

Datasheet for #sb12604 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 and positive bias on the specific zones drawn below.

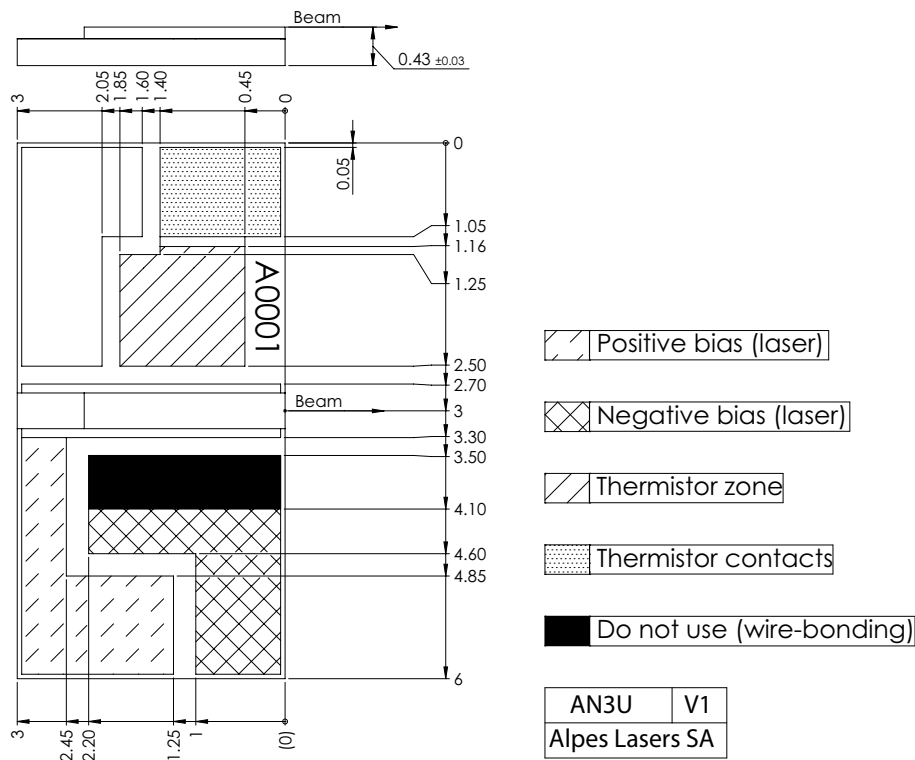


Figure 1: Support mounting for #sb12604 DN (please note that AlN submount numbering is A08XH)

