

Datasheet for #sb3066 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 longer pulses, higher repetition rate, higher voltage or higher current than specified in this document may cause damage. It will result in loss of warranty, unless agreed upon with Alpes Lasers!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative bias on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive bias on the base contact (= submount, corresponding to the label "base" on the LLH).

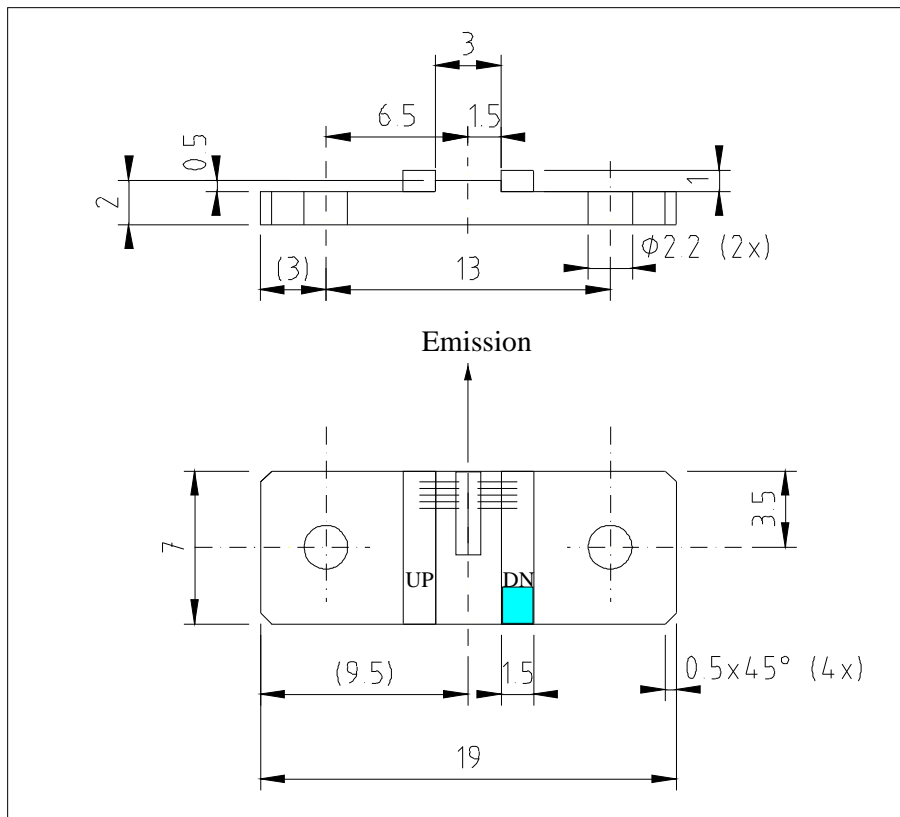


Figure 1: Support mounting for #sb3066 DN (please note that the laser is connected to the DN pad drawn in blue)

