

Datasheet for #sb16598 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).

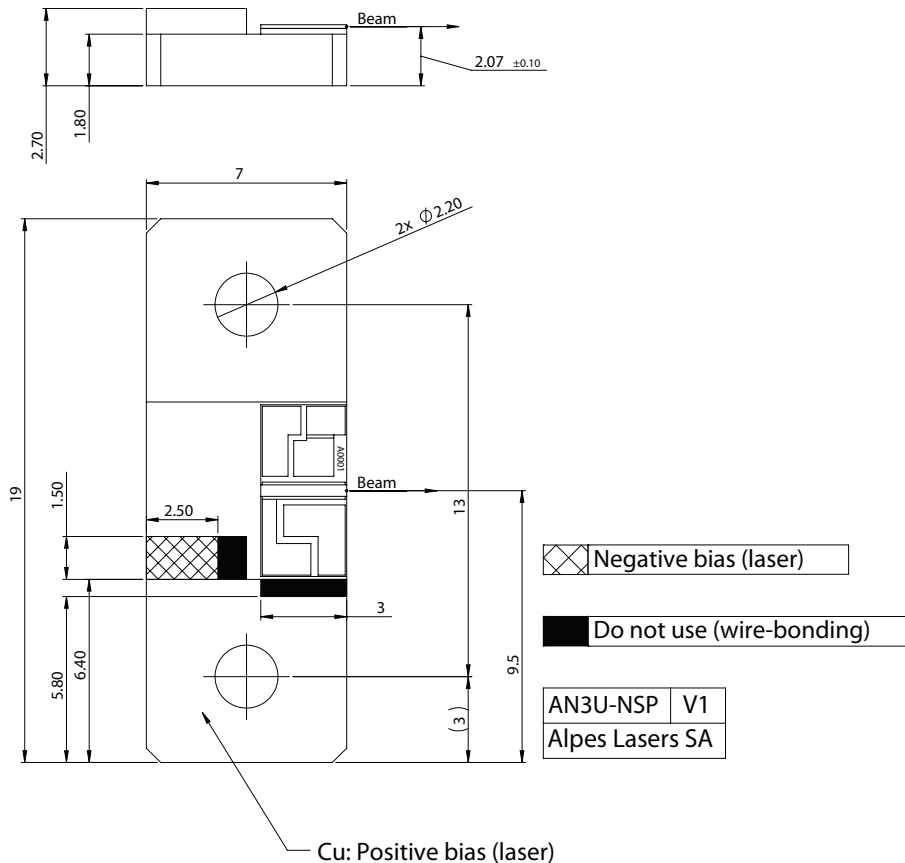


Figure 1: Mechanical and electrical interface for #sb16598 DN

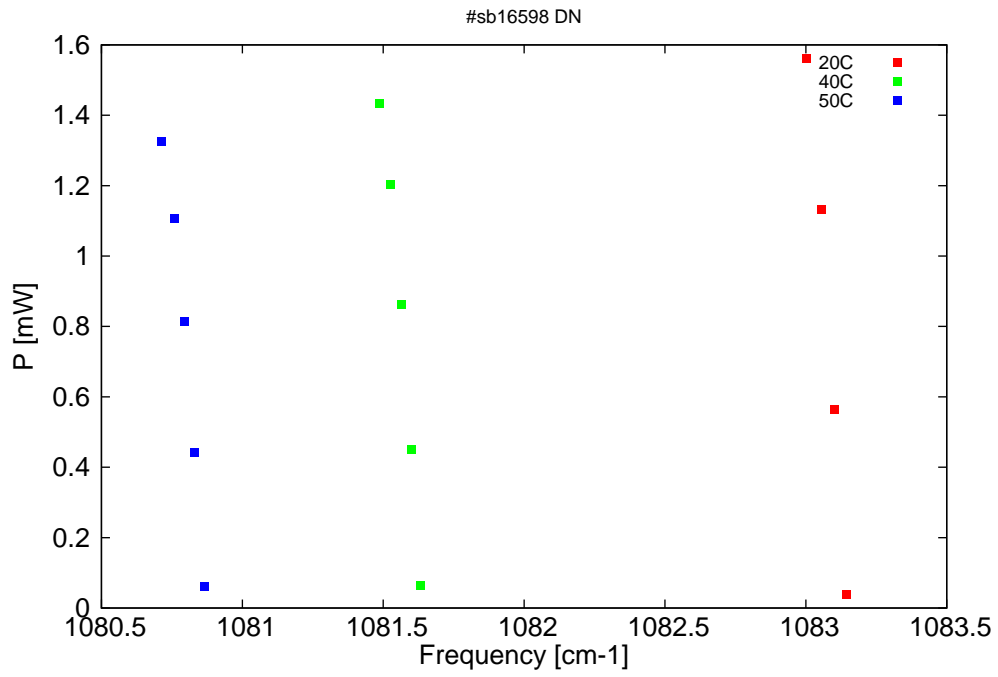


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

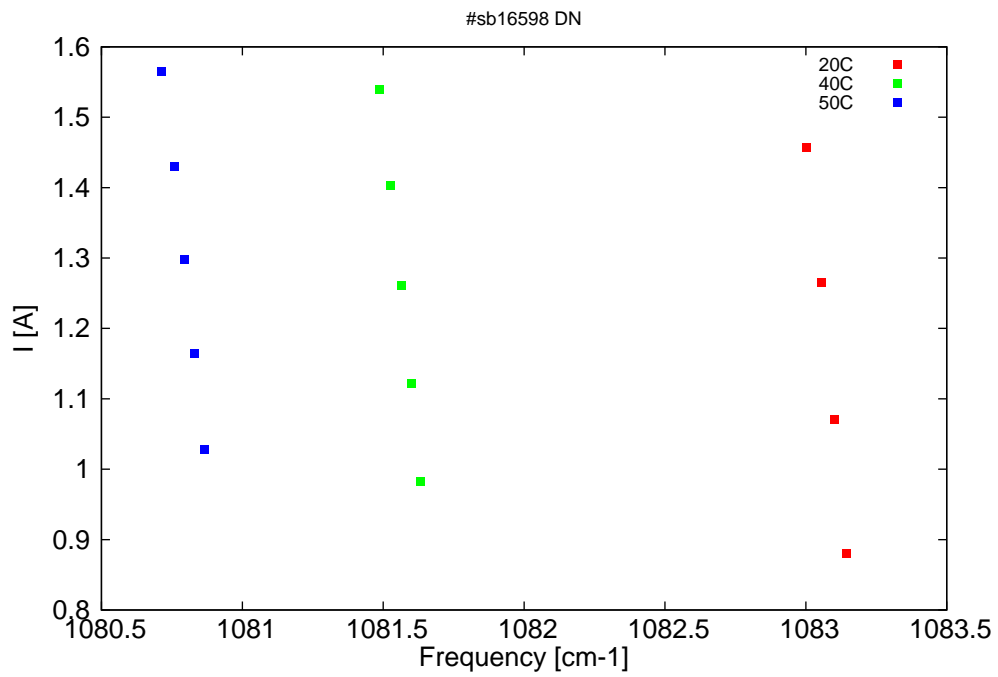


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{pulse} [V]	I_{pulse} [A]
9232.4	1083.1	0	20	9.9	0.88
9232.7	1083.1	0.6	20	10.5	1.07
9233.1	1083.1	1.1	20	11.2	1.26
9233.6	1083	1.6	20	11.9	1.46
9245.3	1081.6	0.1	40	10.1	0.98
9245.5	1081.6	0.5	40	10.6	1.12
9245.9	1081.6	0.9	40	11.1	1.26
9246.2	1081.5	1.2	40	11.6	1.4
9246.5	1081.5	1.4	40	12.1	1.54
9251.8	1080.9	0.1	50	10.2	1.03
9252.1	1080.8	0.4	50	10.7	1.16
9252.5	1080.8	0.8	50	11.2	1.3
9252.8	1080.8	1.1	50	11.7	1.43
9253.1	1080.7	1.3	50	12.2	1.56

