

Datasheet for #sb13194 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.

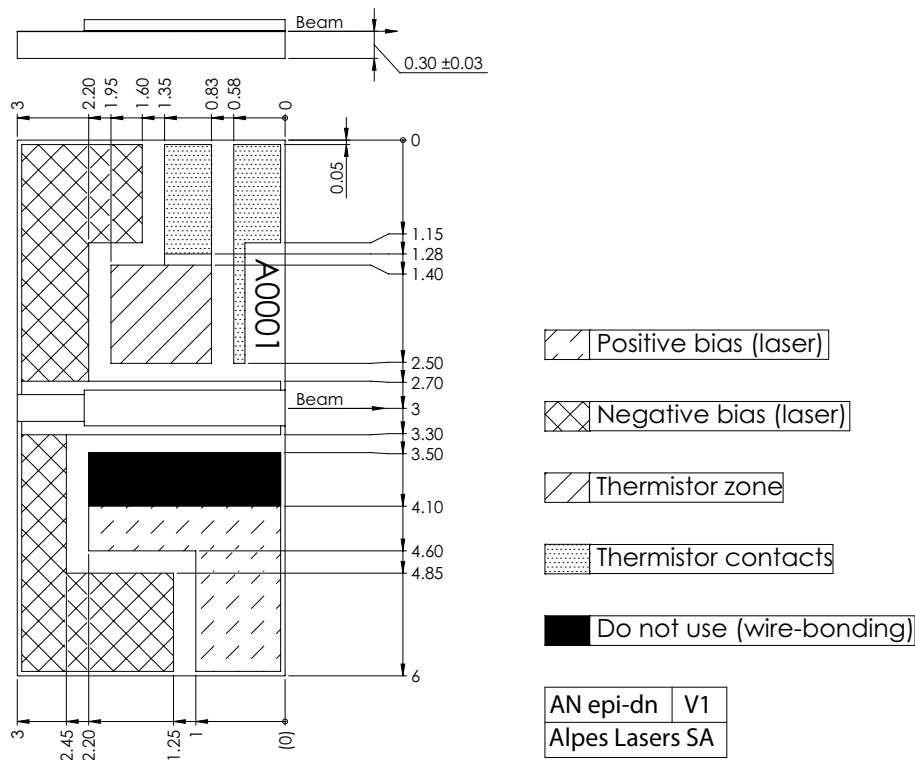


Figure 1: Mechanical and electrical interface for #sb13194 DN (please note that AlN submount numbering is A02AH)

