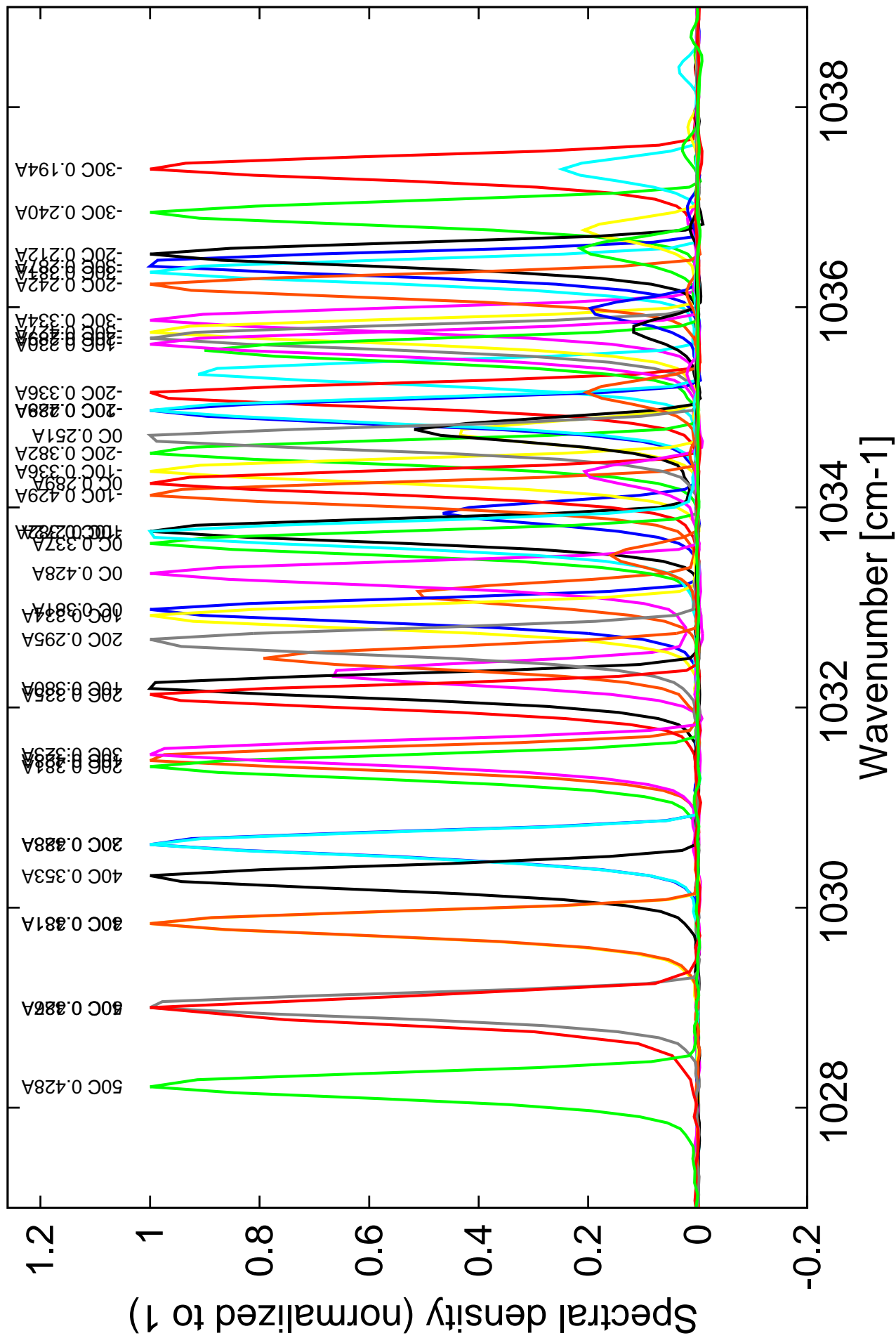


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -30C: $I_{th}=0.19A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.43A for all temperatures.