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

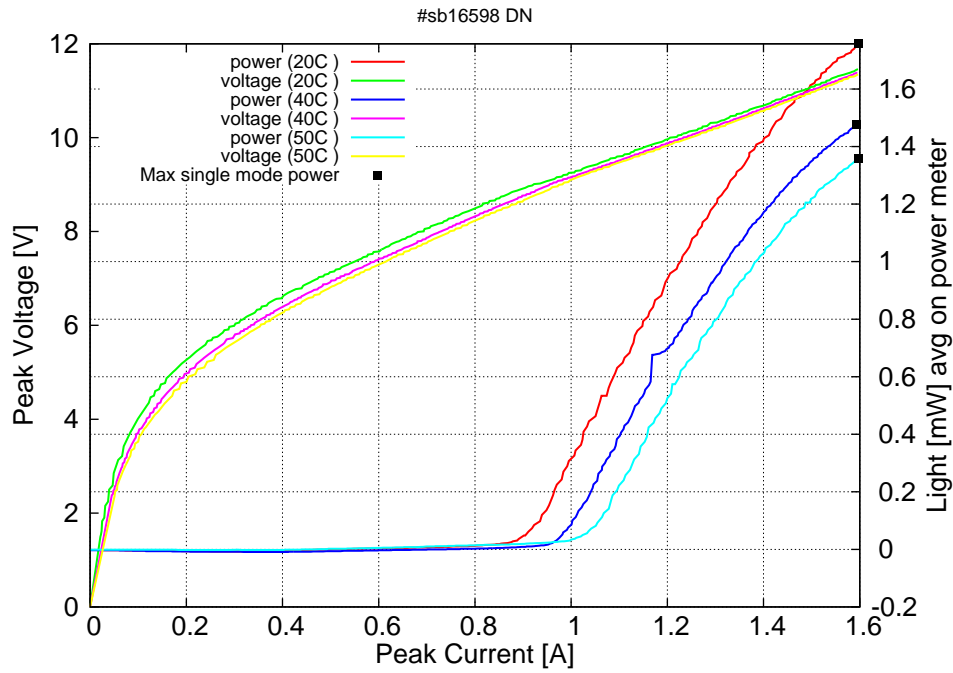
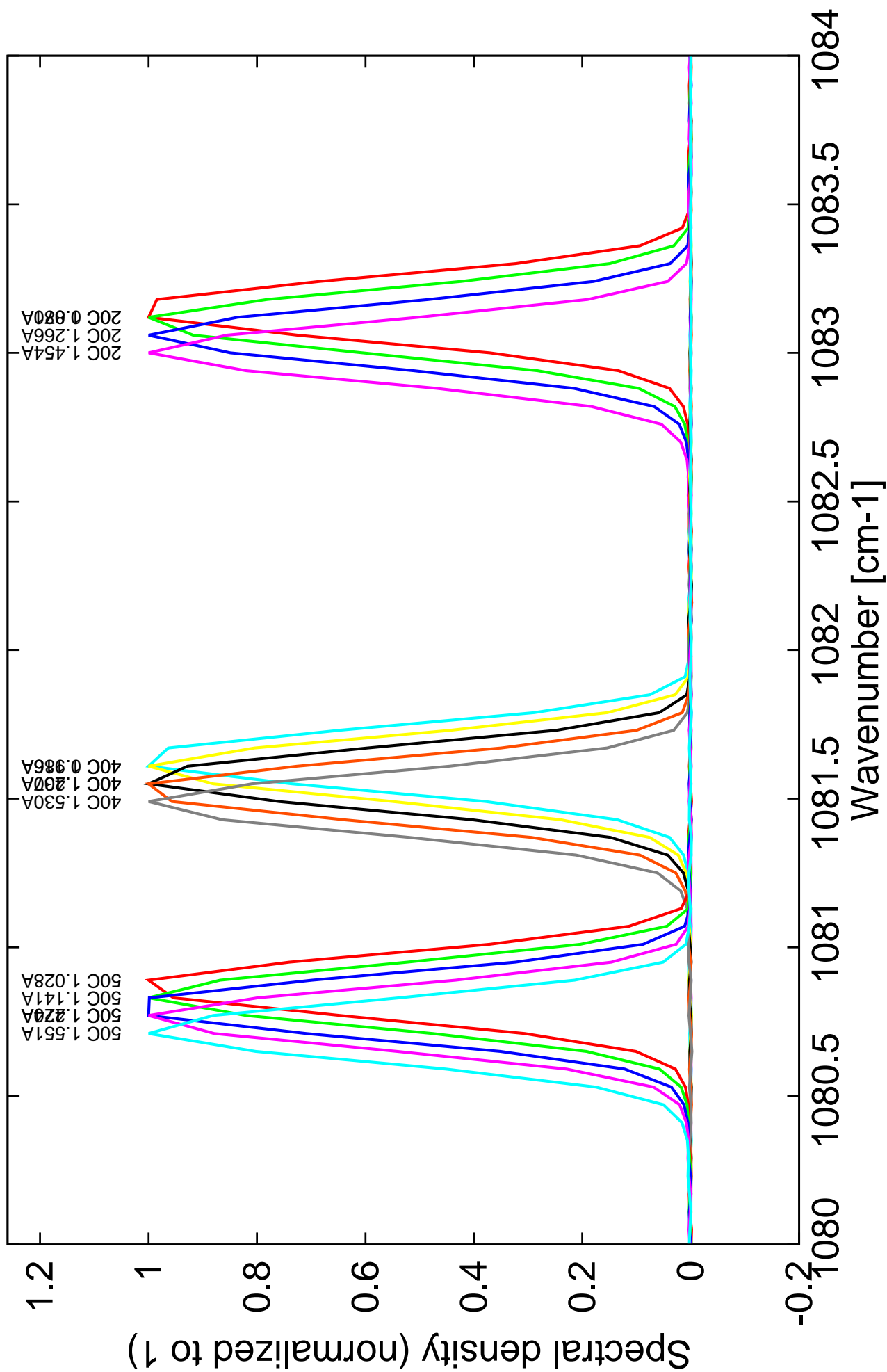


Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (500ns pulses on the laser) / $I_{max}=1.60A$ (the solid squares indicate the maximum singlemode emitted power)

Figure 3: spectra at 20C, 40C and 50C at 2% duty-cycle (20ns pulses on the laser)



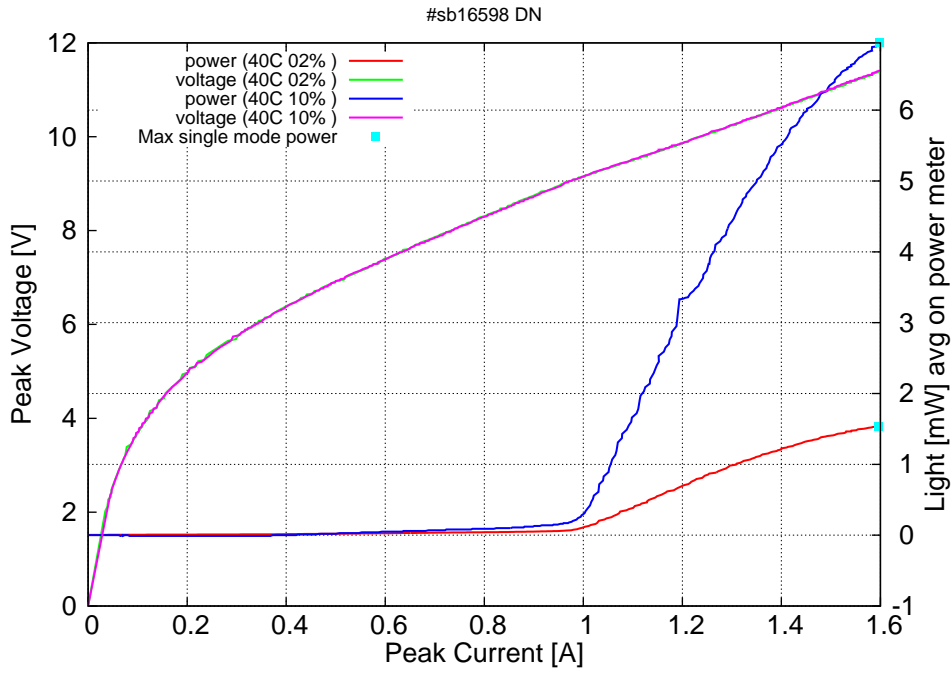


Figure 5: Peak voltage and average power vs peak current at 40C at 2% and 10% duty-cycle (500ns pulses on the laser) / $I_{max}=1.60A$ / duty max = 10% (the solid squares indicate the maximum singlemode emitted power)