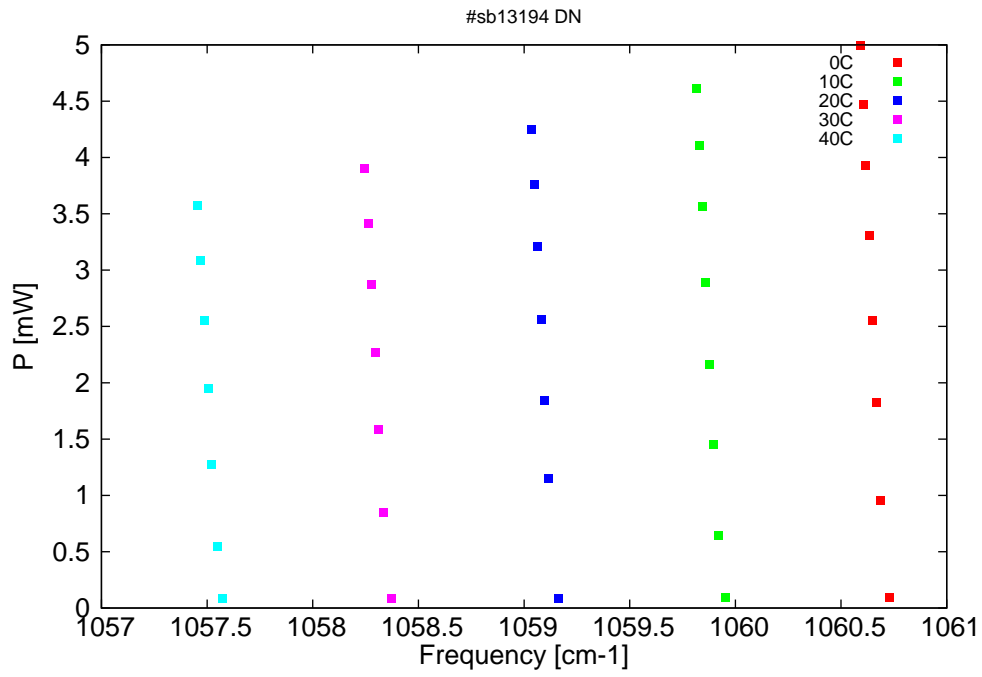


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

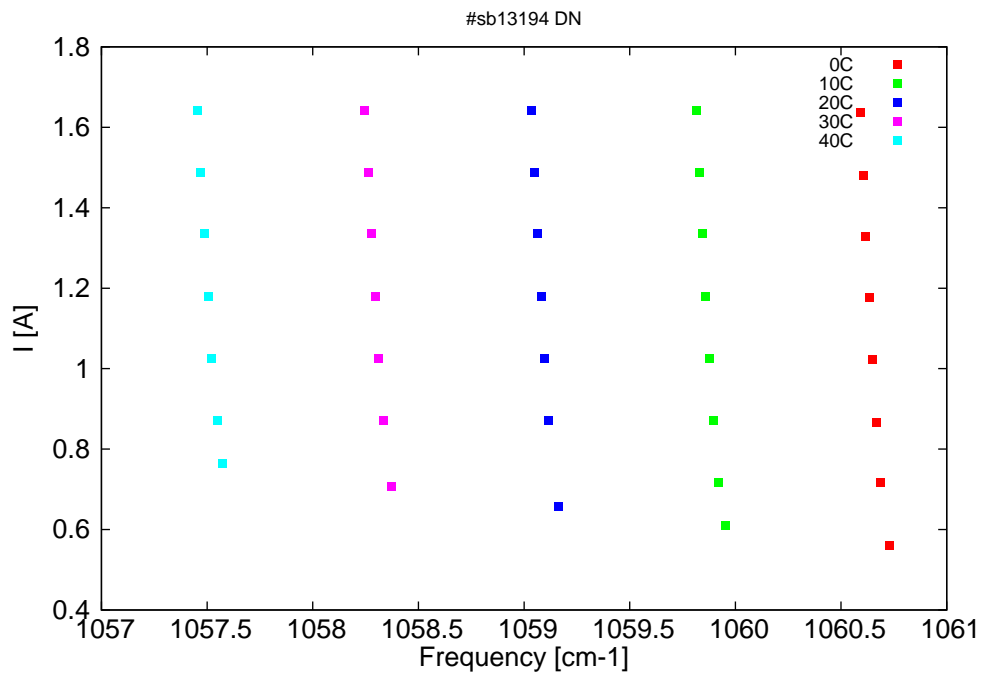


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{pulse}$ [V]	$I_{pulse}$ [A]
9427.5	1060.7	0.1	0	9.1	0.56
9427.9	1060.7	1	0	10.1	0.72
9428	1060.7	1.8	0	10.6	0.87
9428.2	1060.6	2.6	0	11	1.02
9428.3	1060.6	3.3	0	11.4	1.18
9428.5	1060.6	3.9	0	11.7	1.33
9428.6	1060.6	4.5	0	12	1.48
9428.7	1060.6	5	0	12.4	1.64
9434.4	1060	0.1	10	9.2	0.61
9434.7	1059.9	0.6	10	10	0.72
9434.9	1059.9	1.5	10	10.5	0.87
9435.1	1059.9	2.2	10	10.9	1.03
9435.2	1059.9	2.9	10	11.3	1.18
9435.3	1059.8	3.6	10	11.7	1.33
9435.5	1059.8	4.1	10	12	1.49
9435.6	1059.8	4.6	10	12.4	1.64
9441.4	1059.2	0.1	20	9.3	0.66
9441.8	1059.1	1.2	20	10.4	0.87
9442	1059.1	1.8	20	10.8	1.03
9442.1	1059.1	2.6	20	11.2	1.18
9442.3	1059.1	3.2	20	11.6	1.33
9442.4	1059	3.8	20	12	1.49
9442.6	1059	4.3	20	12.3	1.64
9448.5	1058.4	0.1	30	9.4	0.71
9448.8	1058.3	0.9	30	10.3	0.87
9449	1058.3	1.6	30	10.8	1.03
9449.2	1058.3	2.3	30	11.2	1.18
9449.3	1058.3	2.9	30	11.6	1.33
9449.5	1058.3	3.4	30	11.9	1.49
9449.6	1058.2	3.9	30	12.3	1.64
9455.6	1057.6	0.1	40	9.6	0.76
9455.8	1057.5	0.6	40	10.2	0.87
9456.1	1057.5	1.3	40	10.7	1.03
9456.2	1057.5	1.9	40	11.1	1.18
9456.4	1057.5	2.5	40	11.5	1.33
9456.5	1057.5	3.1	40	11.9	1.49
9456.7	1057.5	3.6	40	12.3	1.64

