

Datasheet for #sbcw8828 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.

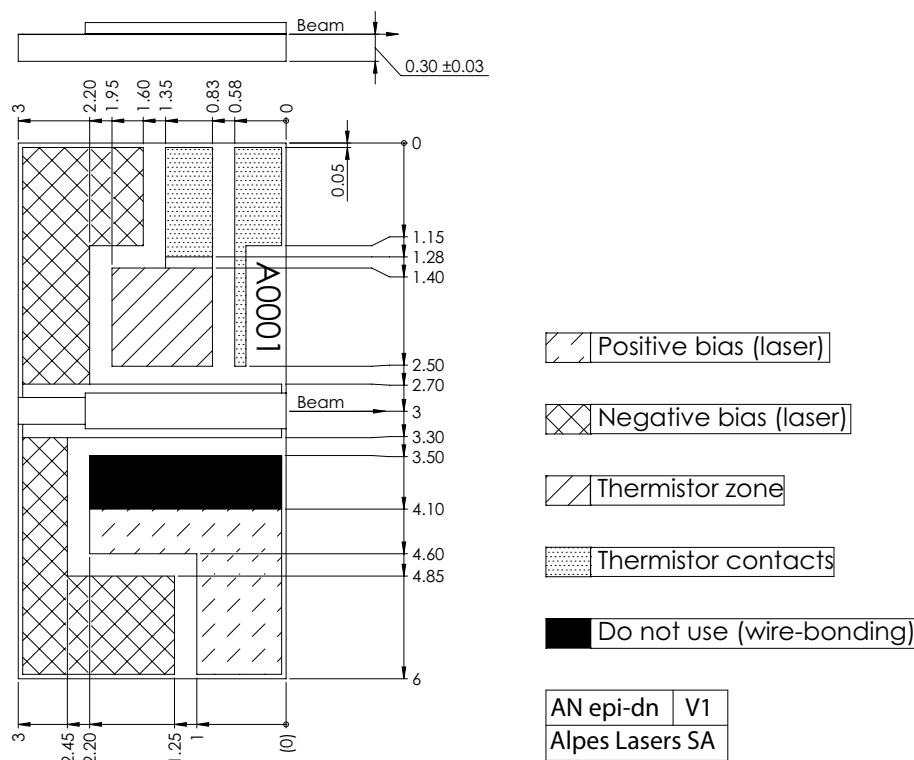


Figure 1: Mechanical and electrical interface for #sbcw8828 DN (please note that AlN submount numbering is A02DH)