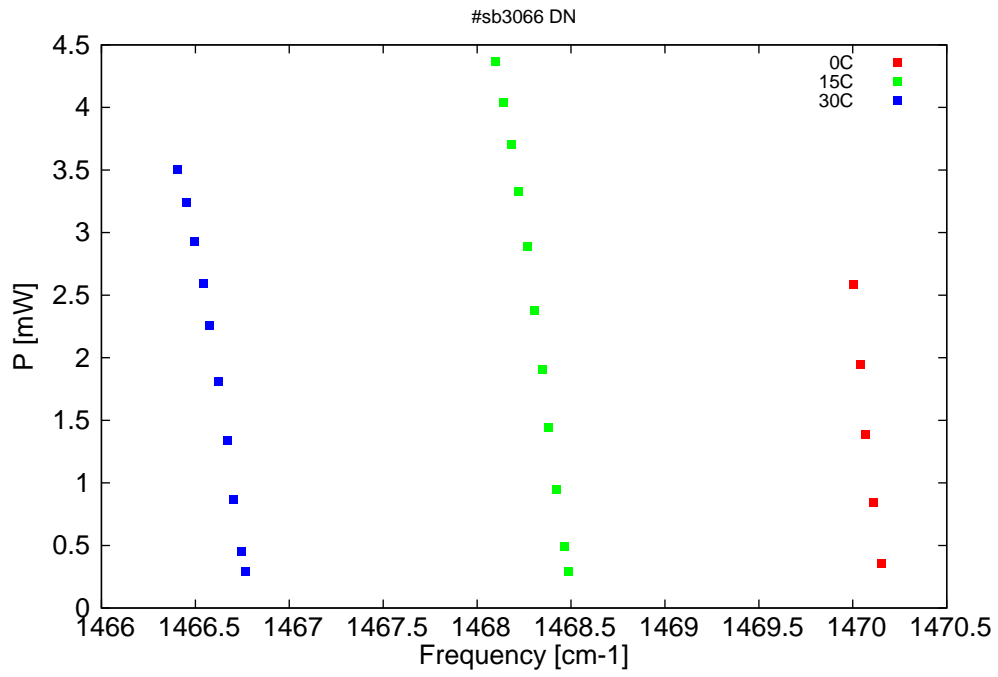


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

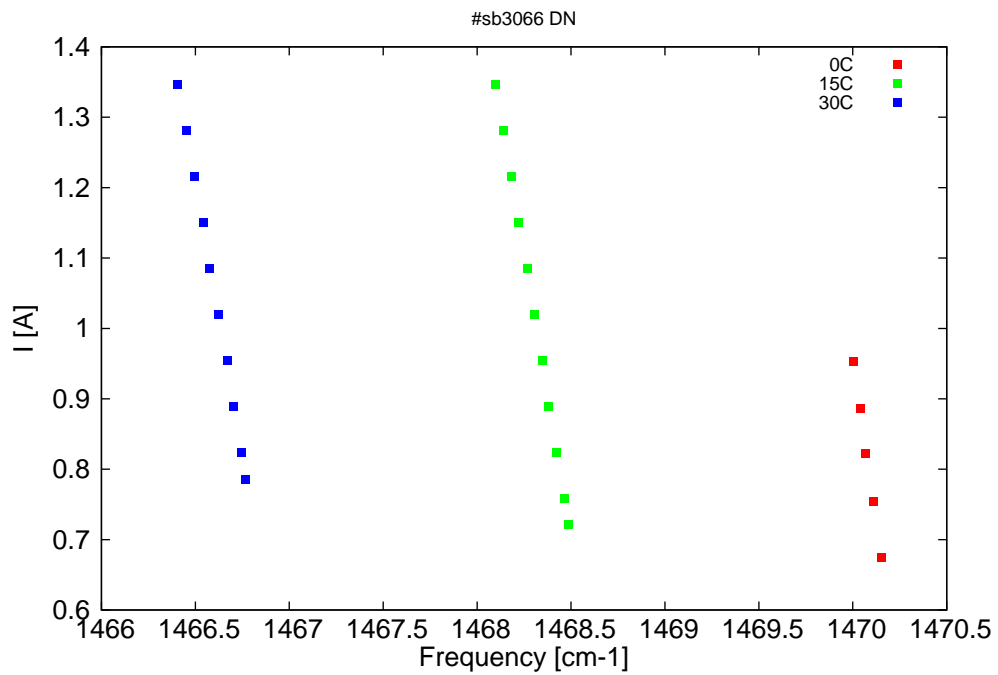


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{pulse} [V]	I_{pulse} [A]
6802	1470.2	0.4	0	9.8	0.68
6802.2	1470.1	0.8	0	10	0.75
6802.4	1470.1	1.4	0	10.2	0.82
6802.5	1470	1.9	0	10.3	0.89
6802.7	1470	2.6	0	10.5	0.95
6809.7	1468.5	0.3	15	9.7	0.72
6809.8	1468.5	0.5	15	9.9	0.76
6810	1468.4	1	15	10	0.82
6810.2	1468.4	1.4	15	10.2	0.89
6810.4	1468.3	1.9	15	10.3	0.95
6810.6	1468.3	2.4	15	10.5	1.02
6810.8	1468.3	2.9	15	10.6	1.09
6811	1468.2	3.3	15	10.8	1.15
6811.1	1468.2	3.7	15	11	1.22
6811.3	1468.1	4	15	11.1	1.28
6811.5	1468.1	4.4	15	11.3	1.35
6817.7	1466.8	0.3	30	9.8	0.79
6817.8	1466.7	0.5	30	9.9	0.82
6818	1466.7	0.9	30	10.1	0.89
6818.2	1466.7	1.3	30	10.3	0.95
6818.4	1466.6	1.8	30	10.4	1.02
6818.6	1466.6	2.3	30	10.6	1.09
6818.7	1466.5	2.6	30	10.7	1.15
6819	1466.5	2.9	30	10.9	1.22
6819.2	1466.5	3.2	30	11	1.28
6819.4	1466.4	3.5	30	11.2	1.35