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

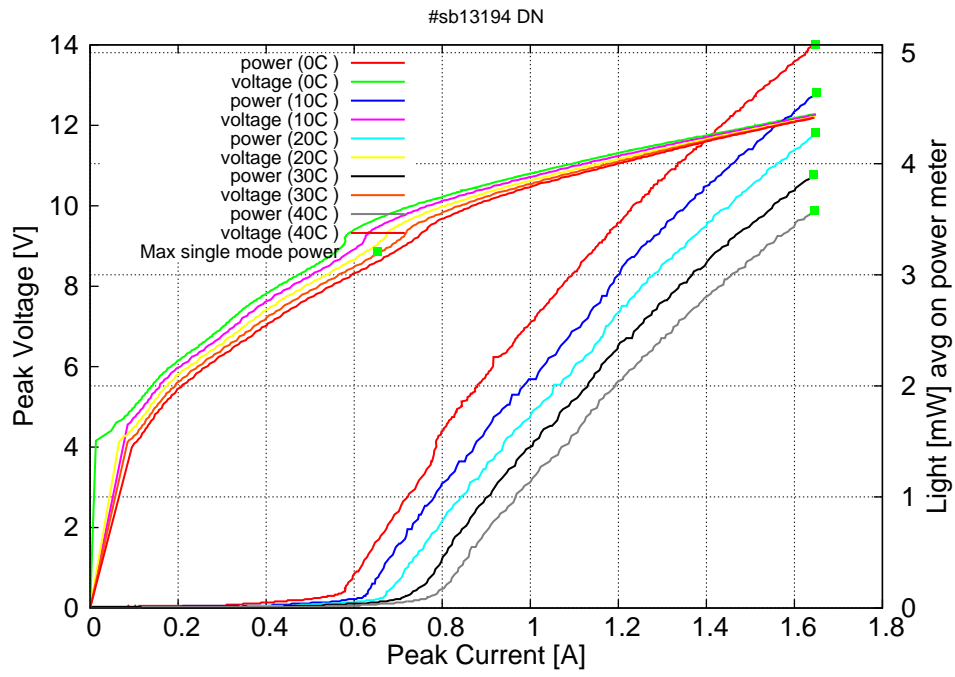
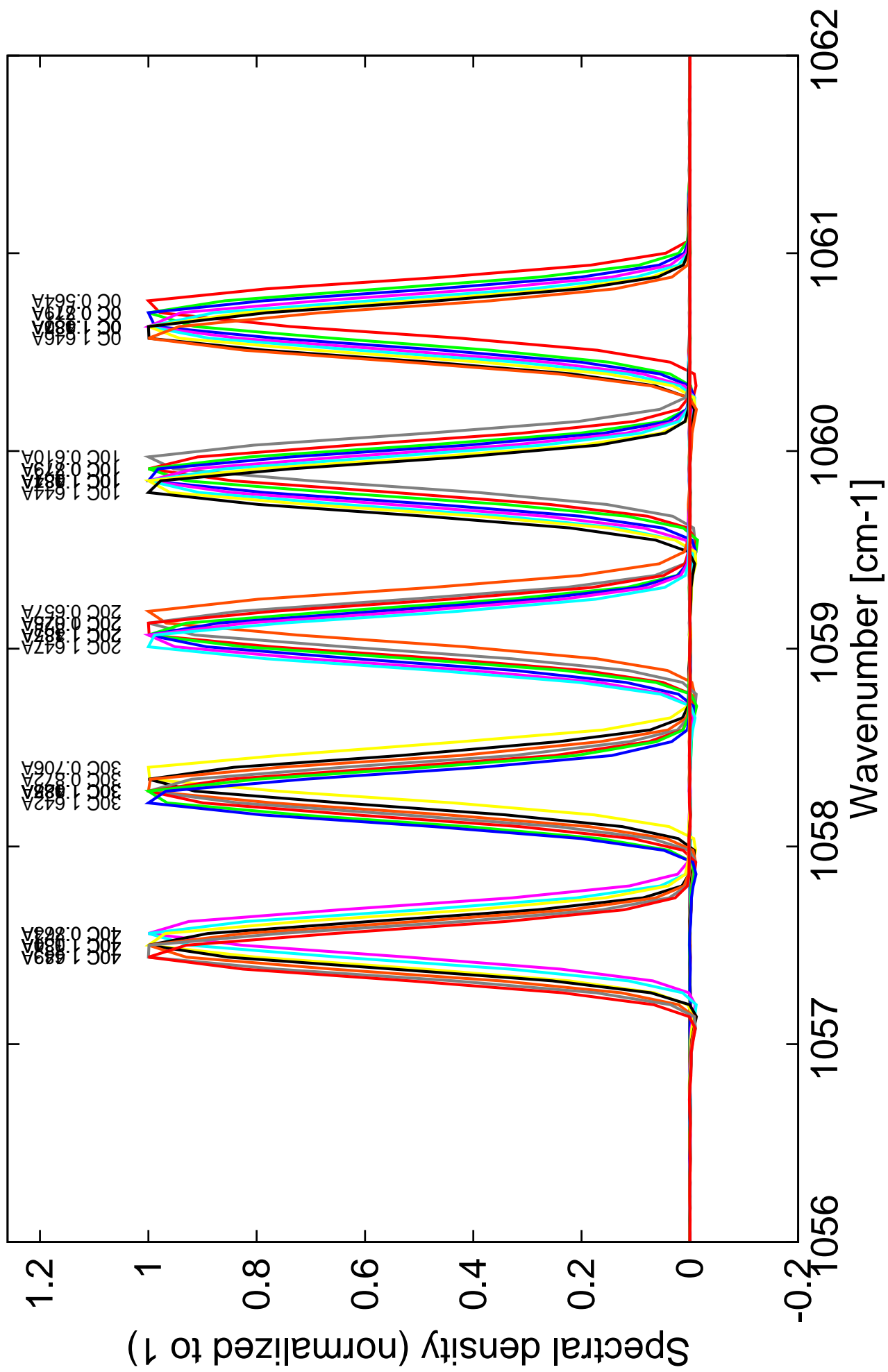


Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (200ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

Figure 3: spectra at different temperatures for various peak currents



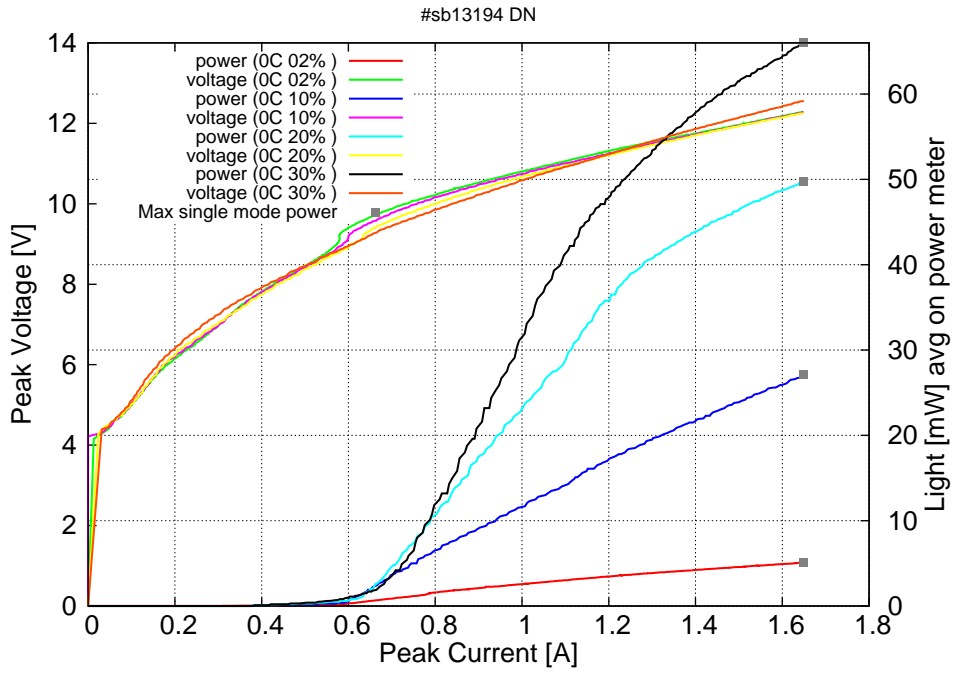


Figure 5: Peak voltage and average power vs peak current for various duty-cycles at 0C (200ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