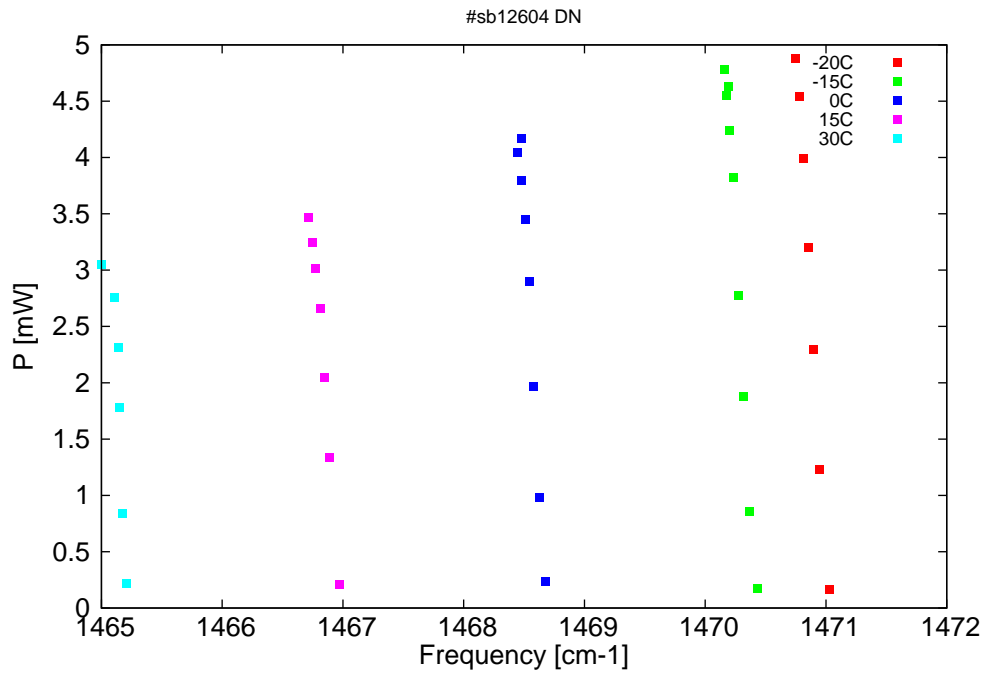


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

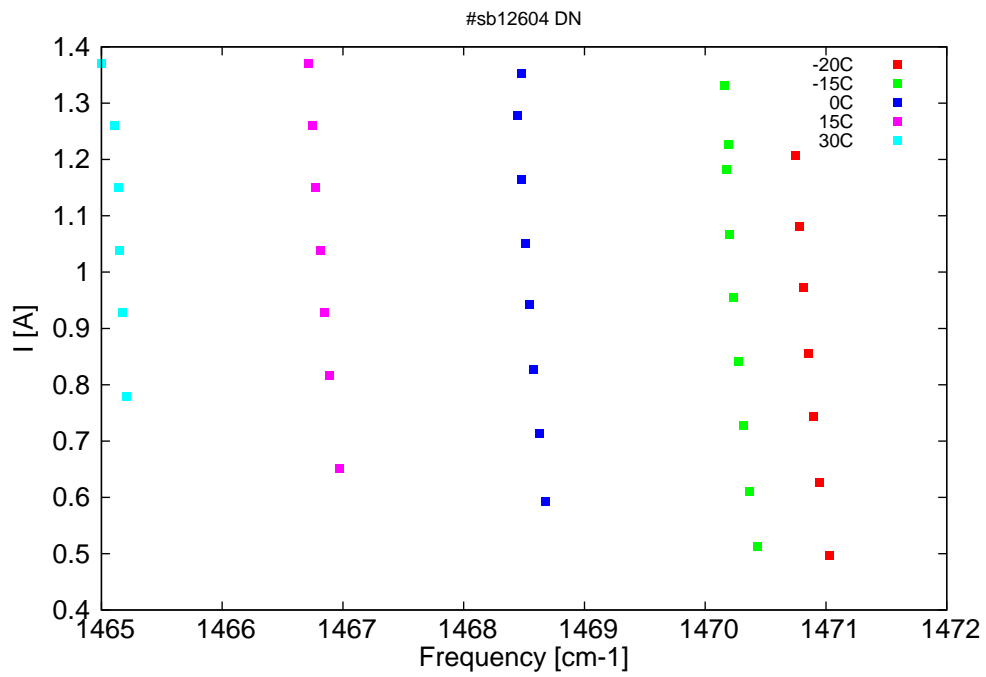


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{pulse}$ [V]	$I_{pulse}$ [A]
6797.9	1471	0.2	-20	9.2	0.5
6798.3	1470.9	1.2	-20	9.9	0.63
6798.6	1470.9	2.3	-20	10.3	0.74
6798.8	1470.9	3.2	-20	10.6	0.86
6799	1470.8	4	-20	10.8	0.97
6799.1	1470.8	4.5	-20	11	1.08
6799.3	1470.7	4.9	-20	11.3	1.21
6800.7	1470.4	0.2	-15	9.2	0.51
6801	1470.4	0.9	-15	9.8	0.61
6801.3	1470.3	1.9	-15	10.1	0.73
6801.5	1470.3	2.8	-15	10.4	0.84
6801.6	1470.2	3.8	-15	10.7	0.95
6801.8	1470.2	4.2	-15	10.9	1.07
6801.9	1470.2	4.5	-15	11.1	1.18
6801.8	1470.2	4.6	-15	11.2	1.23
6802	1470.2	4.8	-15	11.4	1.33
6808.8	1468.7	0.2	0	9.4	0.59
6809.1	1468.6	1	0	9.9	0.71
6809.3	1468.6	2	0	10.2	0.83
6809.5	1468.5	2.9	0	10.5	0.94
6809.6	1468.5	3.5	0	10.7	1.05
6809.8	1468.5	3.8	0	10.9	1.16
6809.9	1468.4	4	0	11.1	1.28
6809.8	1468.5	4.2	0	11.2	1.35
6816.7	1467	0.2	15	9.4	0.65
6817.2	1466.9	1.3	15	10	0.82
6817.3	1466.8	2	15	10.3	0.93
6817.5	1466.8	2.7	15	10.6	1.04
6817.7	1466.8	3	15	10.8	1.15
6817.8	1466.7	3.2	15	11	1.26
6818	1466.7	3.5	15	11.2	1.37
6825	1465.2	0.2	30	9.7	0.78
6825.1	1465.2	0.8	30	10.1	0.93
6825.2	1465.2	1.8	30	10.4	1.04
6825.3	1465.1	2.3	30	10.6	1.15
6825.4	1465.1	2.8	30	10.8	1.26
6825.9	1465	3	30	11	1.37

