

Datasheet for #sbcw12320 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 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 #sbcw12320 DN

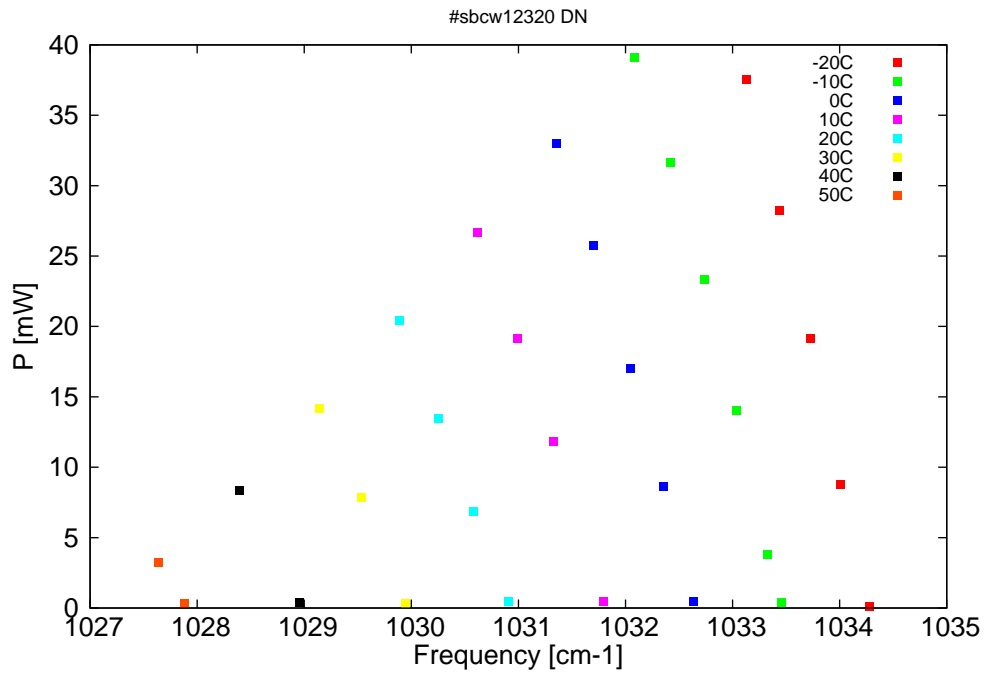


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

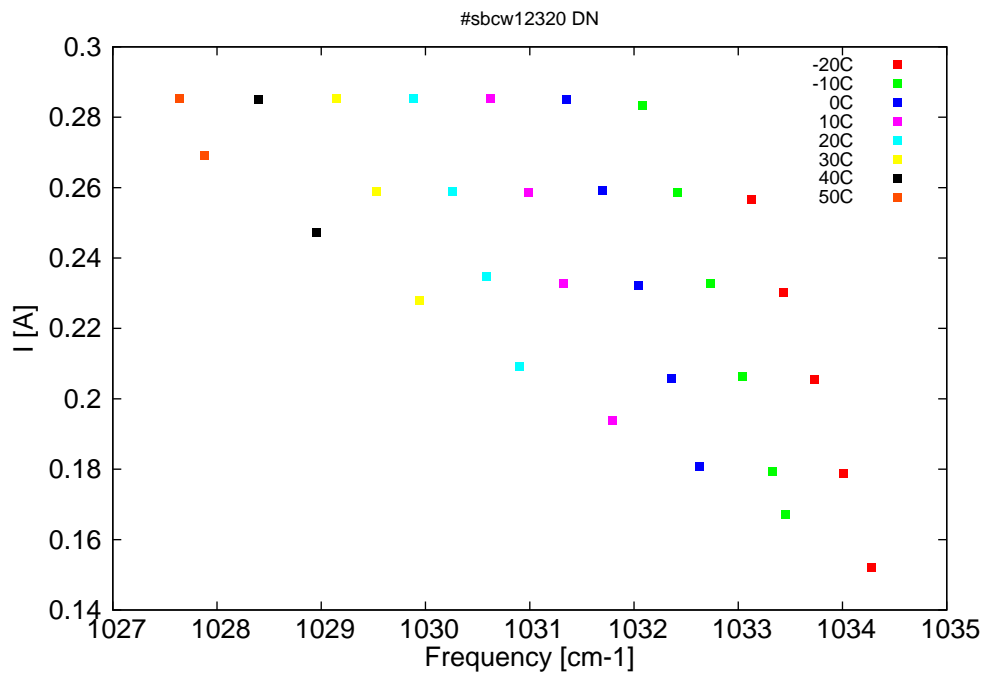


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9668.5	1034.3	0.1	-20	9.1	0.15
9671.1	1034	8.8	-20	9.5	0.18
9673.7	1033.7	19.1	-20	9.8	0.21
9676.5	1033.4	28.2	-20	10.1	0.23
9679.3	1033.1	37.6	-20	10.4	0.26
9676.3	1033.5	0.4	-10	9.2	0.17
9677.5	1033.3	3.8	-10	9.4	0.18
9680.2	1033	14.1	-10	9.7	0.21
9683	1032.7	23.3	-10	10	0.23
9686	1032.4	31.6	-10	10.3	0.26
9689.2	1032.1	39.1	-10	10.6	0.28
9684	1032.6	0.5	0	9.3	0.18
9686.6	1032.4	8.6	0	9.6	0.21
9689.5	1032	17	0	9.9	0.23
9692.7	1031.7	25.7	0	10.3	0.26
9696	1031.4	33	0	10.6	0.29
9691.9	1031.8	0.5	10	9.4	0.19
9696.2	1031.3	11.8	10	9.8	0.23
9699.4	1031	19.2	10	10.2	0.26
9702.9	1030.6	26.7	10	10.5	0.29
9700.2	1030.9	0.4	20	9.5	0.21
9703.2	1030.6	6.8	20	9.8	0.23
9706.3	1030.3	13.5	20	10.1	0.26
9709.8	1029.9	20.4	20	10.4	0.29
9709.3	1029.9	0.3	30	9.6	0.23
9713.2	1029.5	7.8	30	10	0.26
9716.8	1029.1	14.2	30	10.3	0.29
9718.6	1029	0.4	40	9.8	0.25
9723.9	1028.4	8.4	40	10.2	0.29
9728.7	1027.9	0.4	50	10	0.27
9731	1027.6	3.2	50	10.2	0.29

