

Datasheet for #sbcw10334 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 #sbcw10334 DN

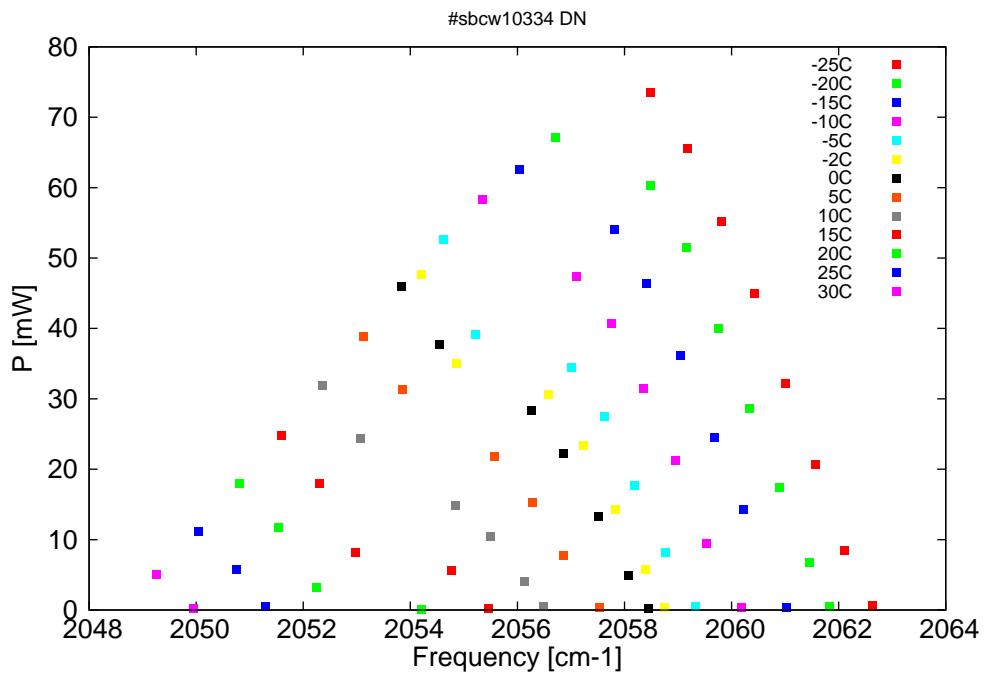


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

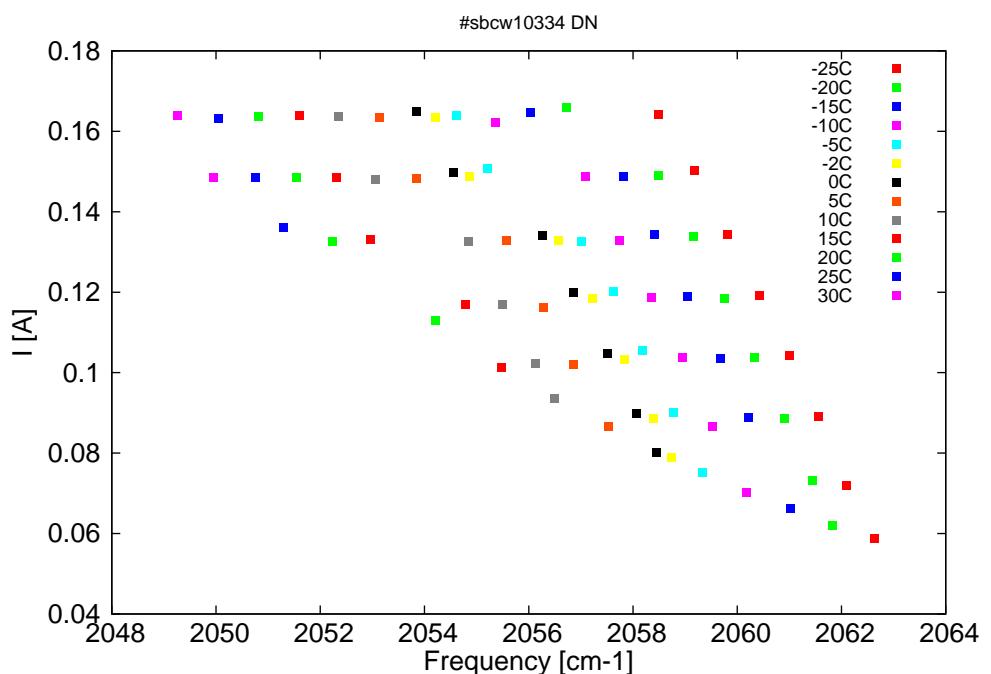


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4848.2	2062.6	0.7	-25	13.6	0.06
4849.4	2062.1	8.5	-25	14	0.07
4850.7	2061.6	20.7	-25	14.4	0.09
4852	2061	32.2	-25	14.8	0.1
4853.4	2060.4	44.9	-25	15.2	0.12
4854.8	2059.8	55.2	-25	15.5	0.13
4856.3	2059.2	65.6	-25	15.8	0.15
4858	2058.5	73.5	-25	16.2	0.16
4850.1	2061.8	0.5	-20	13.6	0.06
4851	2061.5	6.8	-20	13.9	0.07
4852.3	2060.9	17.5	-20	14.3	0.09
4853.6	2060.3	28.6	-20	14.7	0.1
4854.9	2059.8	40	-20	15.1	0.12
4856.4	2059.2	51.4	-20	15.4	0.13
4857.9	2058.5	60.3	-20	15.7	0.15
4862.1	2056.7	67.1	-20	16.1	0.17
4852	2061	0.3	-15	13.6	0.07
4853.9	2060.2	14.3	-15	14.2	0.09
4855.1	2059.7	24.6	-15	14.6	0.1
4856.6	2059.1	36.1	-15	15	0.12
4858.1	2058.4	46.4	-15	15.3	0.13
4859.5	2057.8	54.1	-15	15.6	0.15
4863.7	2056	62.5	-15	15.9	0.16
4853.9	2060.2	0.4	-10	13.7	0.07
4855.5	2059.5	9.5	-10	14.1	0.09
4856.8	2059	21.2	-10	14.5	0.1
4858.2	2058.4	31.5	-10	14.9	0.12
4859.7	2057.7	40.7	-10	15.2	0.13
4861.2	2057.1	47.3	-10	15.6	0.15
4865.3	2055.4	58.3	-10	15.8	0.16
4856	2059.3	0.5	-5	13.7	0.08
4857.3	2058.8	8.2	-5	14.1	0.09
4858.6	2058.2	17.7	-5	14.5	0.11
4860	2057.6	27.5	-5	14.8	0.12
4861.4	2057	34.4	-5	15.1	0.13