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

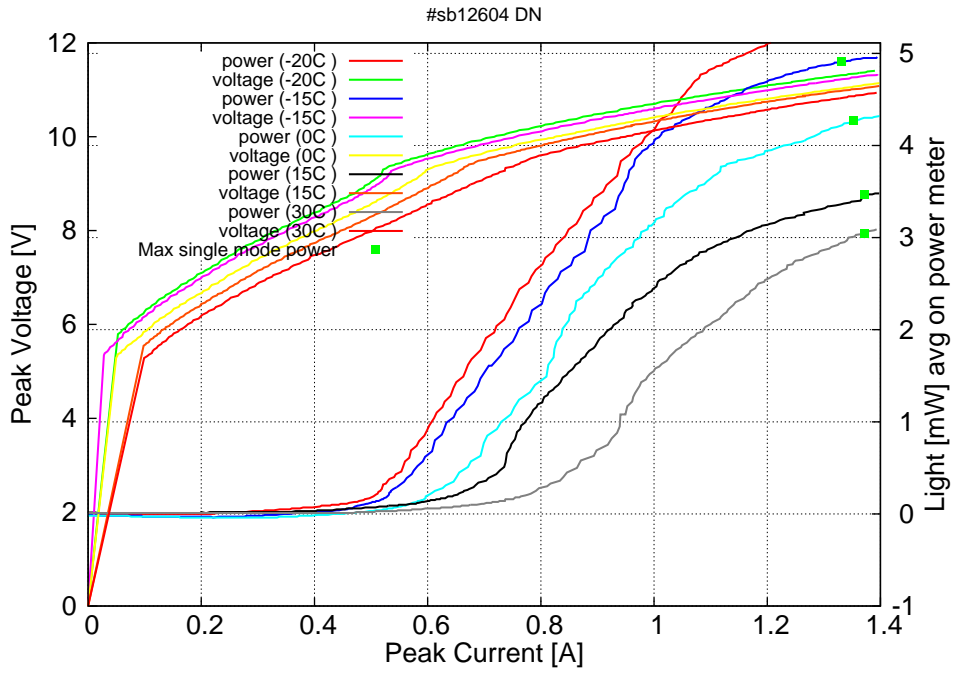


Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (200ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