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

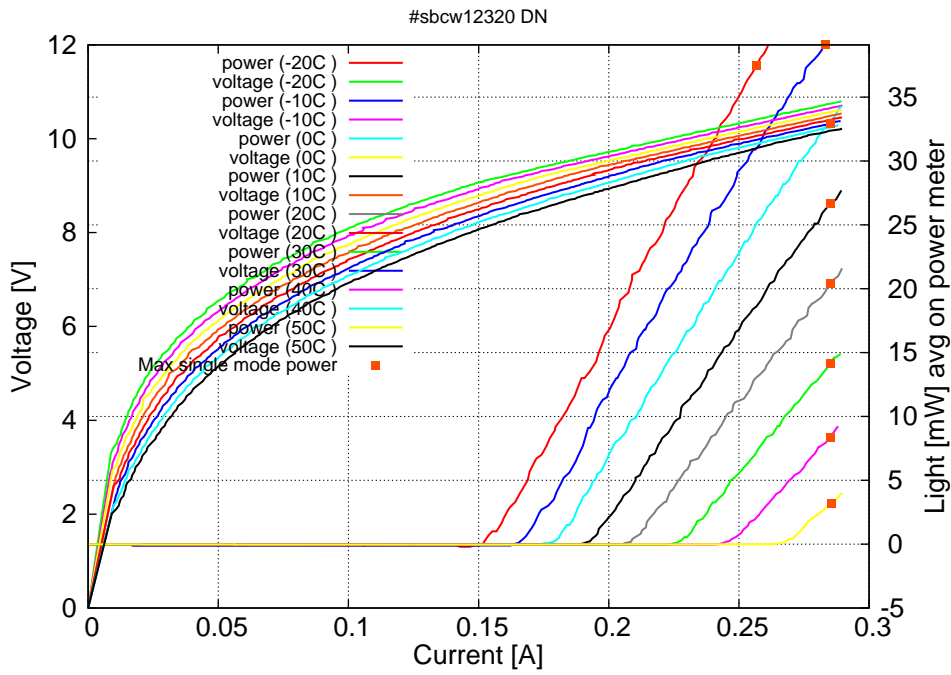