Figure 4: spectra at different temperatures for various DC currents



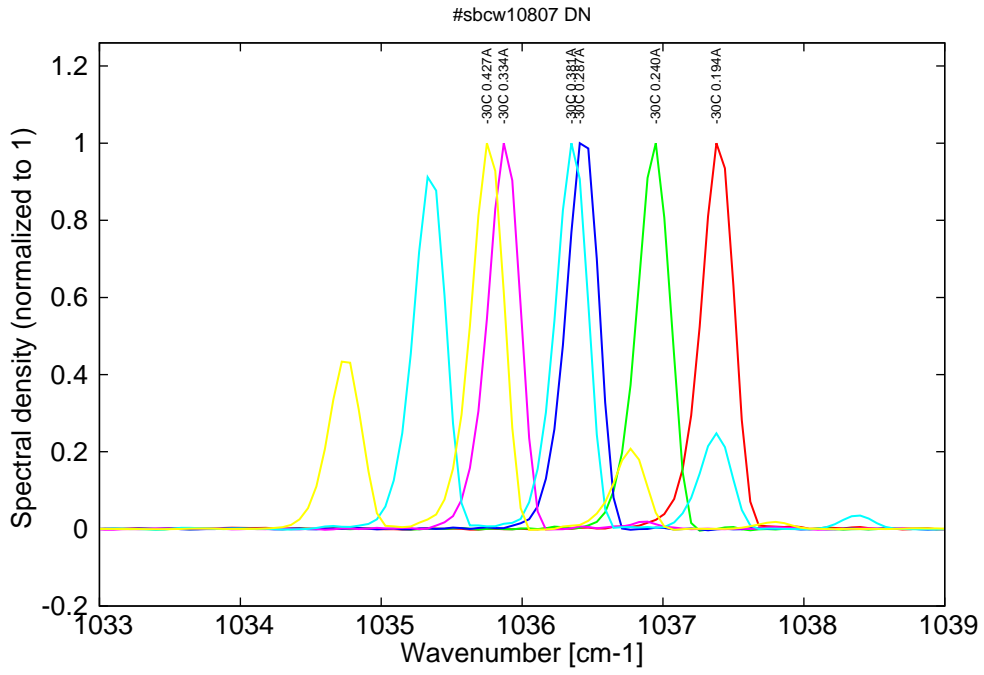


Figure 6: spectra at -30C for various DC current (monomode up to 0.29A, then becomes multimode)