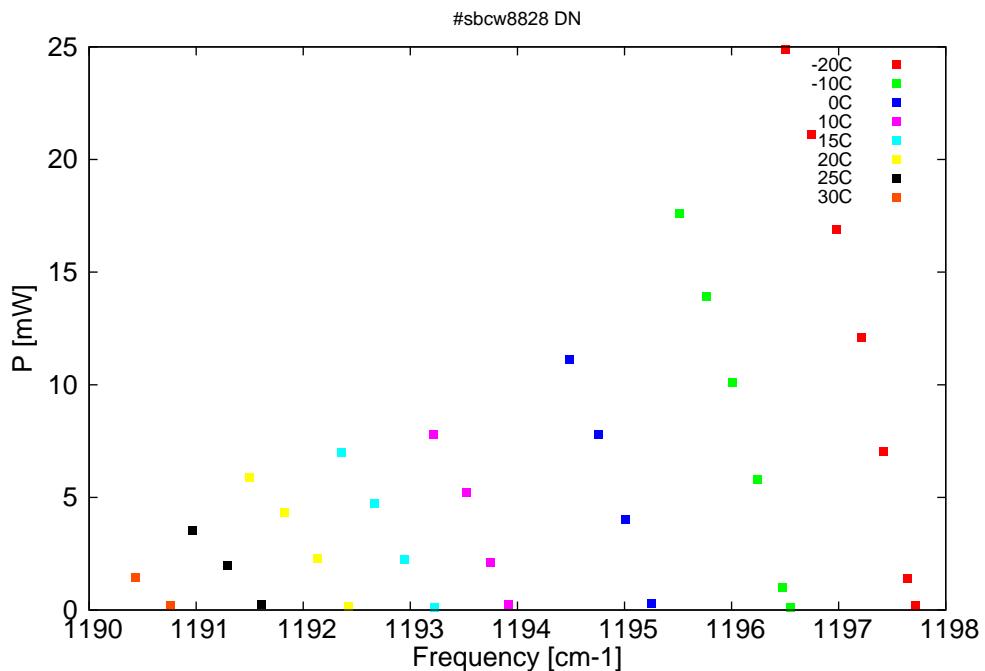


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

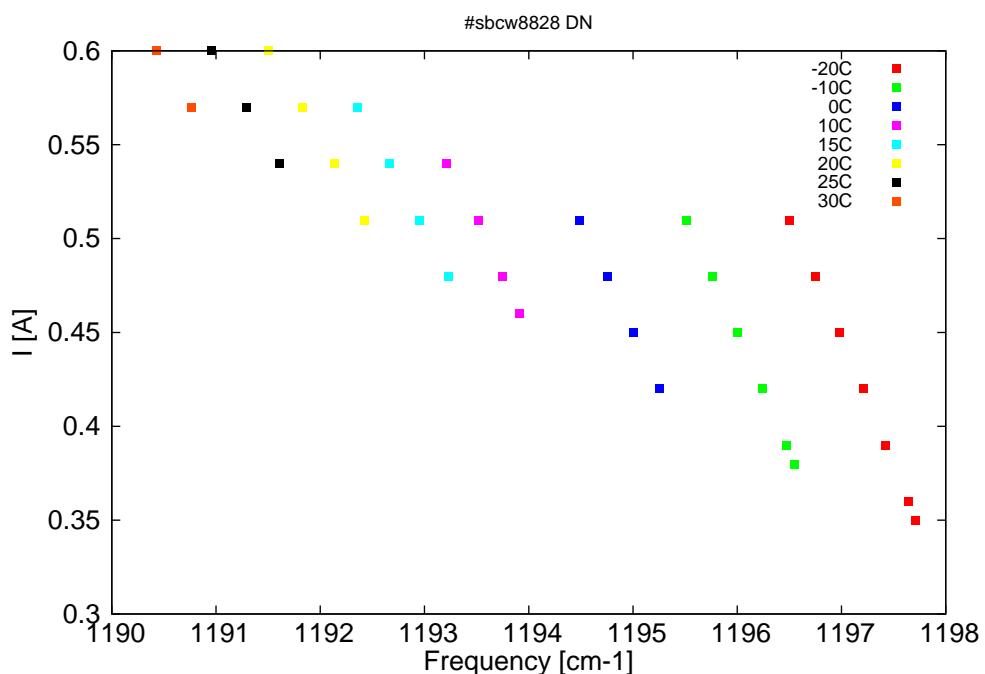


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U $_{LASER}$ [V]	I[A]
8349.2	1197.7	0.2	-20	8.3	0.35
8349.7	1197.6	1.4	-20	8.3	0.36
8351.3	1197.4	7	-20	8.4	0.39
8352.7	1197.2	12.1	-20	8.6	0.42
8354.3	1197	16.9	-20	8.7	0.45
8356	1196.7	21.1	-20	8.8	0.48
8357.7	1196.5	24.9	-20	8.9	0.51
8357.4	1196.6	0.1	-10	8.3	0.38
8357.9	1196.5	1	-10	8.4	0.39
8359.5	1196.2	5.8	-10	8.5	0.42
8361.2	1196	10.1	-10	8.6	0.45
8362.9	1195.8	13.9	-10	8.7	0.48
8364.6	1195.5	17.6	-10	8.9	0.51
8366.4	1195.3	0.3	0	8.5	0.42
8368.1	1195	4	0	8.6	0.45
8369.9	1194.8	7.8	0	8.7	0.48
8371.8	1194.5	11.1	0	8.9	0.51
8375.8	1193.9	0.2	10	8.5	0.46
8377	1193.7	2.1	10	8.6	0.48
8378.6	1193.5	5.2	10	8.8	0.51
8380.7	1193.2	7.8	10	8.9	0.54
8380.6	1193.2	0.1	15	8.6	0.48
8382.6	1192.9	2.2	15	8.7	0.51
8384.6	1192.7	4.7	15	8.9	0.54
8386.7	1192.4	7	15	9	0.57
8386.3	1192.4	0.2	20	8.7	0.51
8388.3	1192.1	2.3	20	8.9	0.54
8390.5	1191.8	4.3	20	9	0.57
8392.8	1191.5	5.9	20	9.1	0.6
8392	1191.6	0.2	25	8.8	0.54
8394.3	1191.3	2	25	9	0.57
8396.6	1191	3.6	25	9.1	0.6
8398	1190.8	0.2	30	8.9	0.57
8400.3	1190.4	1.5	30	9.1	0.6