4865.7	2055.2	39.2	-5	15.5	0.15
4867.1	2054.6	52.6	-5	15.7	0.16
4857.3	2058.7	0.3	-2	13.8	0.08
4858.2	2058.4	5.8	-2	14	0.09
4859.5	2057.8	14.2	-2	14.4	0.1
4860.9	2057.2	23.3	-2	14.7	0.12
4862.4	2056.6	30.7	-2	15.1	0.13
4866.5	2054.9	35	-2	15.4	0.15
4868.1	2054.2	47.7	-2	15.6	0.16
4858	2058.5	0.2	0	13.8	0.08
4858.9	2058.1	4.9	0	14	0.09
4860.2	2057.5	13.3	0	14.4	0.1
4861.8	2056.9	22.2	0	14.7	0.12
4863.2	2056.3	28.4	0	15.1	0.13

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λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U $_{LASER}$ [V]	I[A]
4867.2	2054.6	37.6	0	15.3	0.15
4868.9	2053.8	45.9	0	15.6	0.16
4860.2	2057.5	0.3	5	13.8	0.09
4861.8	2056.9	7.7	5	14.2	0.1
4863.1	2056.3	15.3	5	14.6	0.12
4864.8	2055.6	21.9	5	14.9	0.13
4868.9	2053.9	31.4	5	15.2	0.15
4870.6	2053.1	38.9	5	15.5	0.16
4862.6	2056.5	0.4	10	13.9	0.09
4863.5	2056.1	4	10	14.1	0.1
4865	2055.5	10.5	10	14.5	0.12
4866.6	2054.8	14.9	10	14.9	0.13
4870.8	2053.1	24.3	10	15.1	0.15
4872.4	2052.4	31.8	10	15.4	0.16
4865.1	2055.5	0.2	15	14	0.1
4866.7	2054.8	5.6	15	14.4	0.12
4871	2053	8.1	15	14.8	0.13
4872.6	2052.3	18	15	15	0.15
4874.3	2051.6	24.8	15	15.3	0.16
4868.1	2054.2	0.1	20	14.2	0.11
4872.7	2052.2	3.2	20	14.7	0.13
4874.4	2051.5	11.8	20	14.9	0.15
4875	2051.3	0.5	25	14.7	0.14
4876.2	2050.8	5.7	25	14.8	0.15
4877.9	2050	11.2	25	15.1	0.16
4878.2	2049.9	0.3	30	14.8	0.15
4879.8	2049.3	5	30	15	0.16
4876.1	2050.8	18	20	15.2	0.16