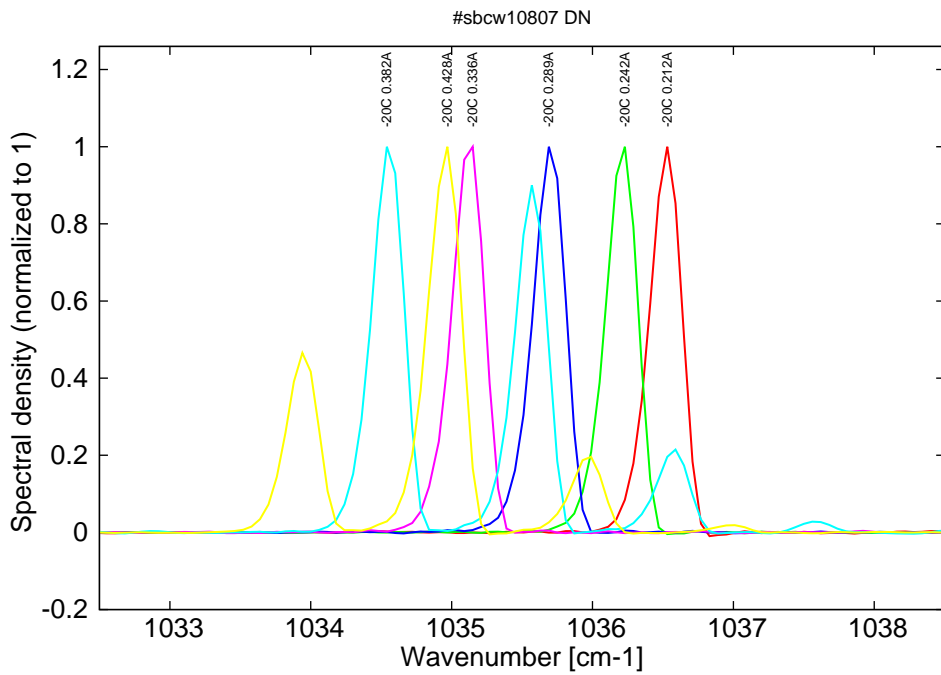


Figure 7: spectra at -20C for various DC current (monomode up to 0.335A, then becomes multimode)

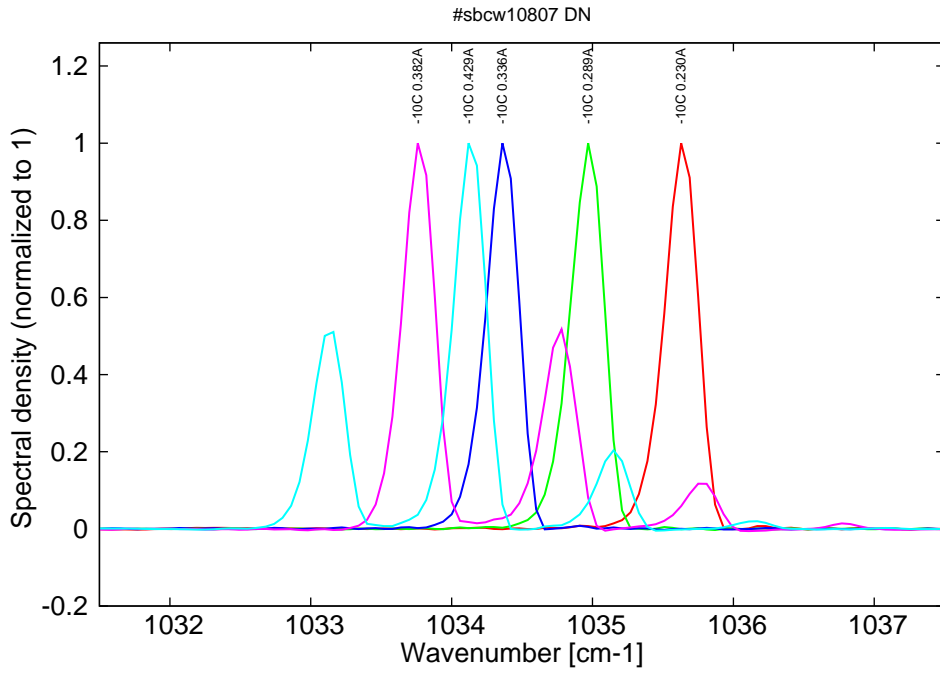


Figure 8: spectra at -10C for various DC current (monomode up to 0.335A, then becomes multimode)