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

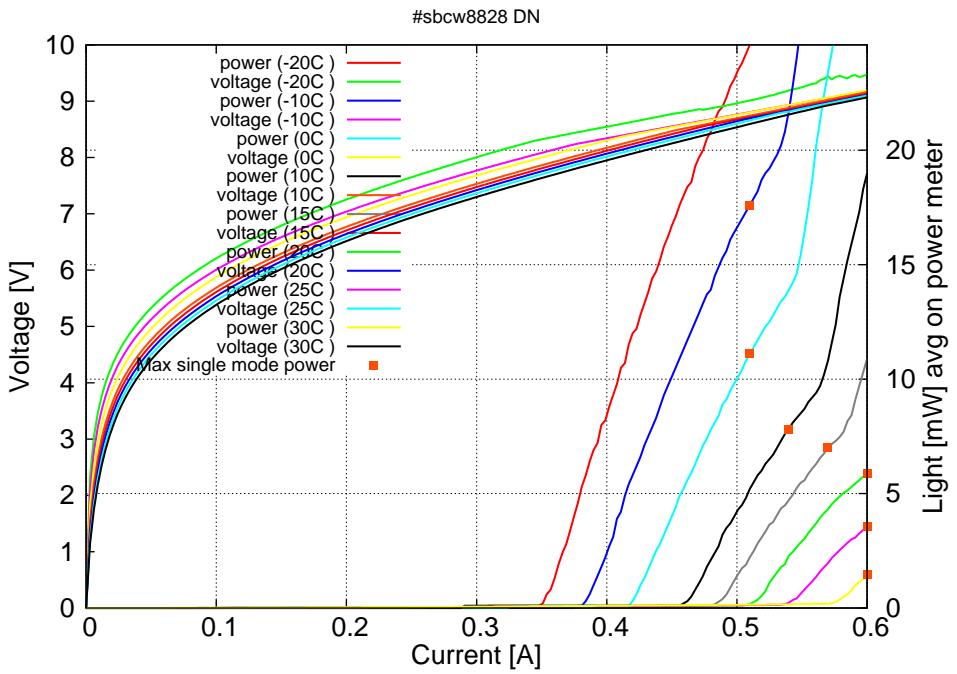