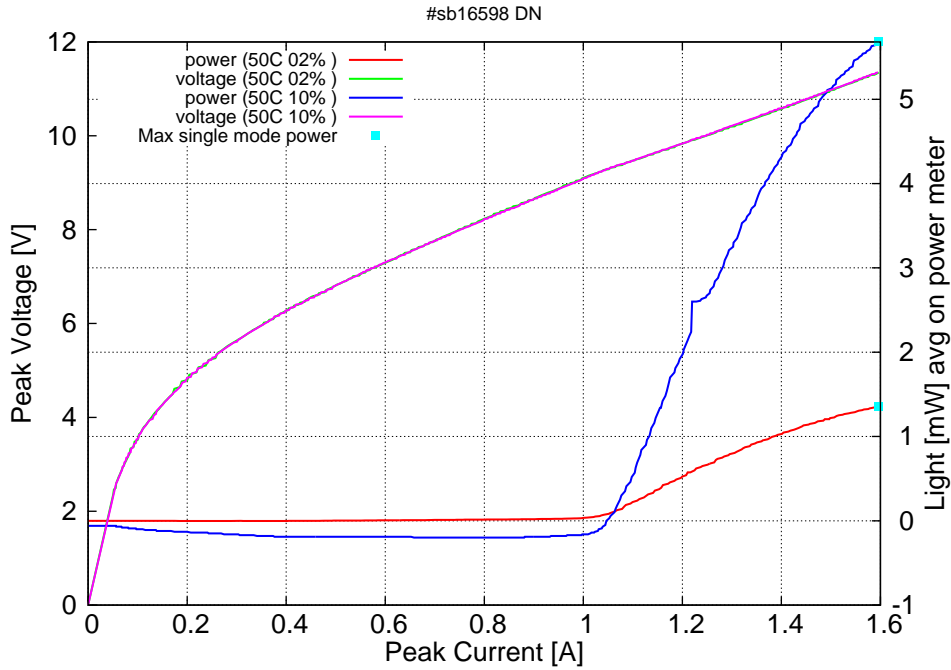


Figure 6: Peak voltage and average power vs peak current at 50C at 2% and 10% duty-cycle (500ns pulses on the laser) / $I_{max}=1.60A$ / duty max = 10% (the solid squares indicate the maximum singlemode emitted power)

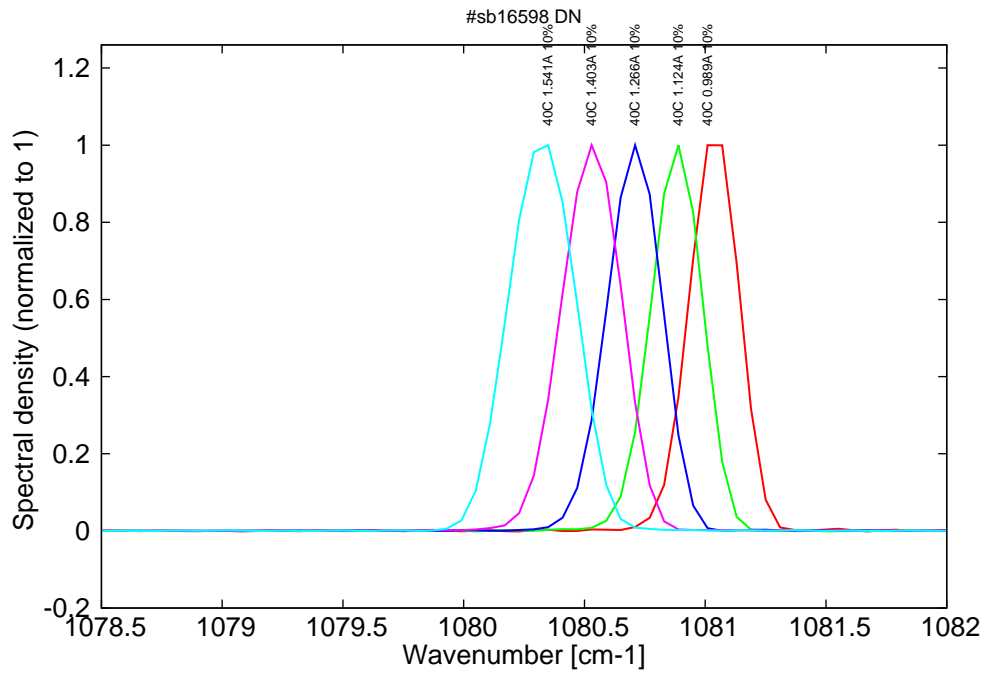


Figure 7: spectra at 40C at 10% duty-cycle (60ns pulses on the laser)