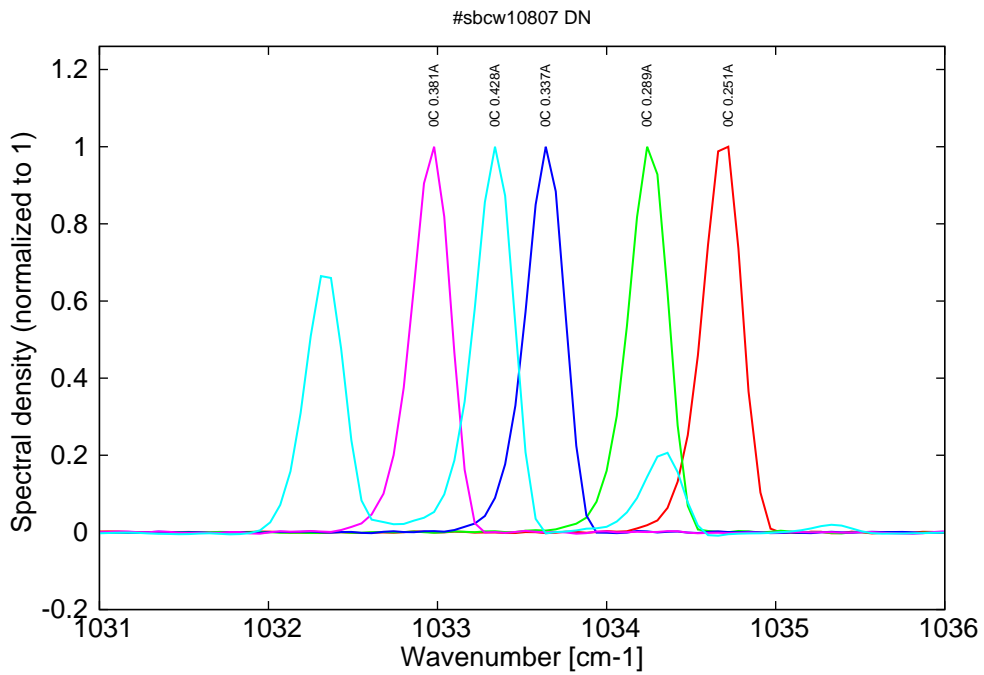


Figure 9: spectra at 0C for various DC current (monomode up to 0.38A, then becomes multimode)

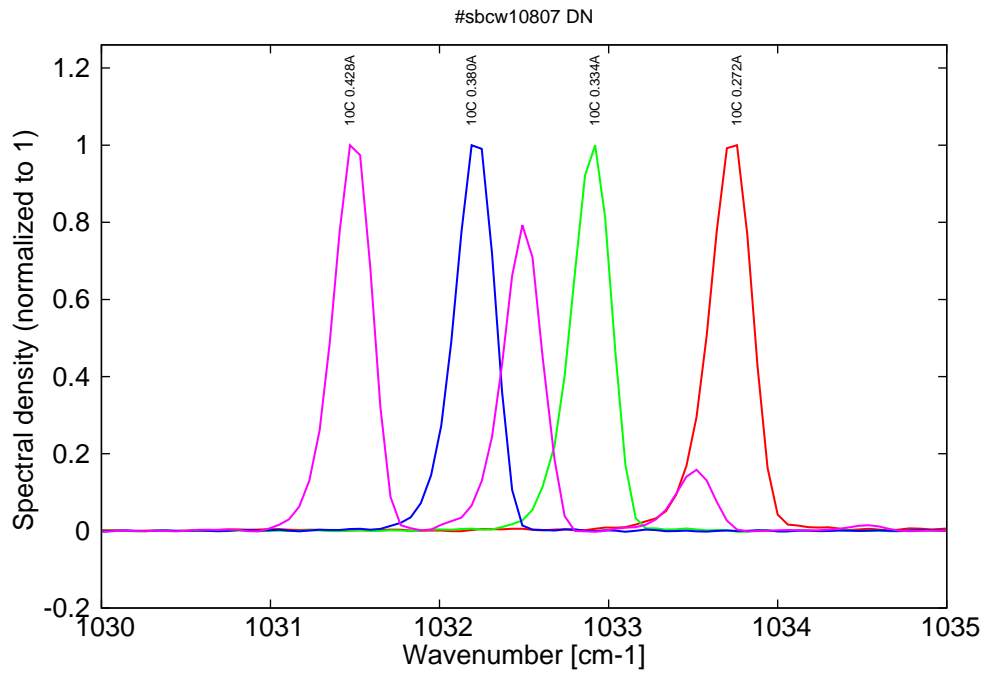


Figure 10: spectra at 10C for various DC current (monomode up to 0.38A, then becomes multimode)

Figure 10: spectra between 20C and 50C (all monomode up to 0.43A)