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

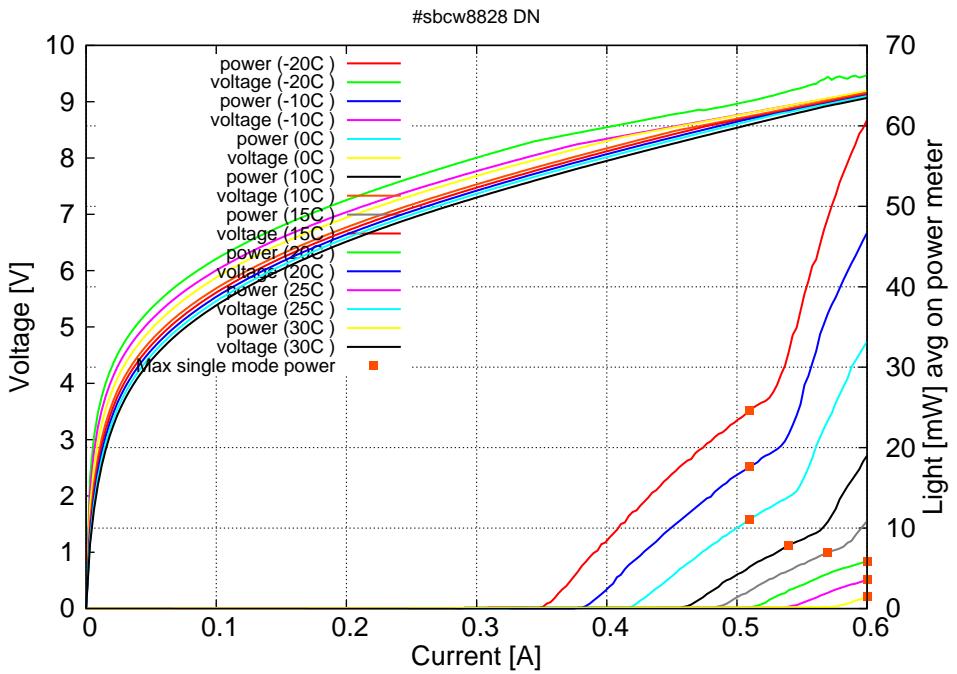
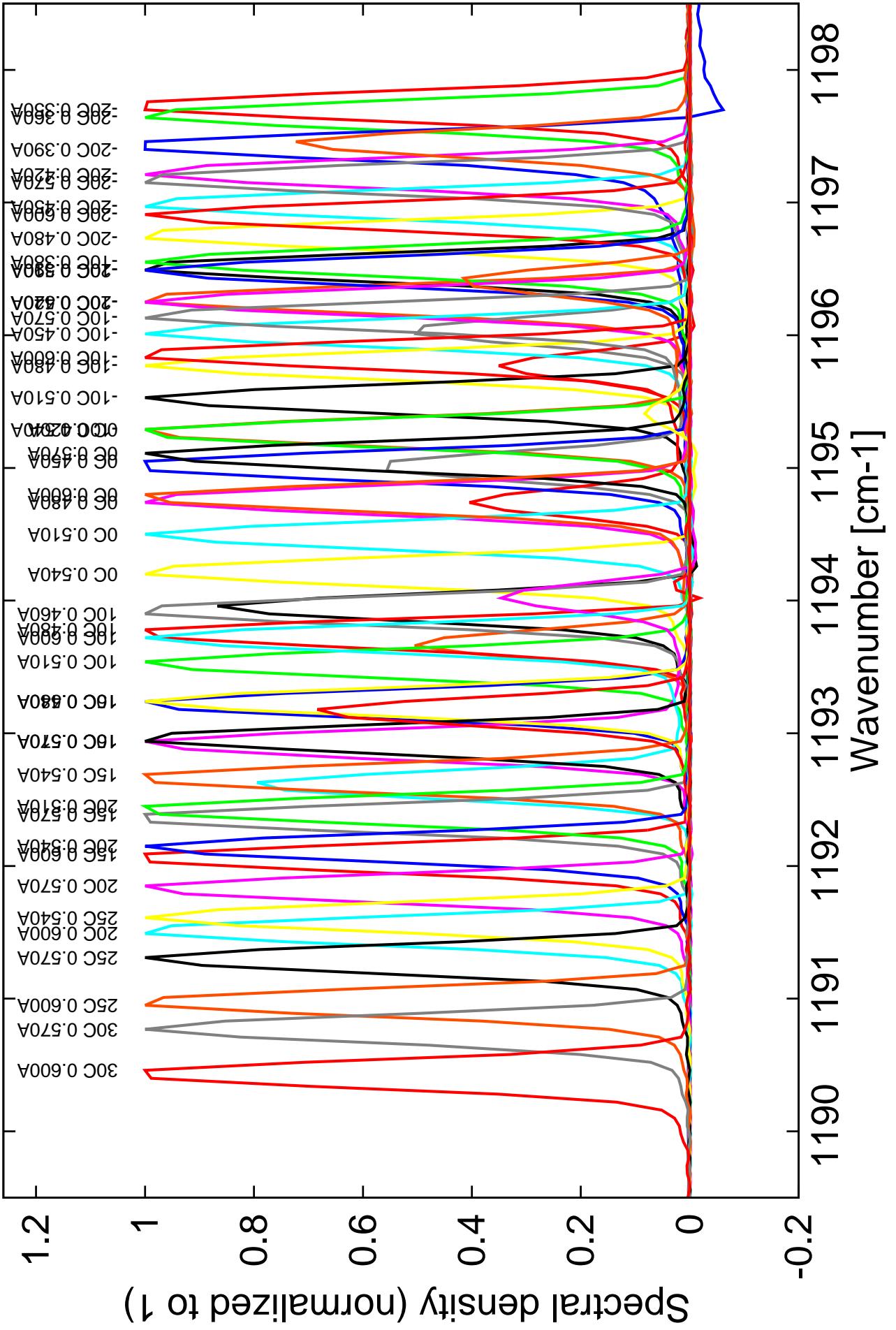


