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Datasheet for #sbcw24908 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 bias and positive bias on the specific zones drawn below. To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.

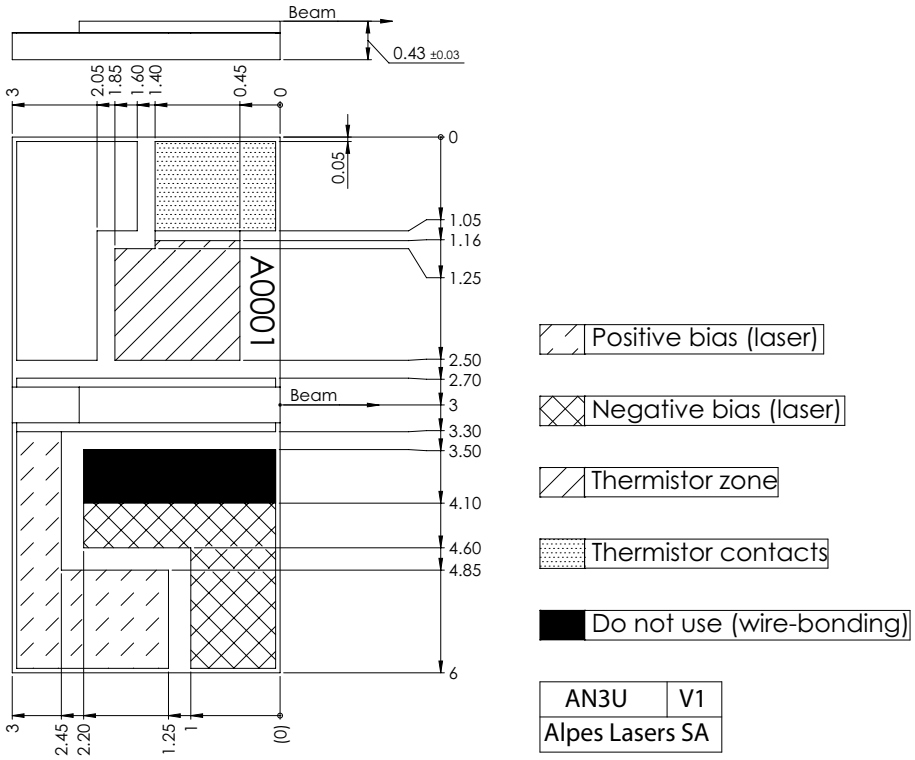

Figure 1: Mechanical and electrical interface for #sbcw24908 DN (please note that AlN submount numbering is A114F)