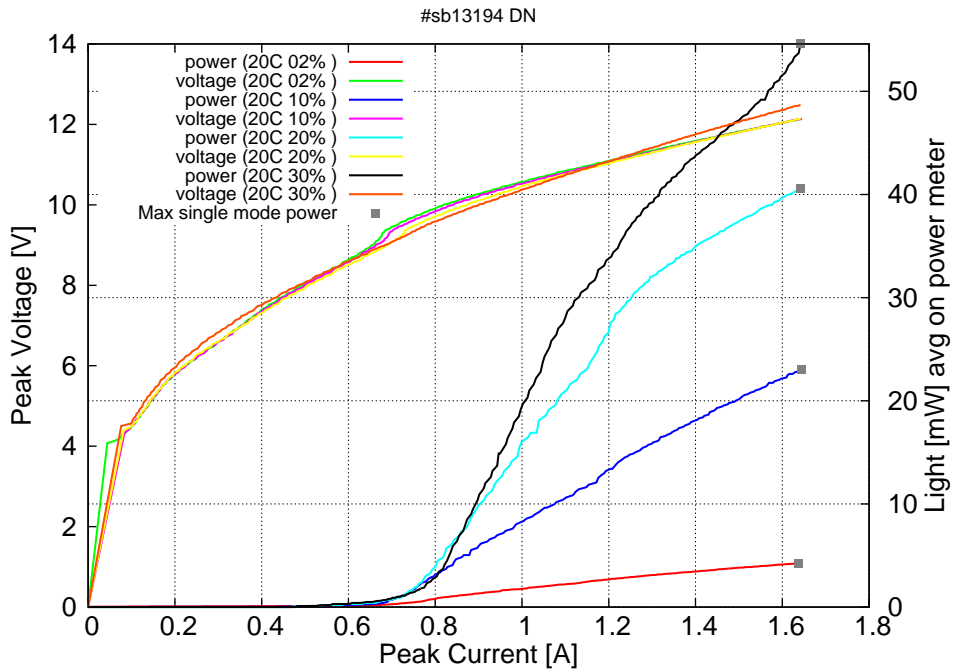


Figure 6: Peak voltage and average power vs peak current for various duty-cycles at 20C (200ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

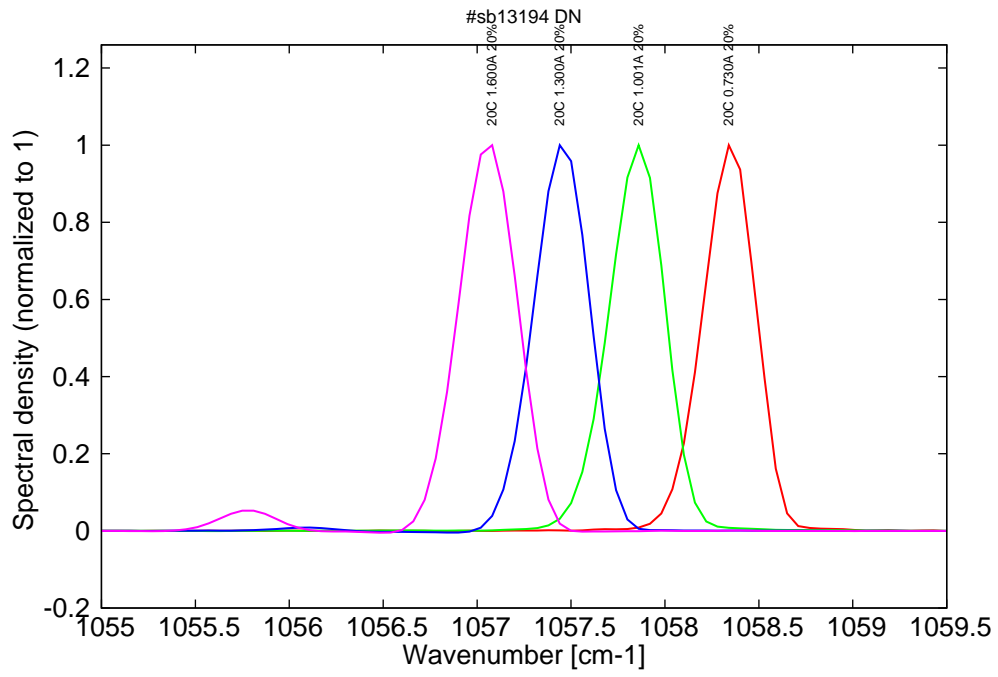


Figure 7: spectra at 20C and 20% duty-cycle (100ns pulses on the laser). monomode up to 1A, then becomes bimode