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -20C: $I_{th}=0.34A$ / $V_{th}=8.2V$ (2-wires measurements). Maximum operation current: 0.60A for all temperatures.

Figure 4: spectra at different temperatures for various DC currents



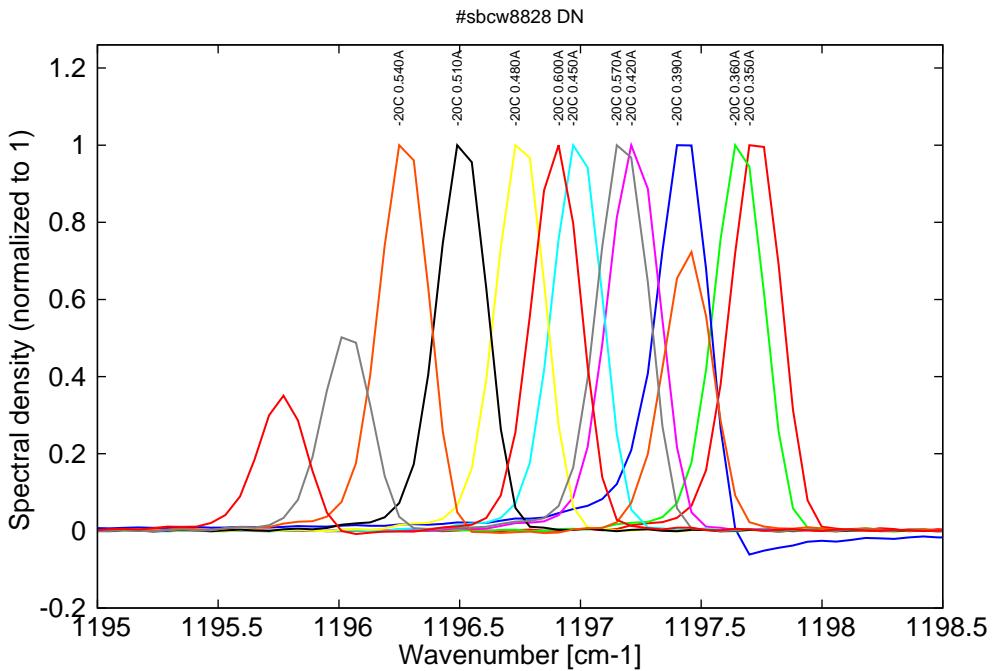


Figure 6: spectra at -20C for various DC currents (monomode up to 0.51A, then become bimode)

