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Datasheet for #sbcw1903 DN

Recommendations:

Please read the starter kit user manual (at least installation chapter 5), if available, and have a look at the FAQ at `http://www.alpeslasers.ch/alfaq.pdf`

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.

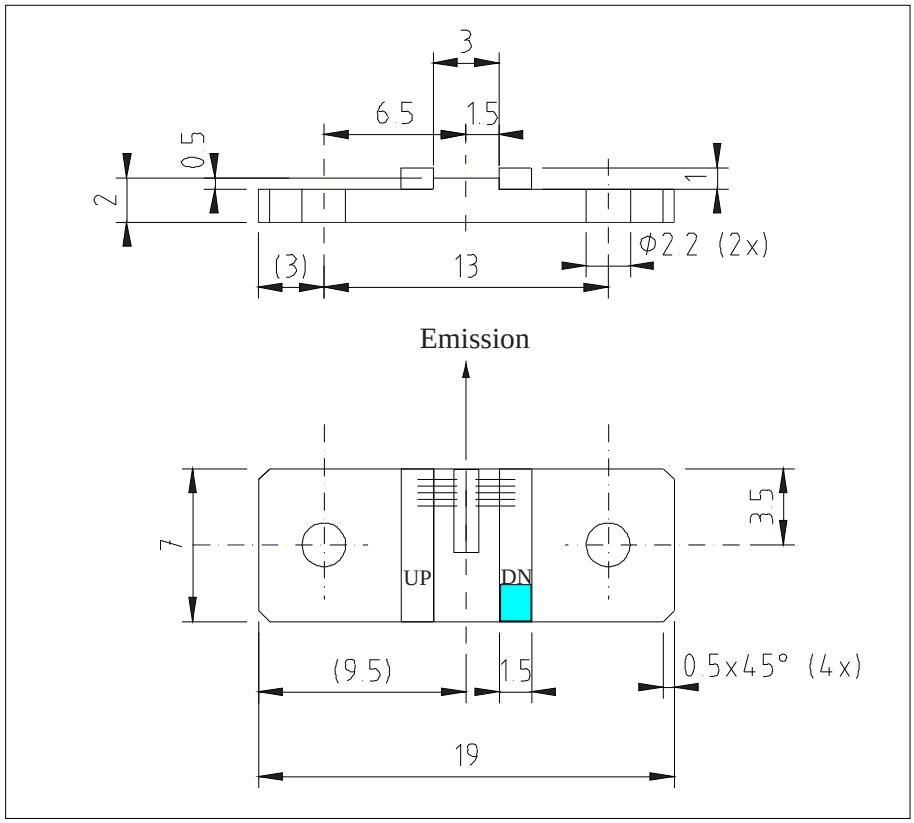


Figure 1: Support mounting for #sbcw1903 DN (please note that the laser is connected to the DN pad drawned in blue)