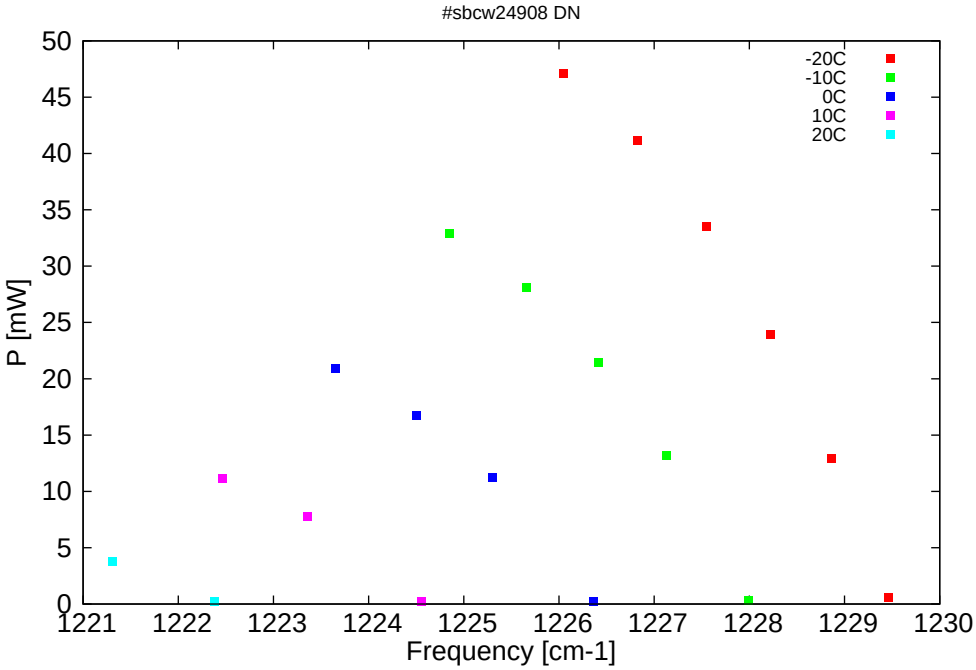

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

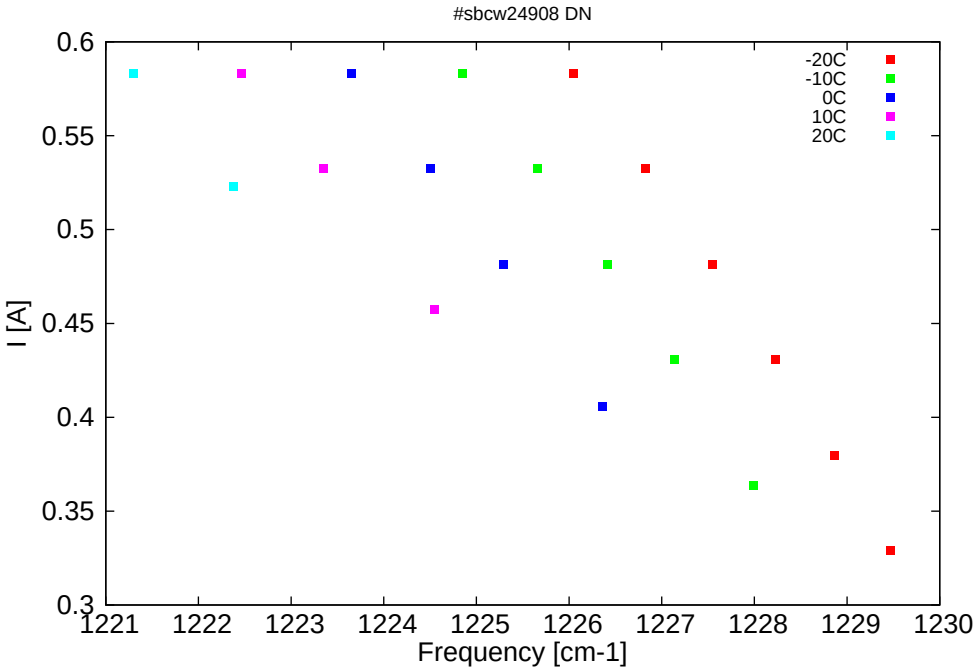

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
8133.6	1229.5	0.6	-20	7.47	0.329
8137.6	1228.9	12.9	-20	7.62	0.38
8141.8	1228.2	23.9	-20	7.77	0.431
8146.3	1227.6	33.5	-20	7.92	0.482
8151.1	1226.8	41.2	-20	8.08	0.532
8156.3	1226.1	47.1	-20	8.24	0.583
8143.4	1228	0.3	-10	7.51	0.364
8149.1	1227.1	13.2	-10	7.72	0.431
8153.8	1226.4	21.5	-10	7.88	0.482
8158.9	1225.7	28.1	-10	8.04	0.532
8164.3	1224.9	32.9	-10	8.2	0.583
8154.2	1226.4	0.2	0	7.6	0.406
8161.3	1225.3	11.2	0	7.84	0.482
8166.6	1224.5	16.8	0	8.01	0.532
8172.3	1223.7	20.9	0	8.17	0.583
8166.3	1224.6	0.2	10	7.72	0.458
8174.3	1223.4	7.7	10	7.96	0.532
8180.2	1222.5	11.1	10	8.14	0.583
8180.8	1222.4	0.2	20	7.89	0.523
8188	1221.3	3.8	20	8.1	0.583