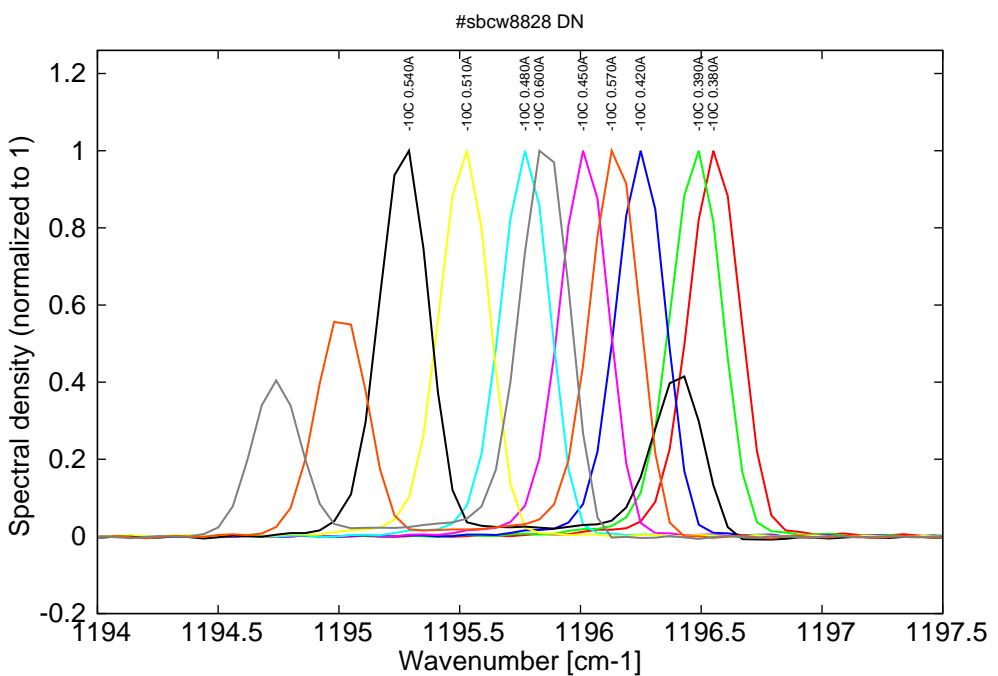


Figure 7: spectra at -10C for various DC currents (monomode up to 0.51A, then become bimode)