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

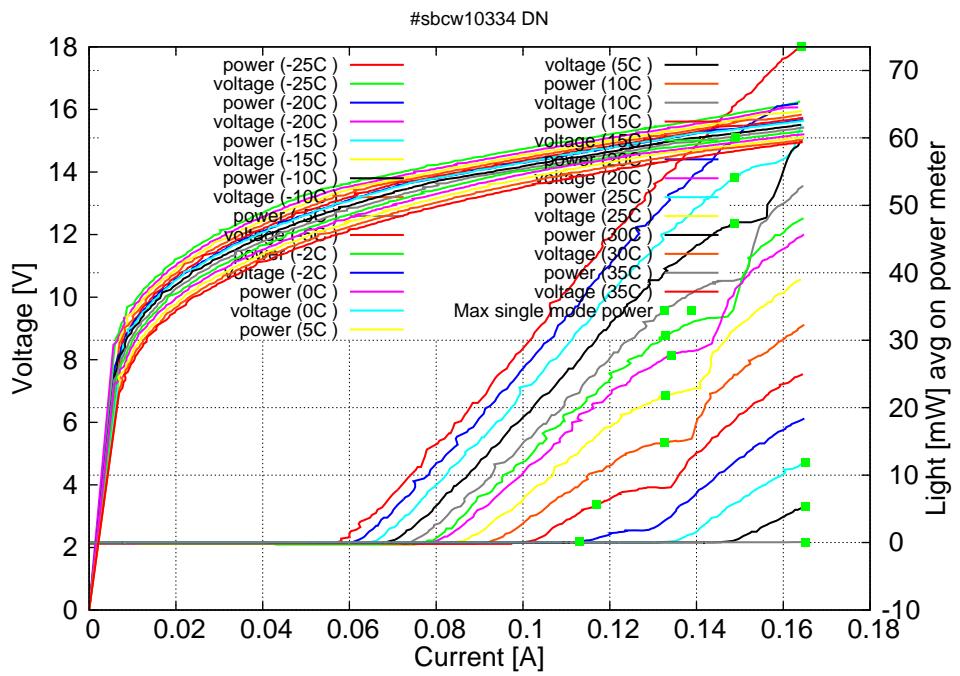
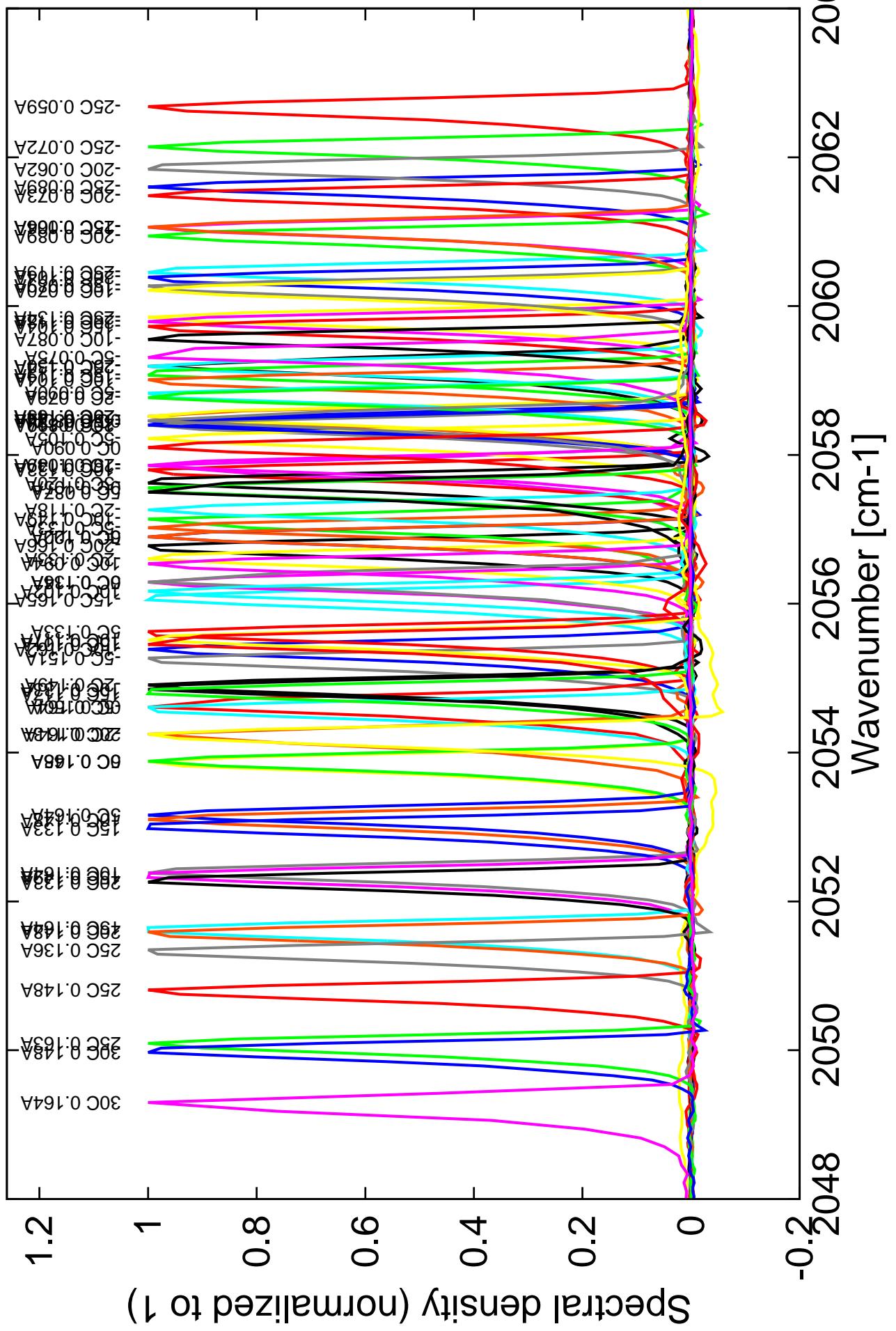


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -25C: $I_{th}=0.06A$ / $V_{th}=13.6V$ (2-wires measurements). Maximum operation current: 0.165A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents