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

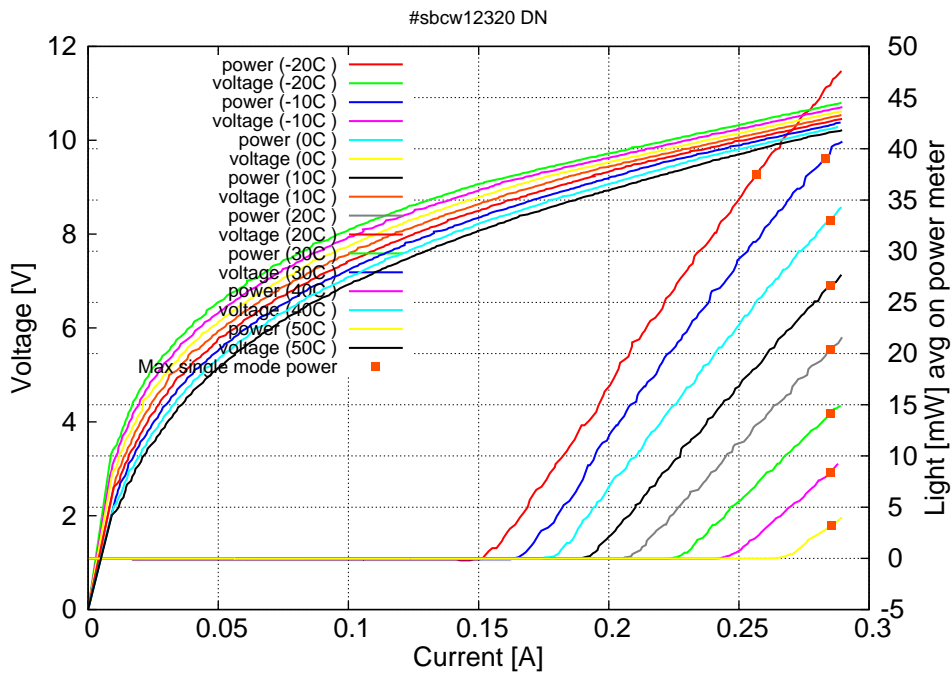
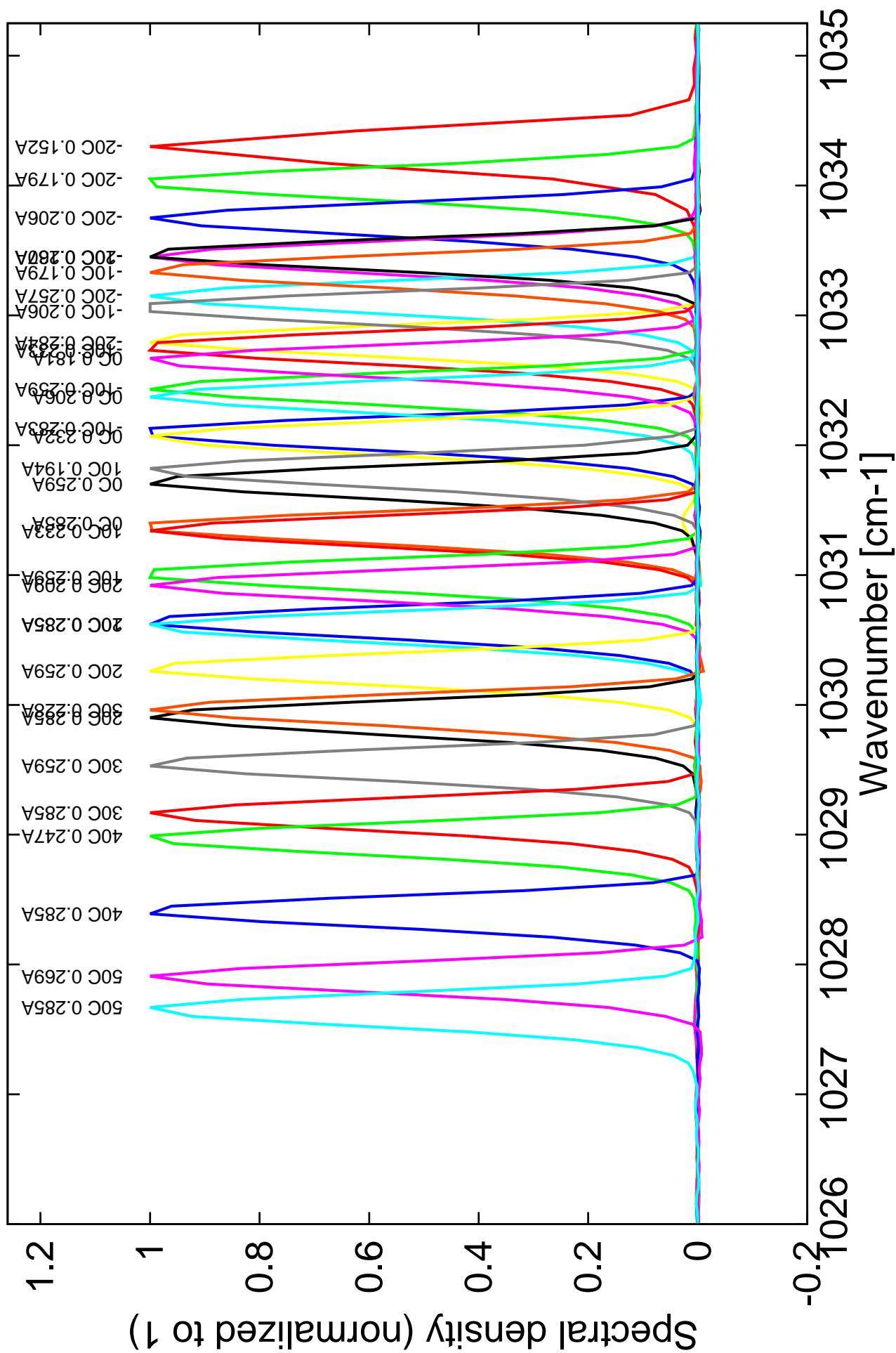