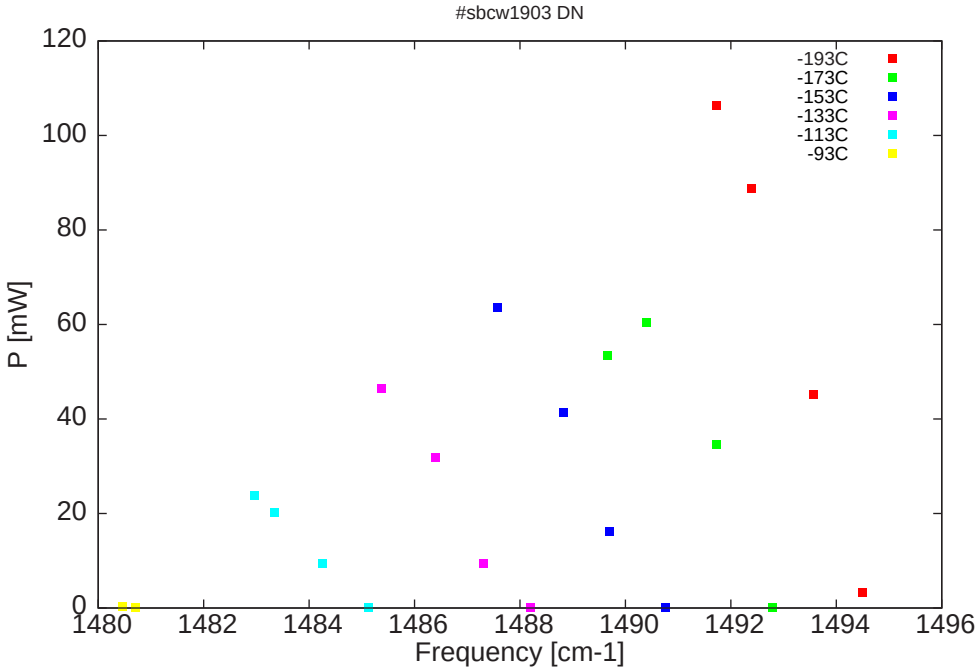


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

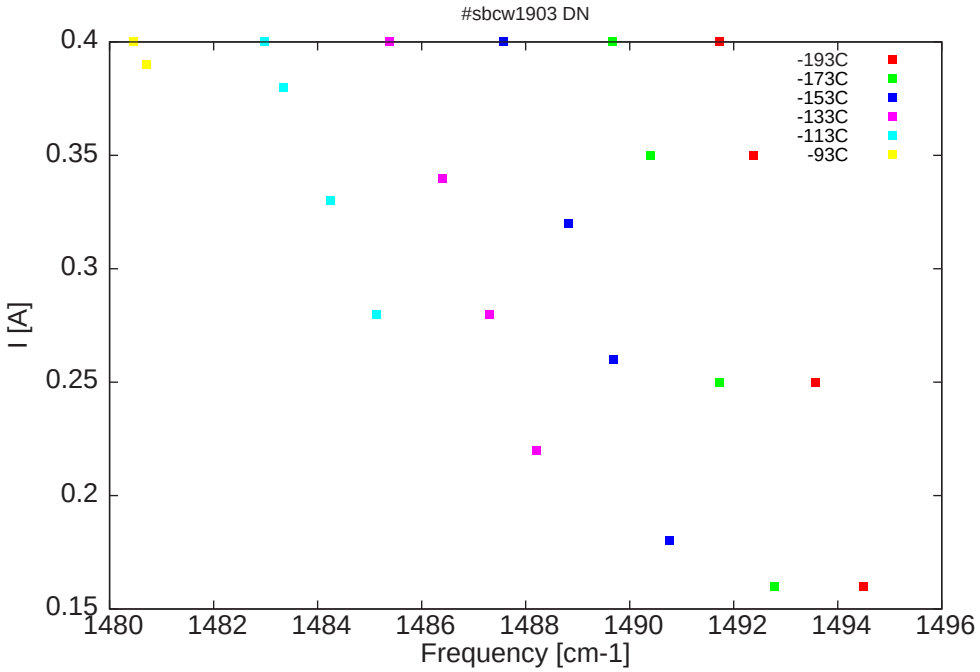


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
6691.2	1494.5	3.4	-193	10.8	0.16
6695.4	1493.6	45.1	-193	11.2	0.25
6700.7	1492.4	88.7	-193	11.6	0.35
6703.6	1491.7	106.3	-193	11.7	0.4
6698.9	1492.8	0.1	-173	10.6	0.16
6703.6	1491.7	34.5	-173	11	0.25
6709.6	1490.4	60.4	-173	11.3	0.35
6712.9	1489.7	53.5	-173	11.5	0.4
6708	1490.8	0.1	-153	10.3	0.18
6712.8	1489.7	16.1	-153	10.7	0.26
6716.7	1488.8	41.5	-153	10.9	0.32
6722.4	1487.6	63.5	-153	11.2	0.4
6719.5	1488.2	0.1	-133	10.2	0.22
6723.5	1487.3	9.5	-133	10.5	0.28
6727.6	1486.4	31.9	-133	10.7	0.34
6732.3	1485.4	46.5	-133	10.9	0.4
6733.4	1485.1	0.1	-113	10.2	0.28
6737.4	1484.3	9.4	-113	10.4	0.33
6741.5	1483.3	20.2	-113	10.6	0.38
6743.2	1483	23.8	-113	10.7	0.4
6753.5	1480.7	0.1	-93	10.4	0.39
6754.6	1480.5	0.4	-93	10.5	0.4