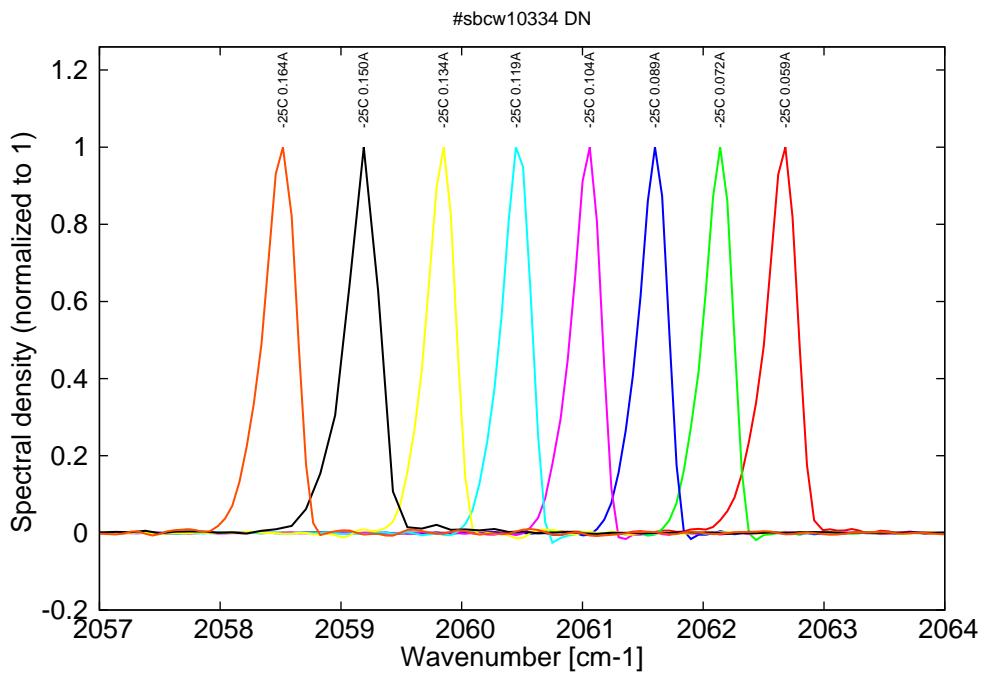


Figure 5: spectra at -25C for various DC currents (all monomode on mode 1)

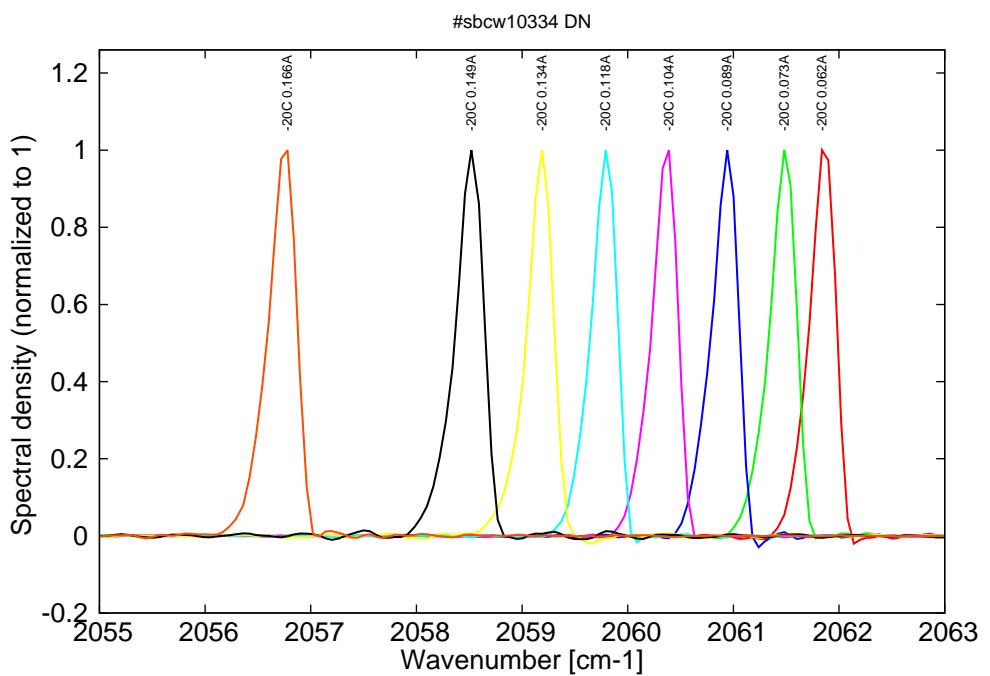


Figure 6: spectra at -20C for various DC currents (monomode on mode 1 up to 0.15A then on mode 2)