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 4: spectra at different temperatures for various DC currents



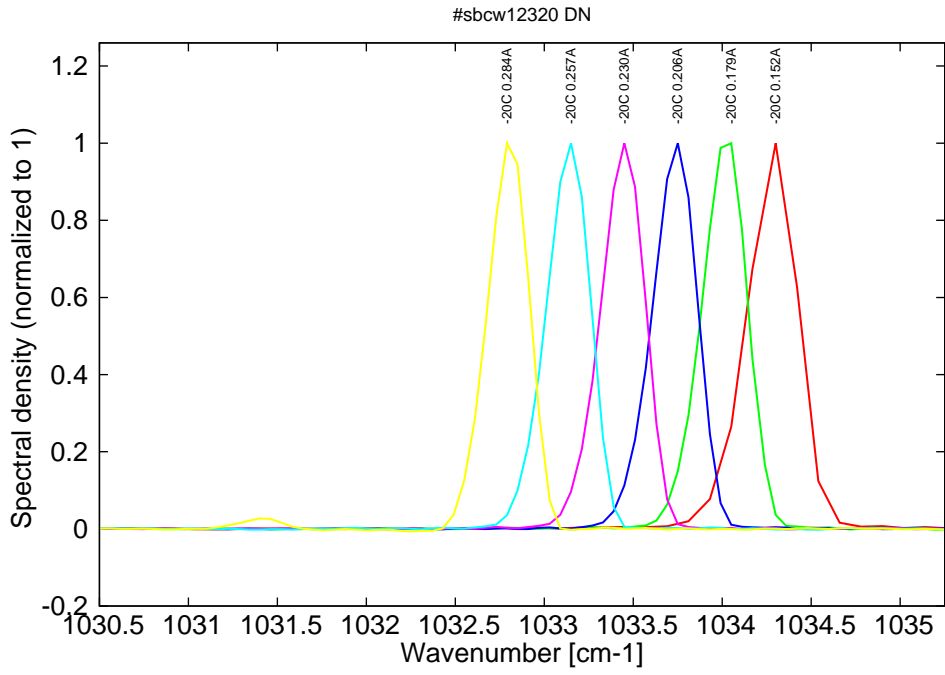


Figure 6: Spectra at -20C for various currents, monomode up to 0.257A then becomes bimode

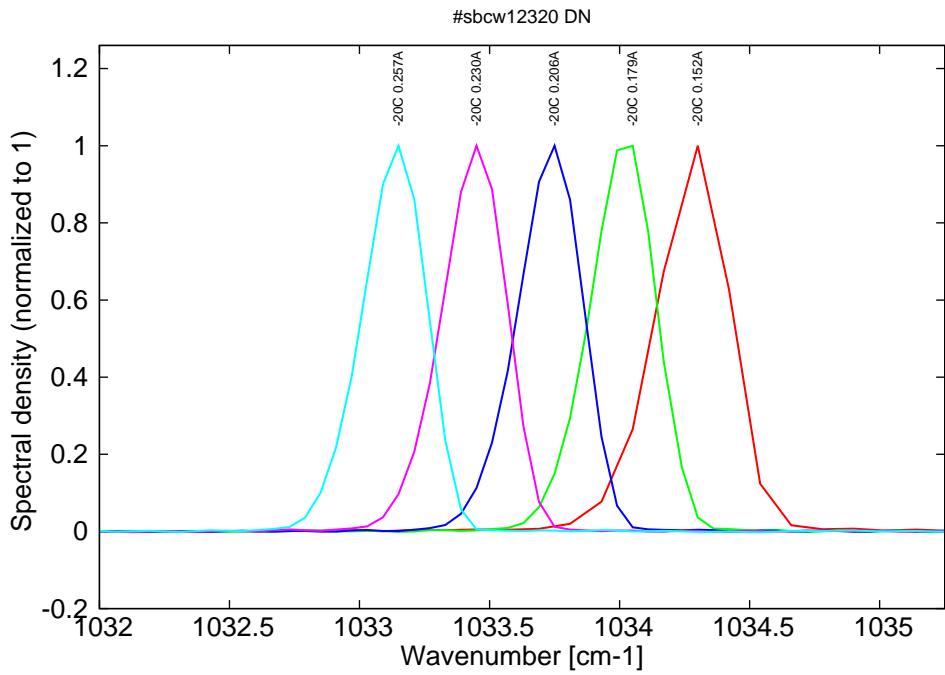


Figure 7: Spectra at -20C for various currents, monomode range

Figure 7: Spectra from -10C to 50C, all monomode