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

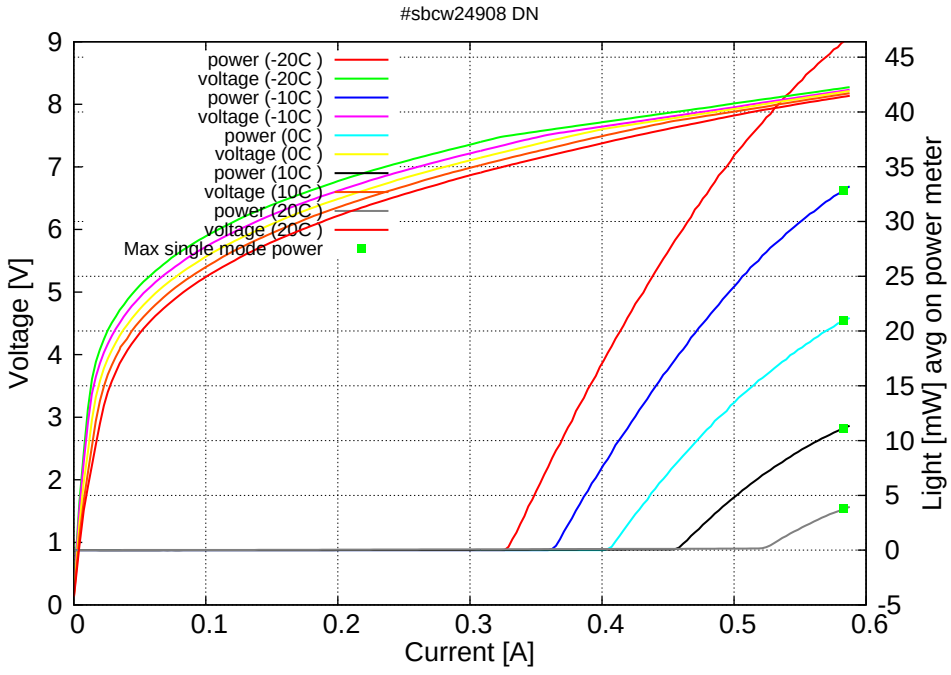

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.32A / Vth=7.45V (2-wires measurements). Maximum operation current: 0.590A for all temperatures.

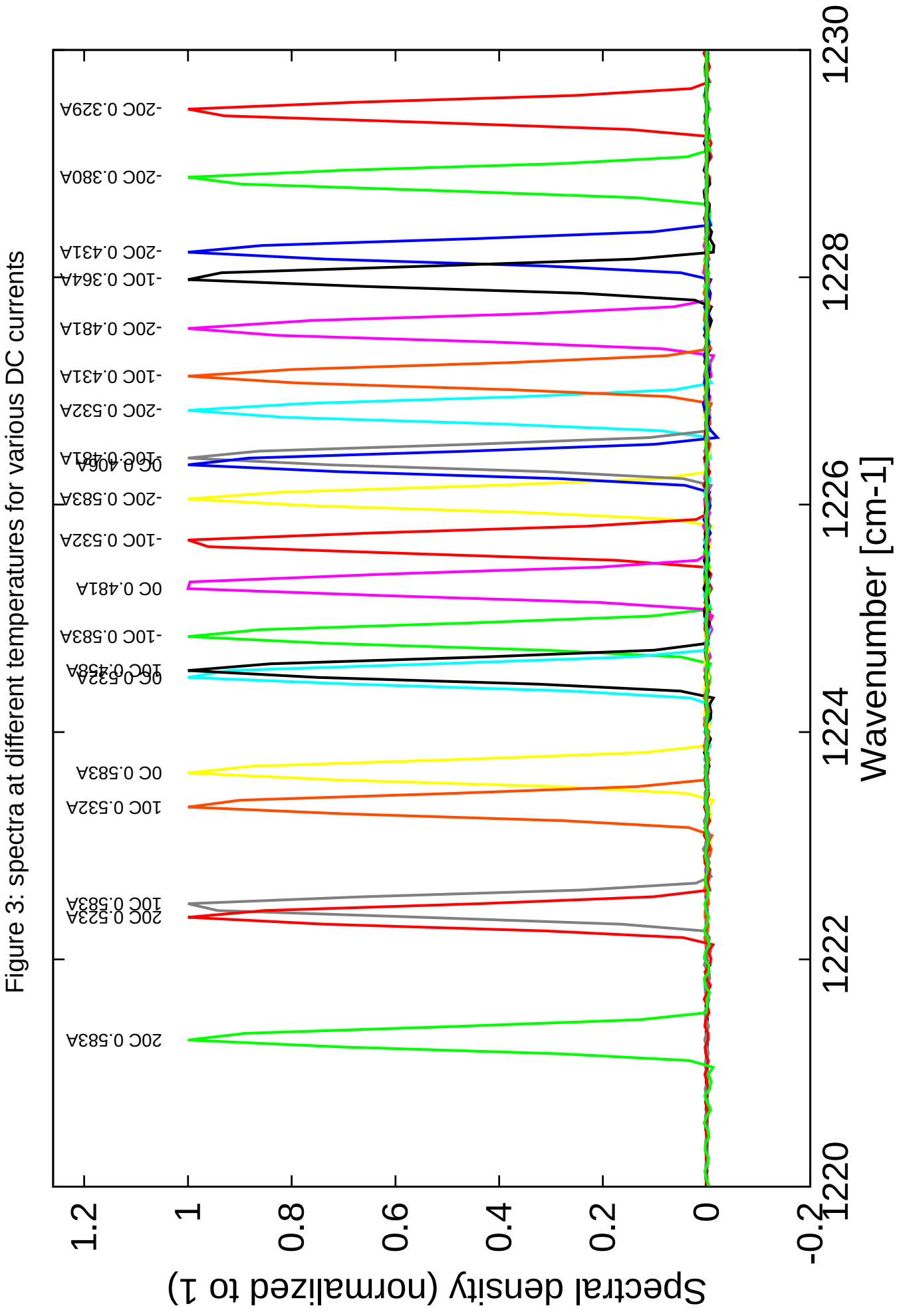

Figure 3: spectra at different temperatures for various DC currents