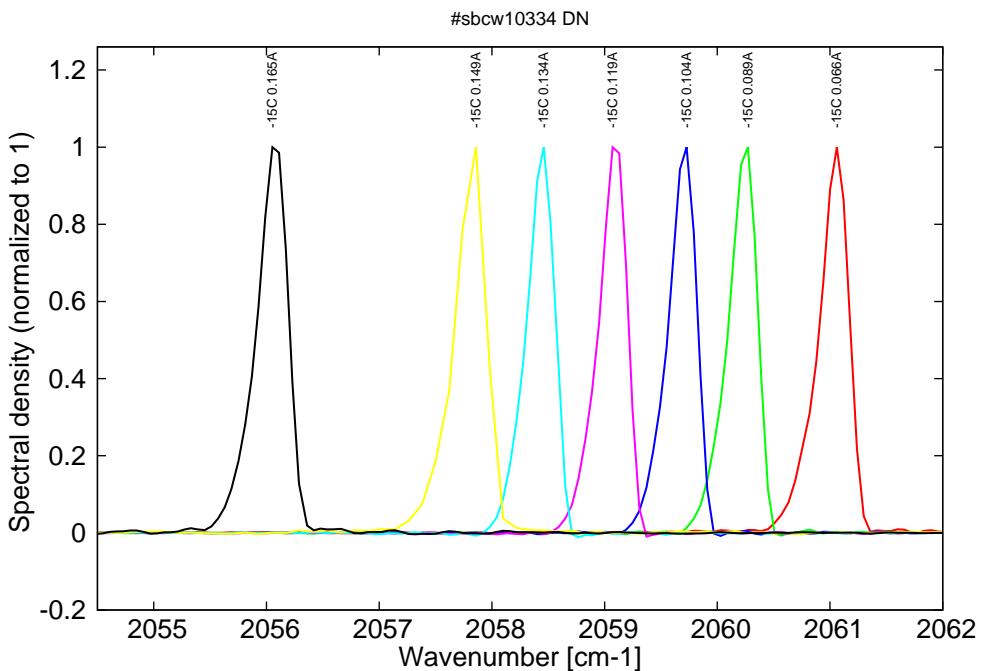


Figure 7: spectra at -15C for various DC currents (monomode on mode 1 up to 0.15A then on mode 2)

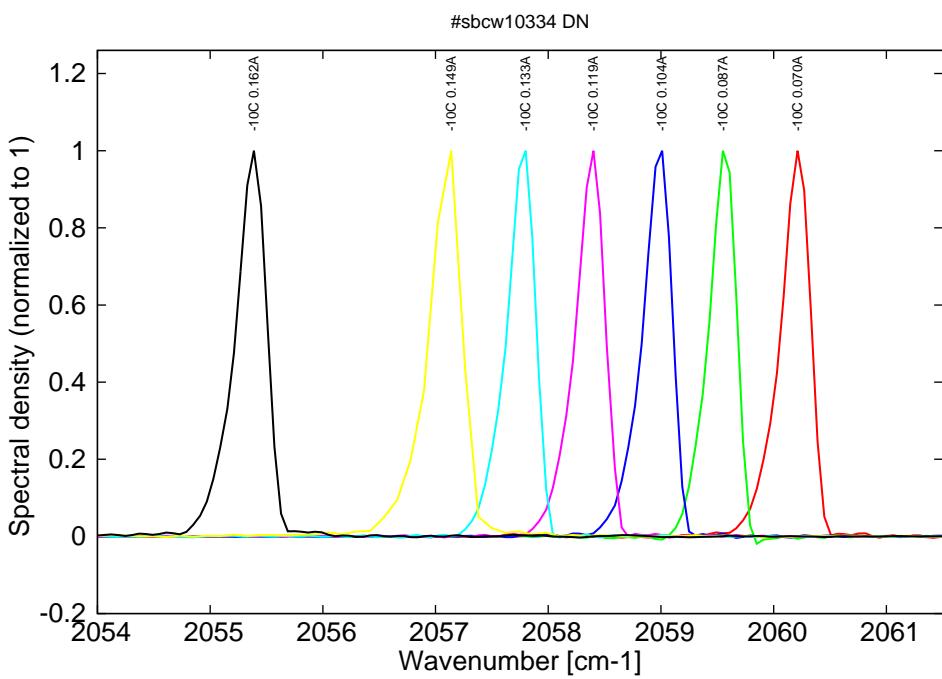


Figure 8: spectra at -10C for various DC currents (monomode on mode 1 up to 0.15A then on mode 2)

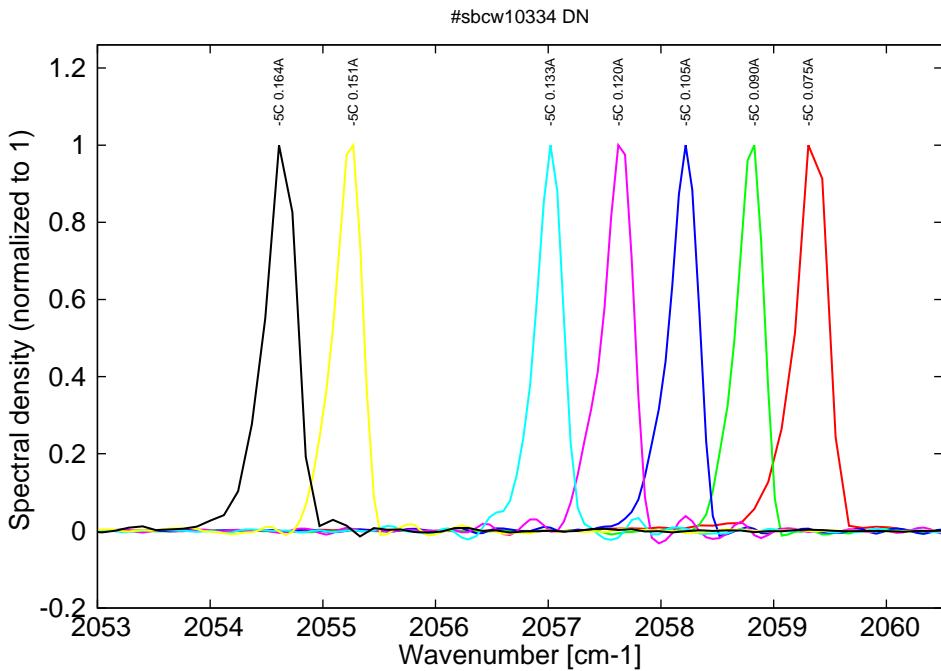


Figure 9: spectra at -5C for various DC currents (monomode on mode 1 up to 0.135A then on mode 2)