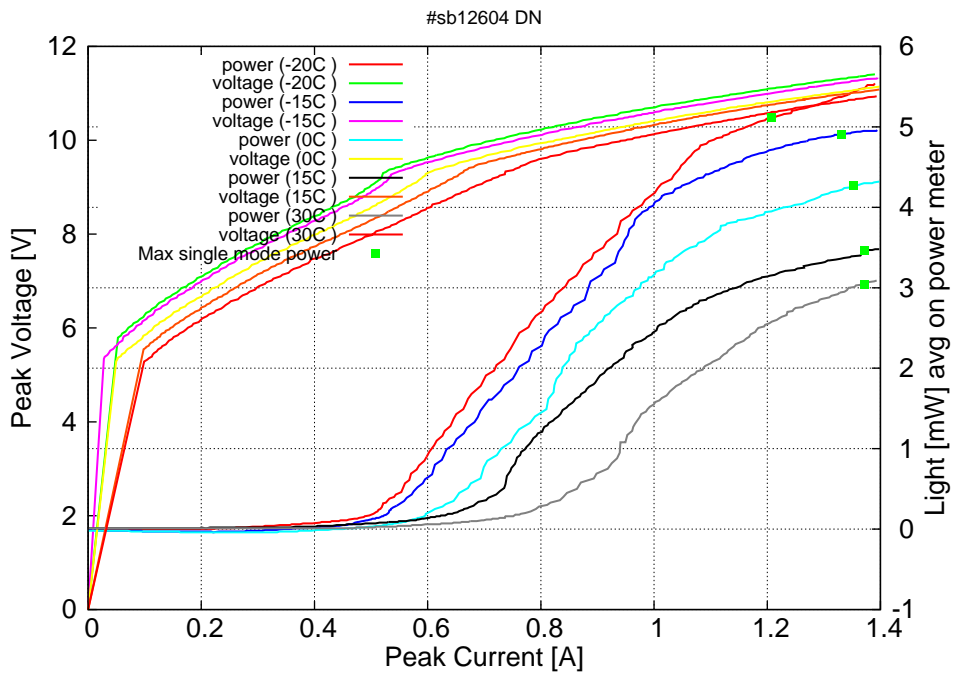
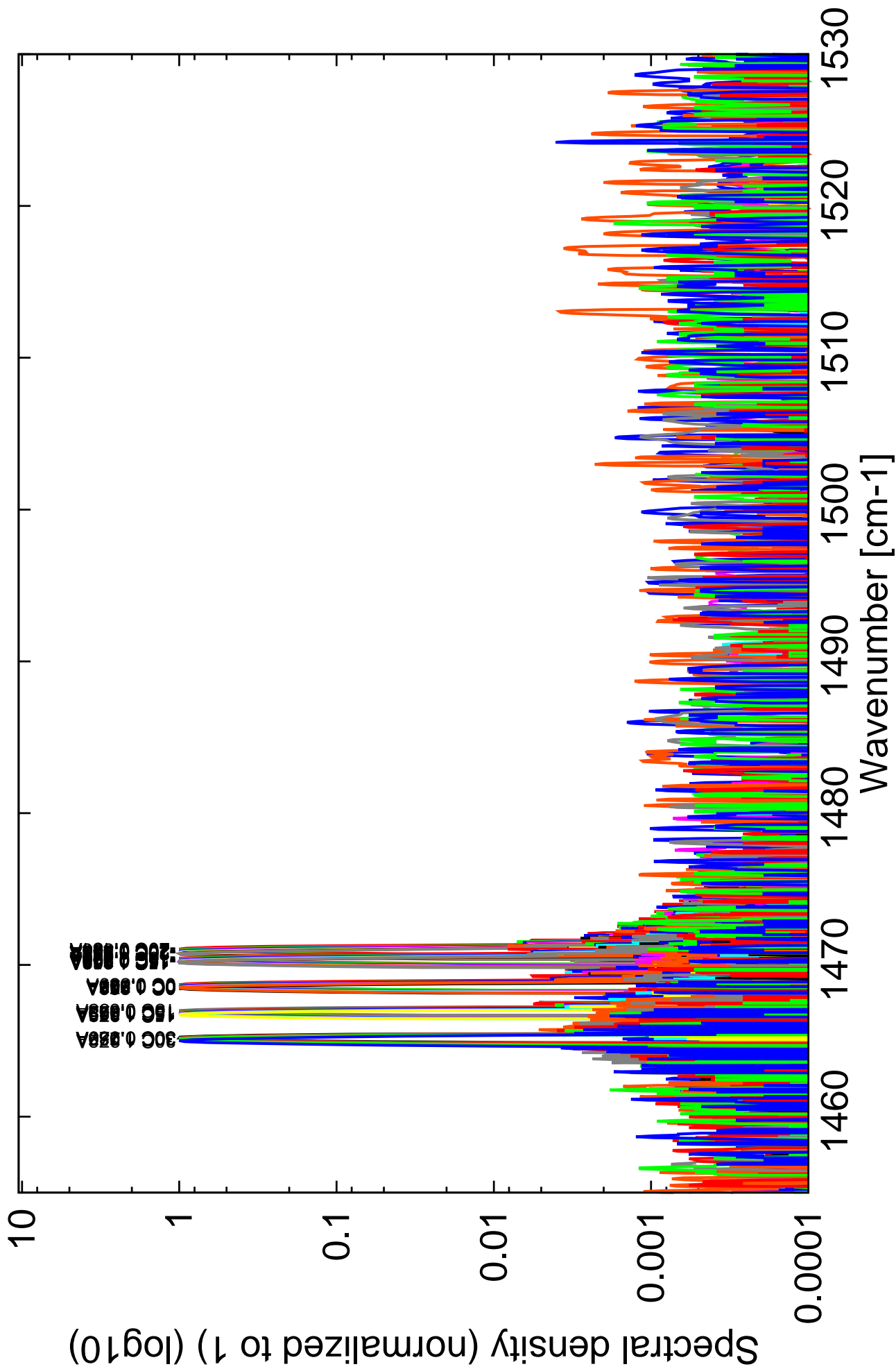


Figure 5: Peak voltage and average power vs peak current at 2% duty-cycle (200ns pulses on the laser) (including the multimode region)