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

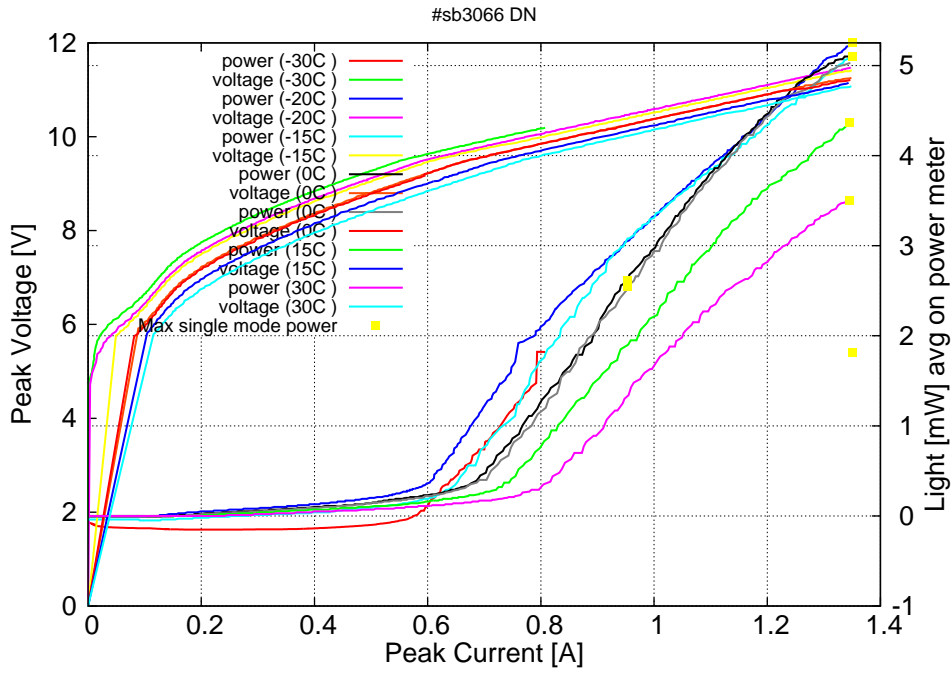


Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (200ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

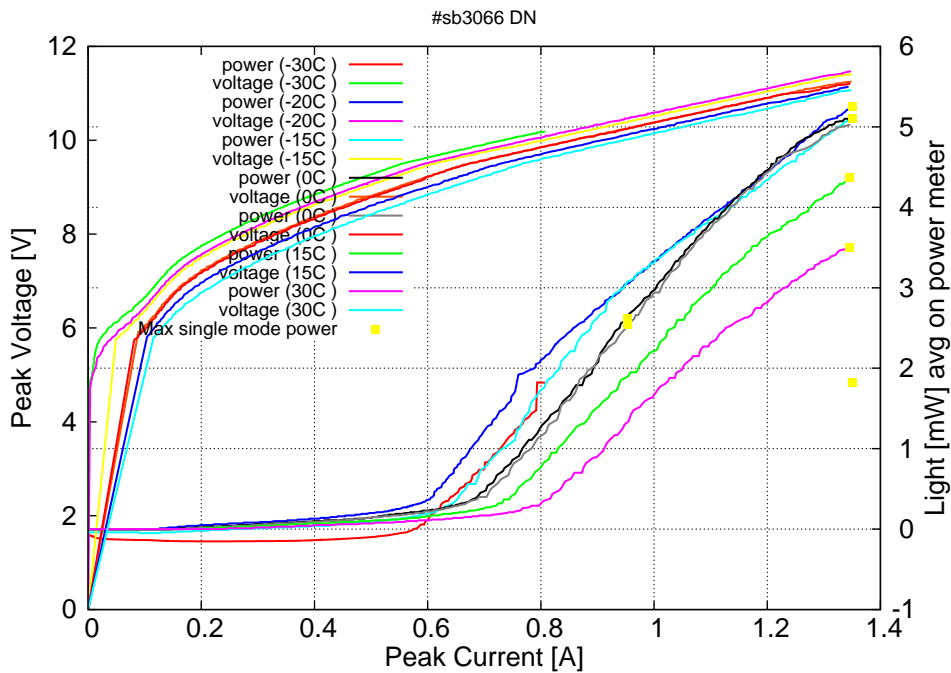


Figure 5: Peak voltage and average power vs peak current at 2% duty-cycle (200ns pulses on the laser) (including the multimode region)