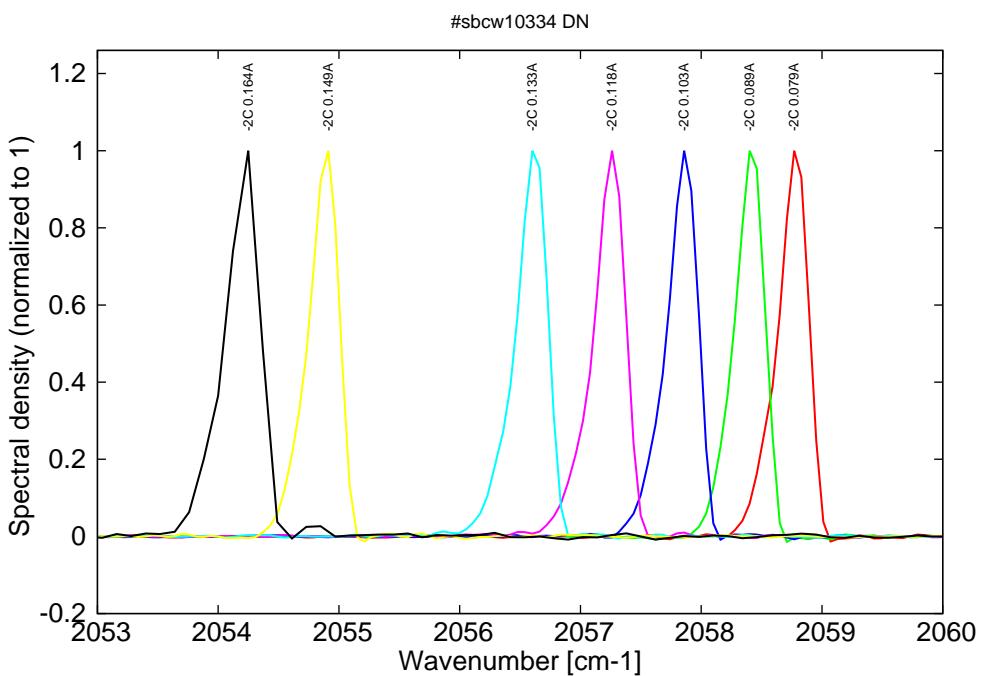


Figure 10: spectra at -2C for various DC currents (monomode on mode 1 up to 0.135A then on mode 2)

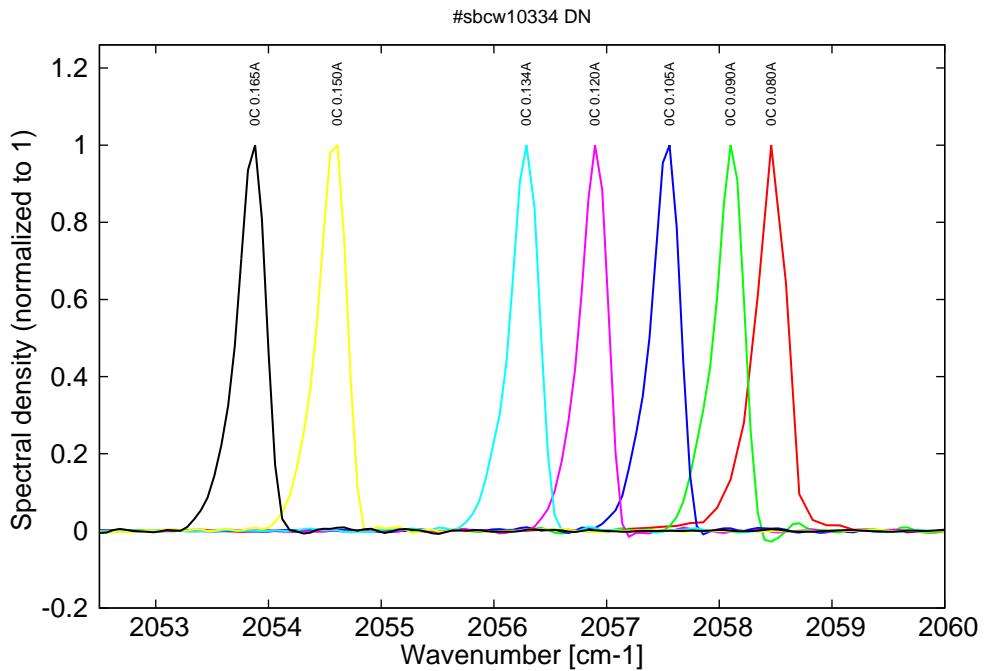


Figure 11: spectra at 0C for various DC currents (monomode on mode 1 up to 0.135A then on mode 2)