Figure 4: spectra at different temperatures for various peak currents



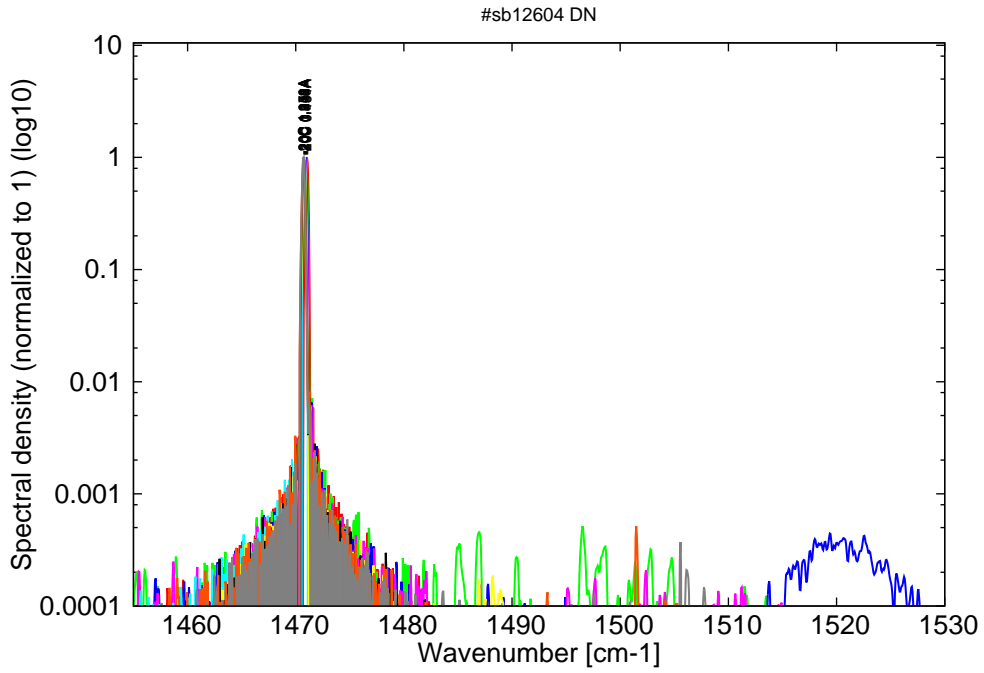


Figure 6: spectra at -20C for various current at 2% duty-cycle (monomode up to 1.15A, then becomes multimode)

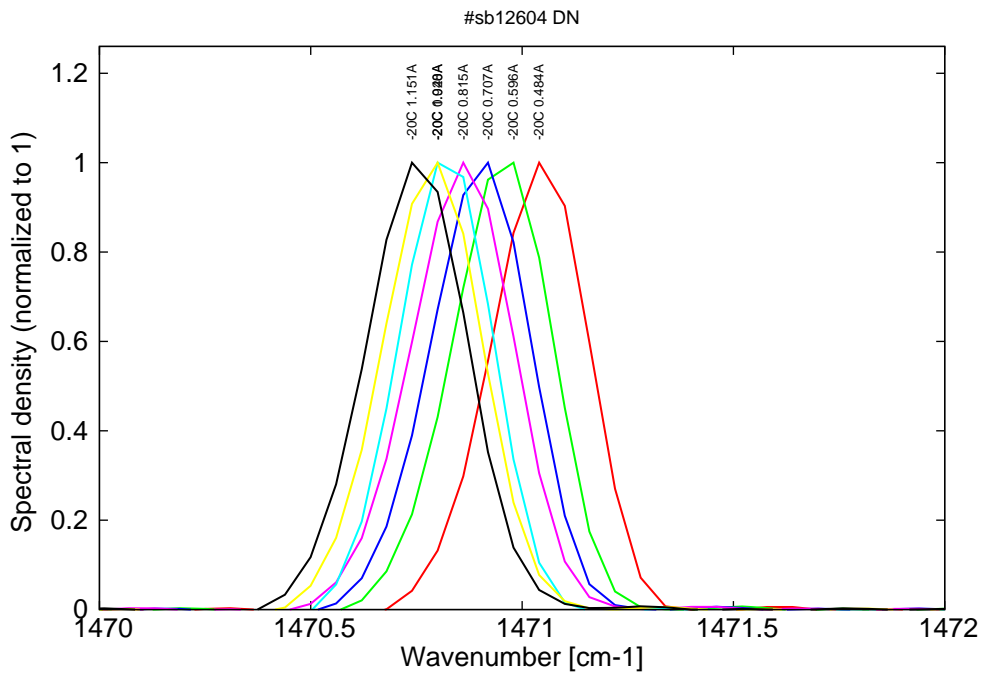


Figure 7: spectra at -20C for various current at 2% duty-cycle (monomode range)

Figure 7: spectra between -15C and 30C for various current at 2% duty-cycle (all monomode)