Table 1 : singlemode optical output power as function of operating parameters

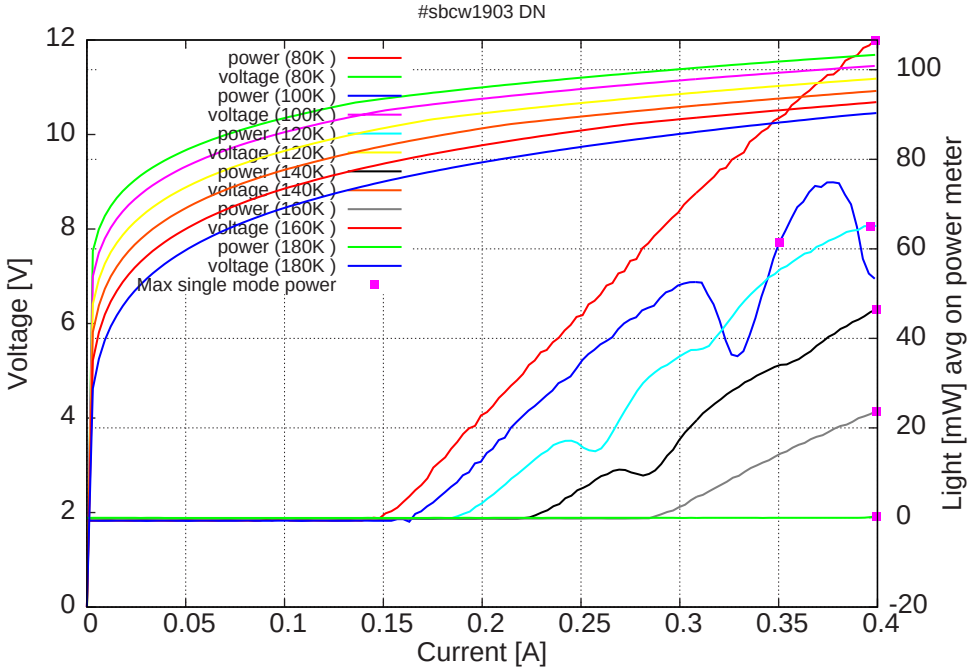


Figure 4: peak voltage and average power vs peak current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 80K: Ith=150mA / Vth= 10.76V (2-wires measurements). Maximum operation

current: 400mA for all temperatures.