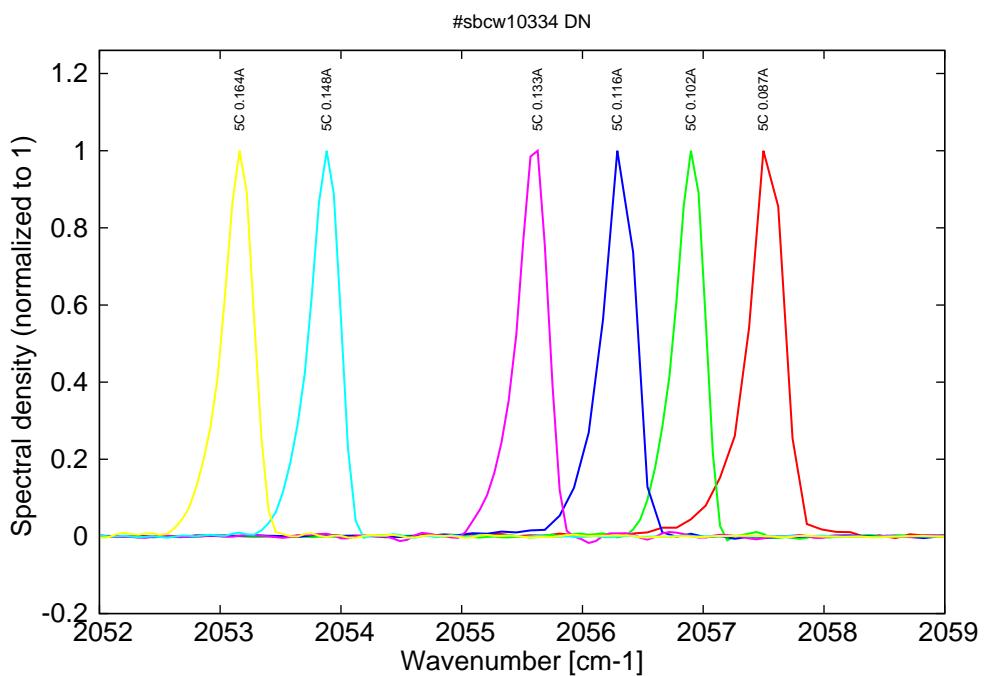


Figure 12: spectra at 5C for various DC currents (monomode on mode 1 up to 0.13A then on mode 2)

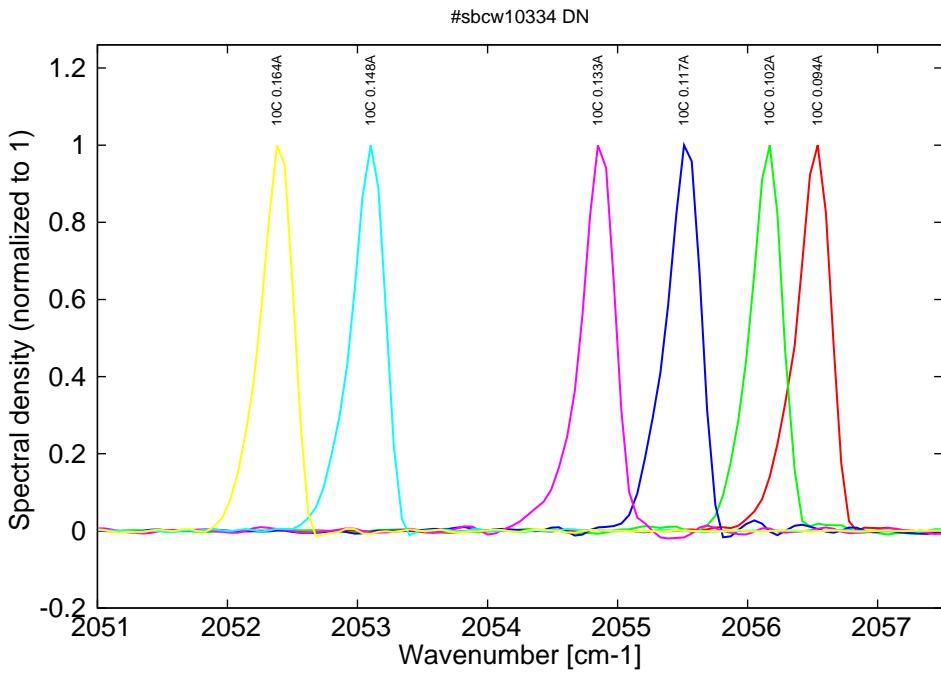


Figure 13: spectra at 10C for various DC currents (monomode on mode 1 up to 0.13A then on mode 2)

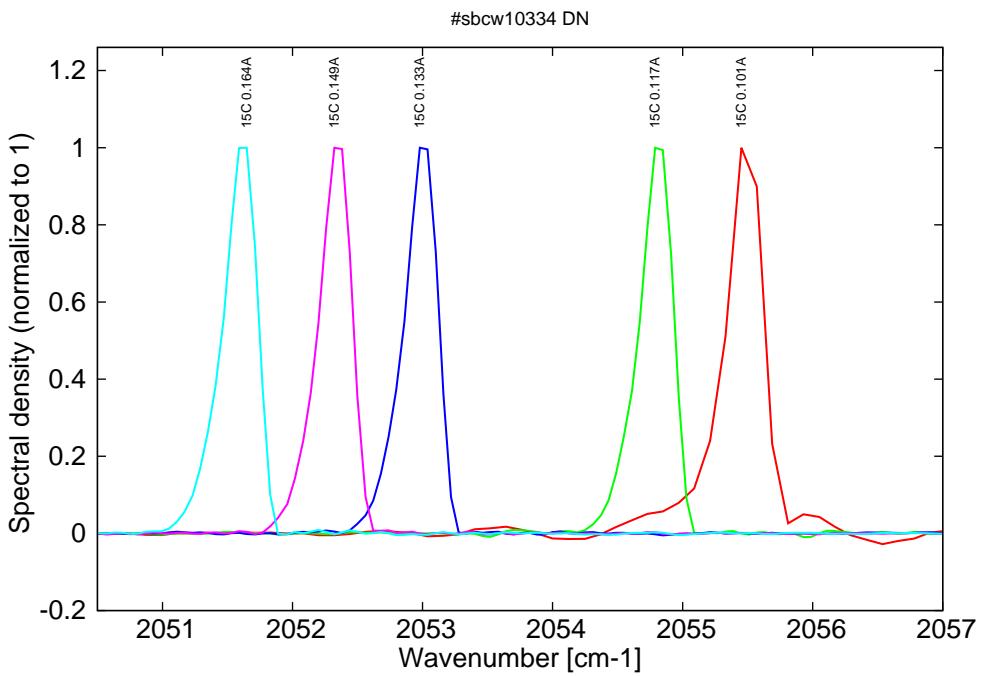


Figure 14: spectra at 15C for various DC currents (monomode on mode 1 up to 0.12A then on mode 2)