Figure 4: spectra at different temperatures for various peak currents

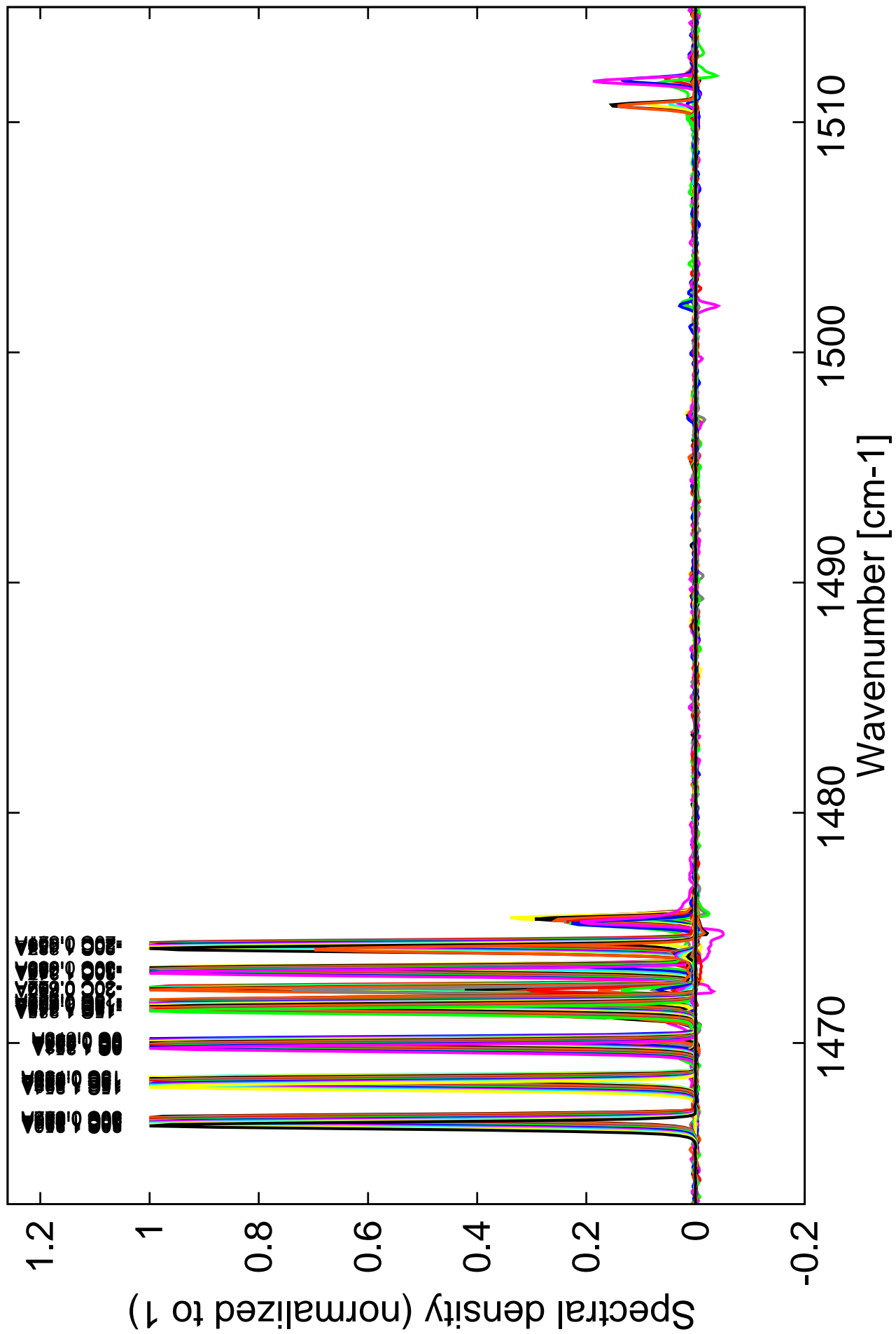
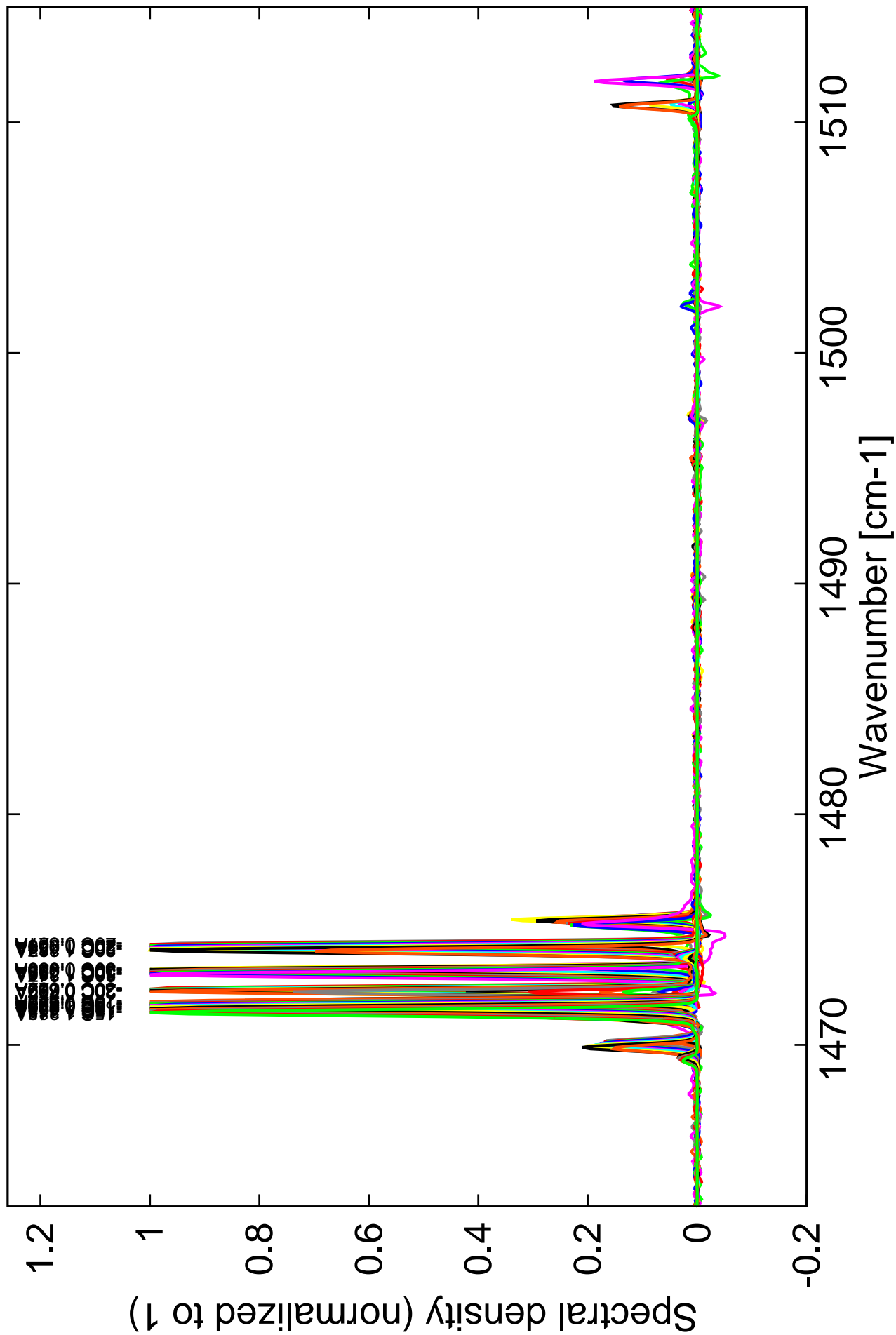