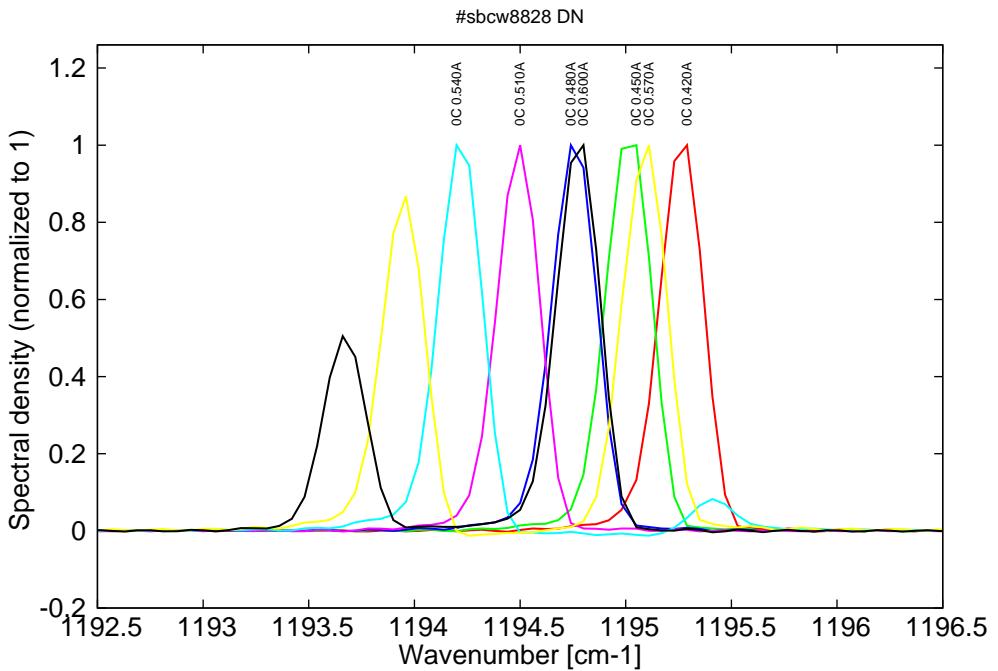


Figure 8: spectra at 0C for various DC currents (monomode up to 0.51A, then become bimode)

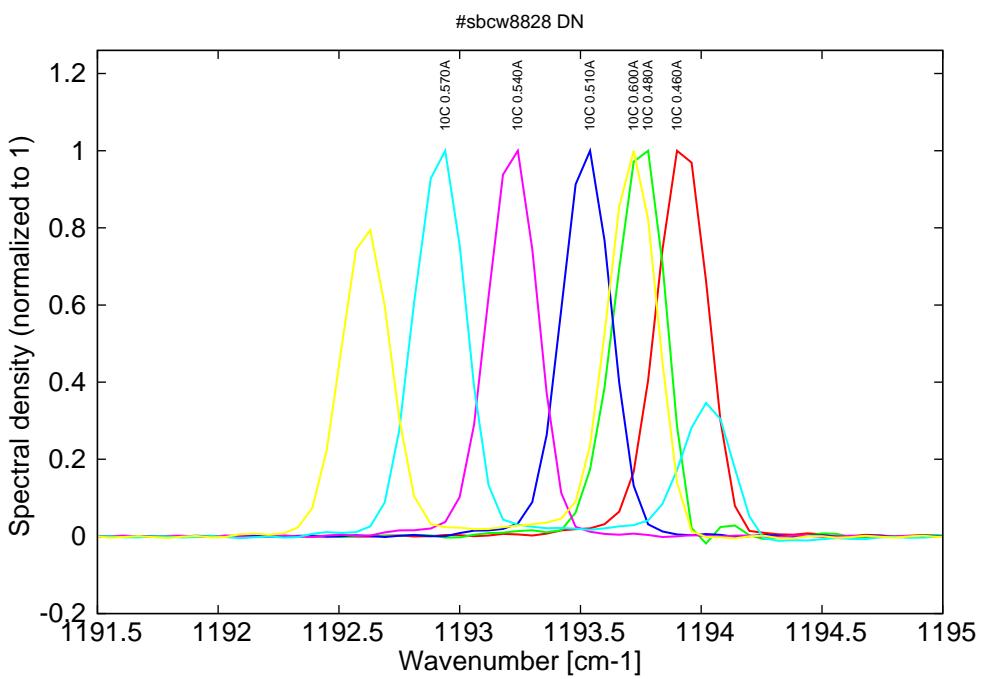


Figure 9: spectra at 10C for various DC currents (monomode up to 0.54A, then become bimode)