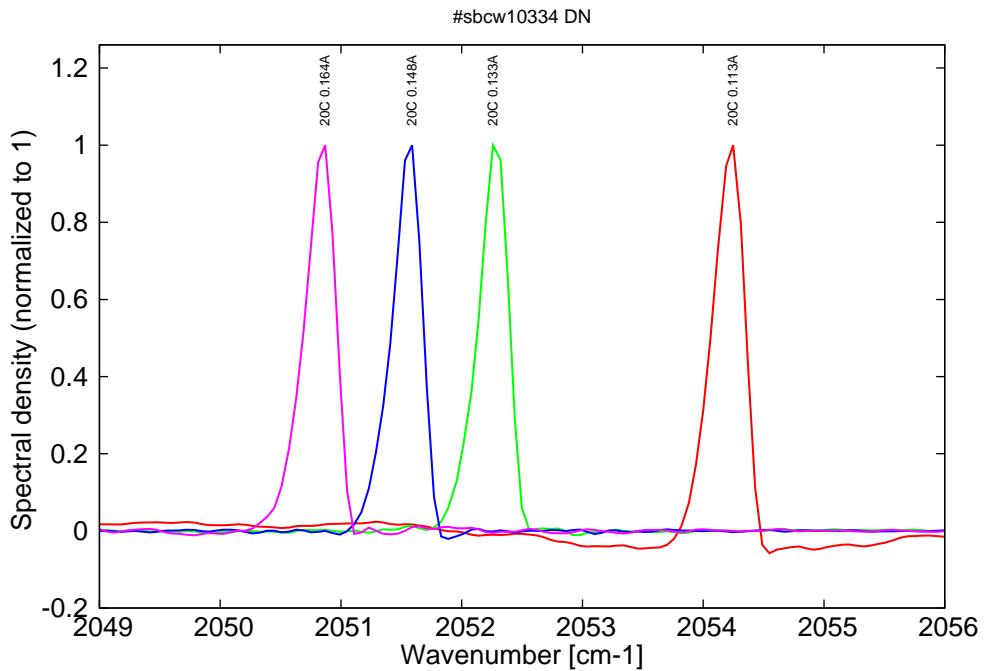


Figure 15: spectra at 20C for various DC currents (monomode on mode 1 up to 0.115A then on mode 2)

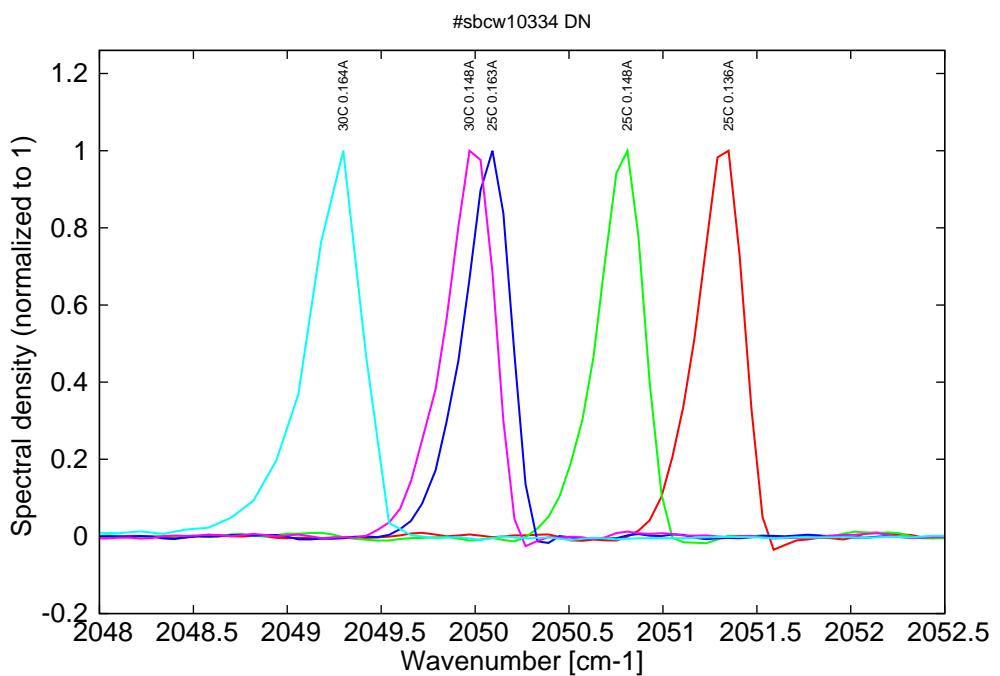


Figure 16: spectra between 25C and 30C for various DC currents (monomode on mode 2)