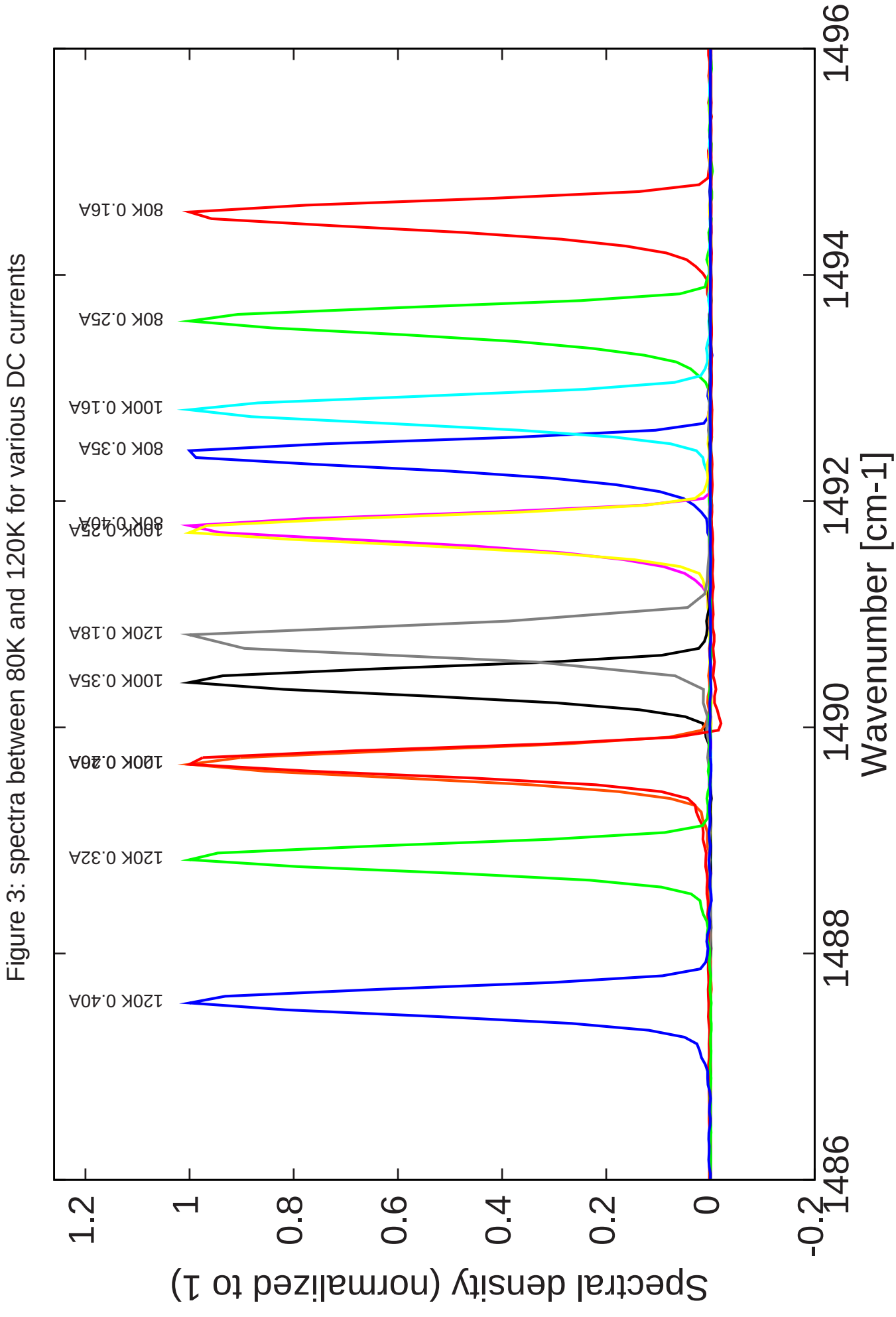
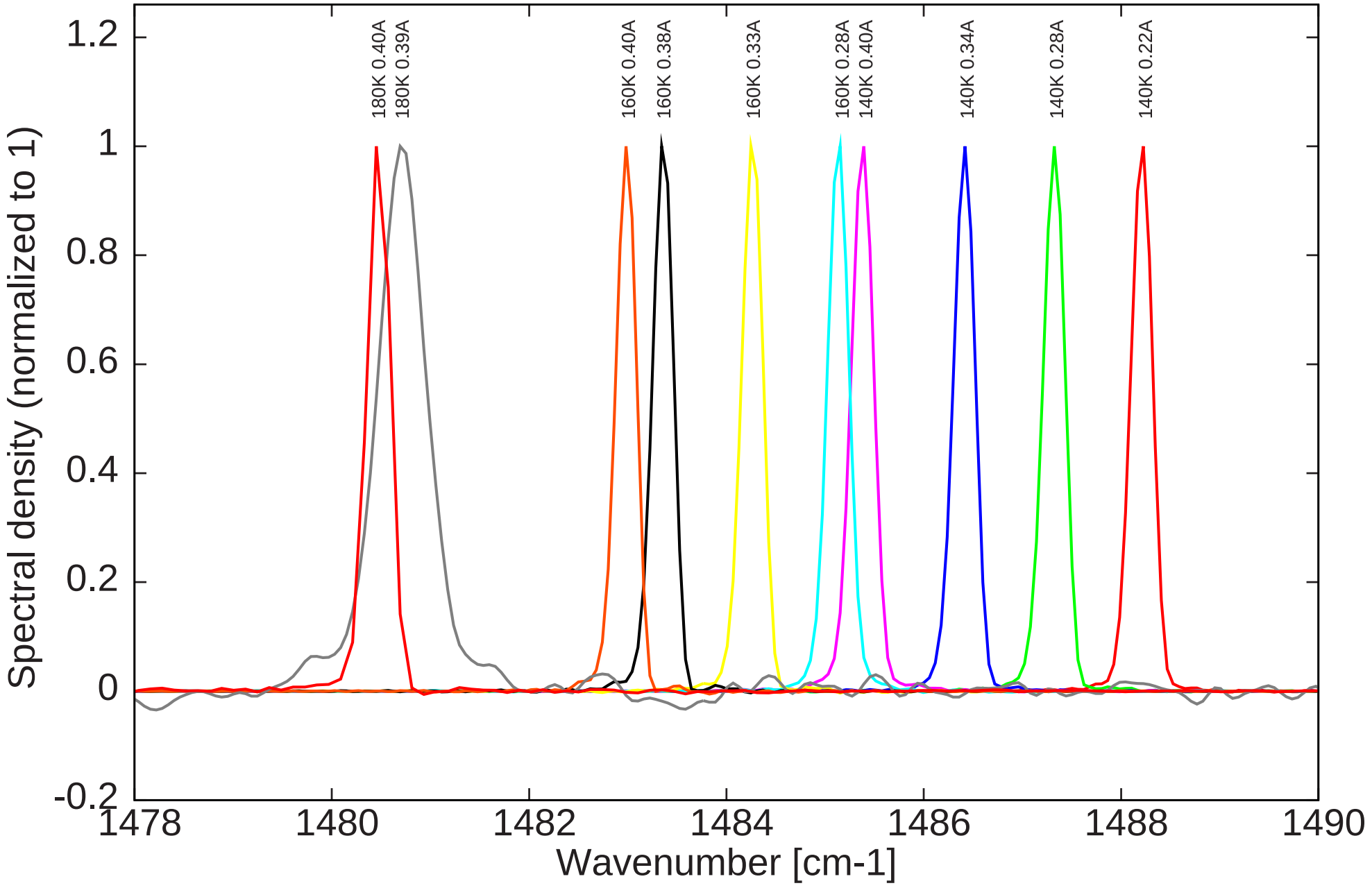


Figure 3: spectra between 80K and 120K for various DC currents

#sbcw1903 DN

Figure 4: spectra between 140K and 180K for various DC currents



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