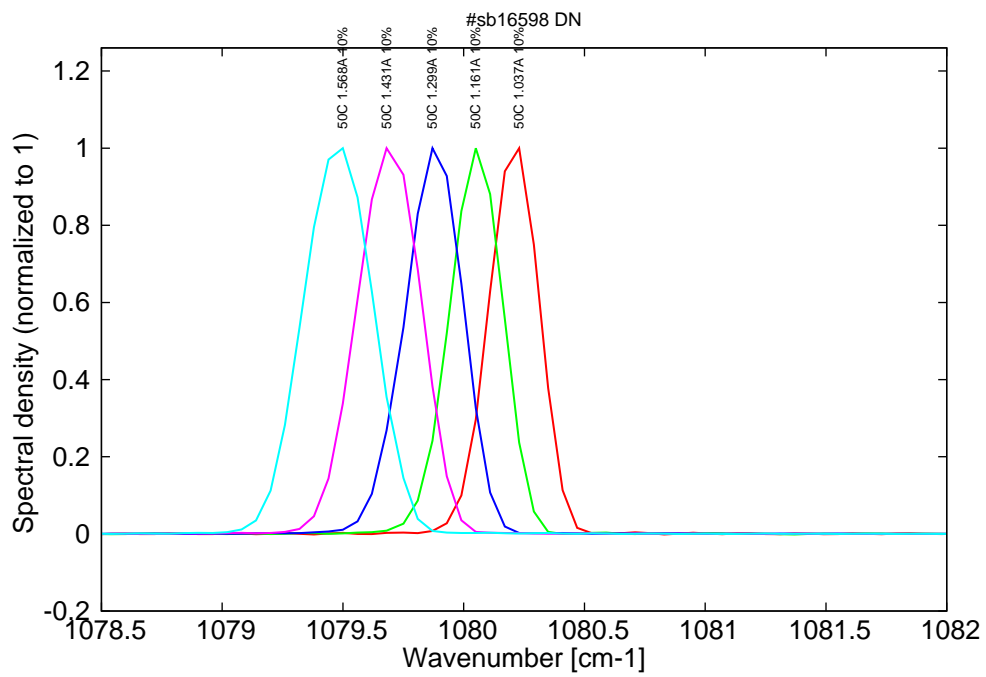


Figure 8: spectra at 50C at 10% duty-cycle (60ns pulses on the laser)

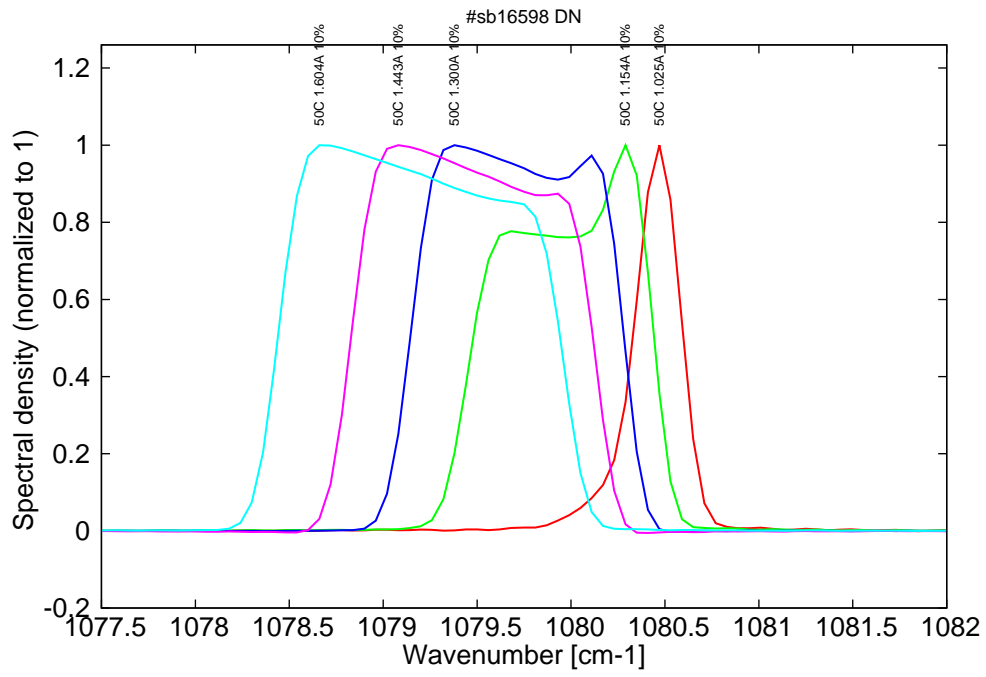


Figure 9: spectra at 50C at 10% duty-cycle with 300ns pulses on the laser