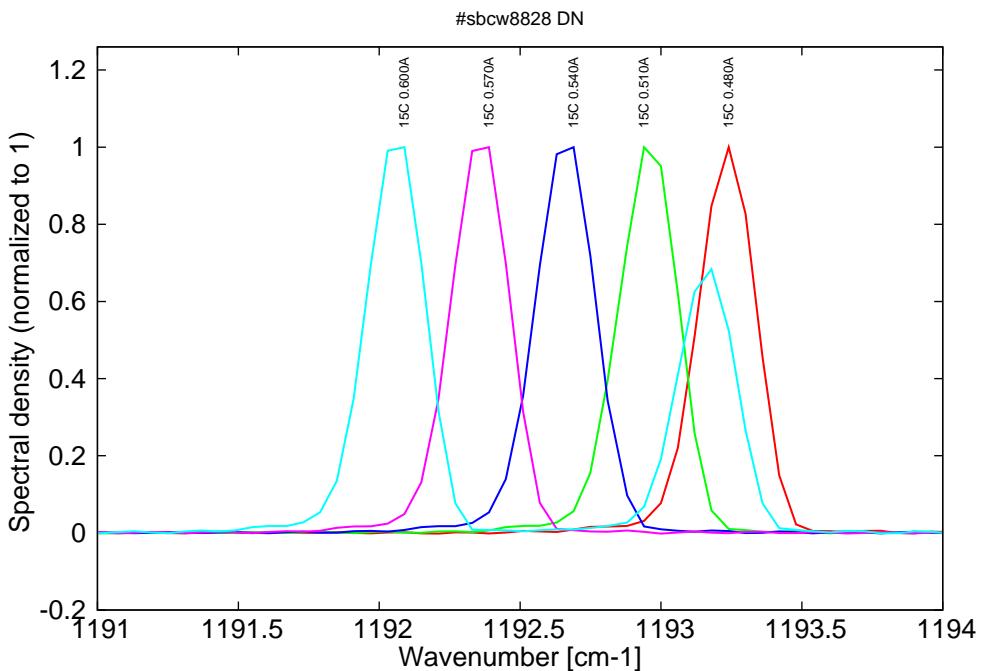


Figure 10: spectra at 15C for various DC currents (monomode up to 0.57A, then become bimode)

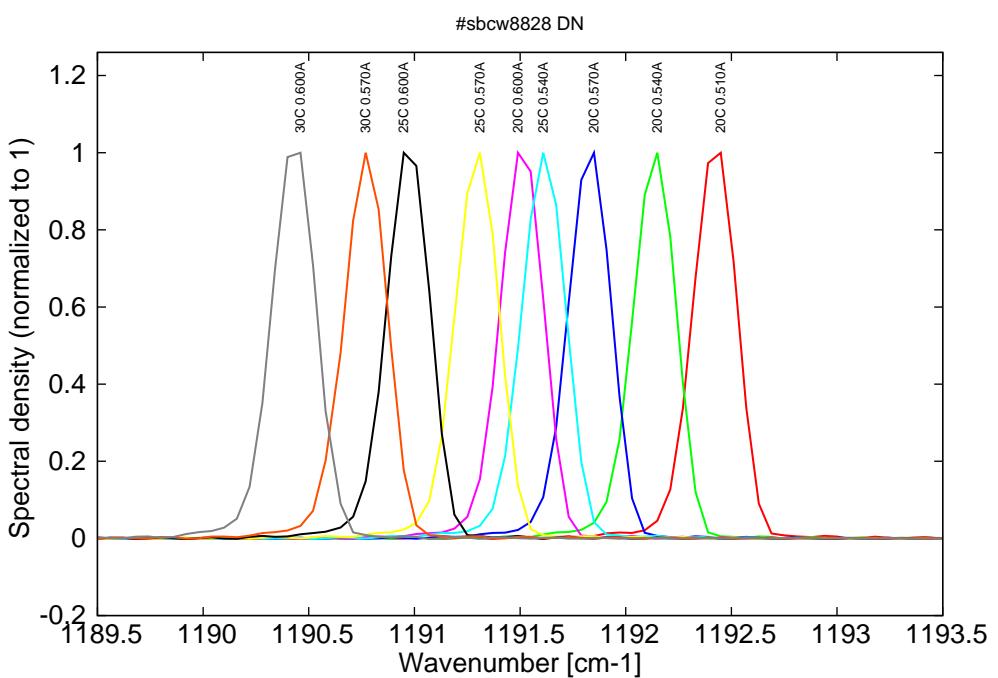


Figure 11: spectra at 20C, 25C et 30C for various DC currents (all monomode up to 0.60A)