Figure 5: spectra between -30C and -15C at 2% duty-cycle, 20ns pulses on the laser (multimode)



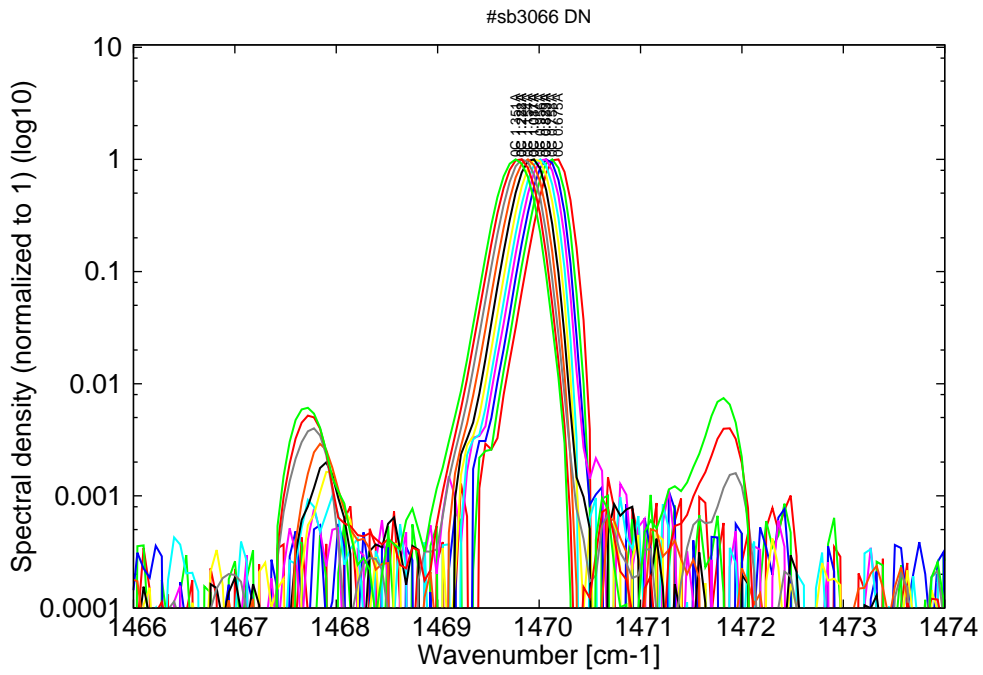


Figure 6: spectra at 0C at 2% duty-cycle, 20ns pulses on the laser (monomode up to 0.96A, then becomes multimode)

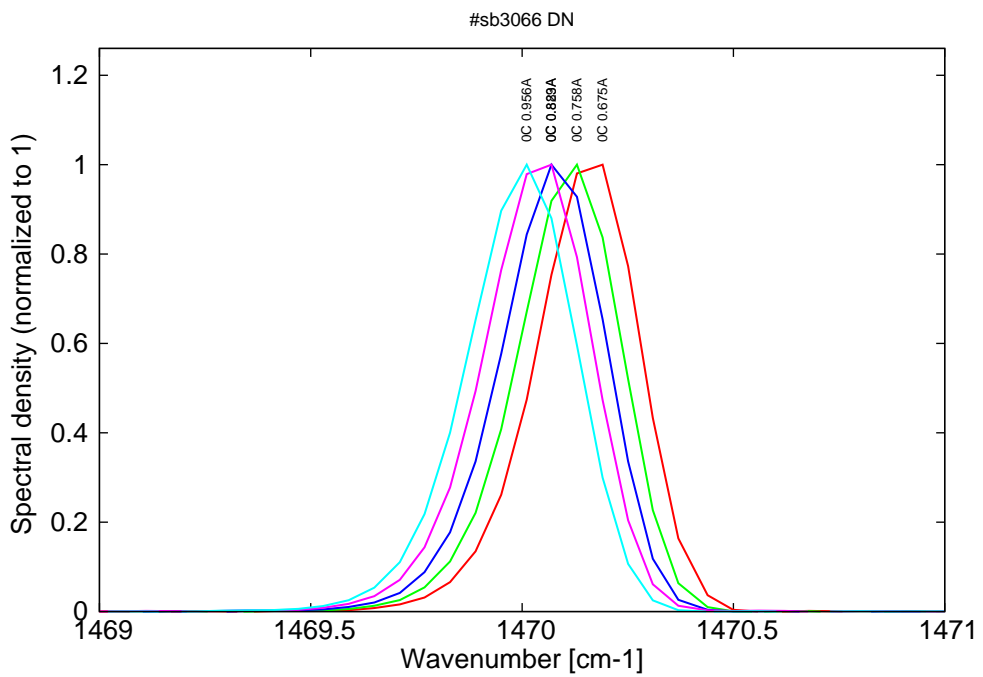


Figure 7: spectra at 0C at 2% duty-cycle, 20ns pulses on the laser (monomode range)

Figure 8: spectra at 15C and 30C at 2% duty-cycle, 20ns pulses on the laser (all monomode)

