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Datasheet for #sbcw24308 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 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.

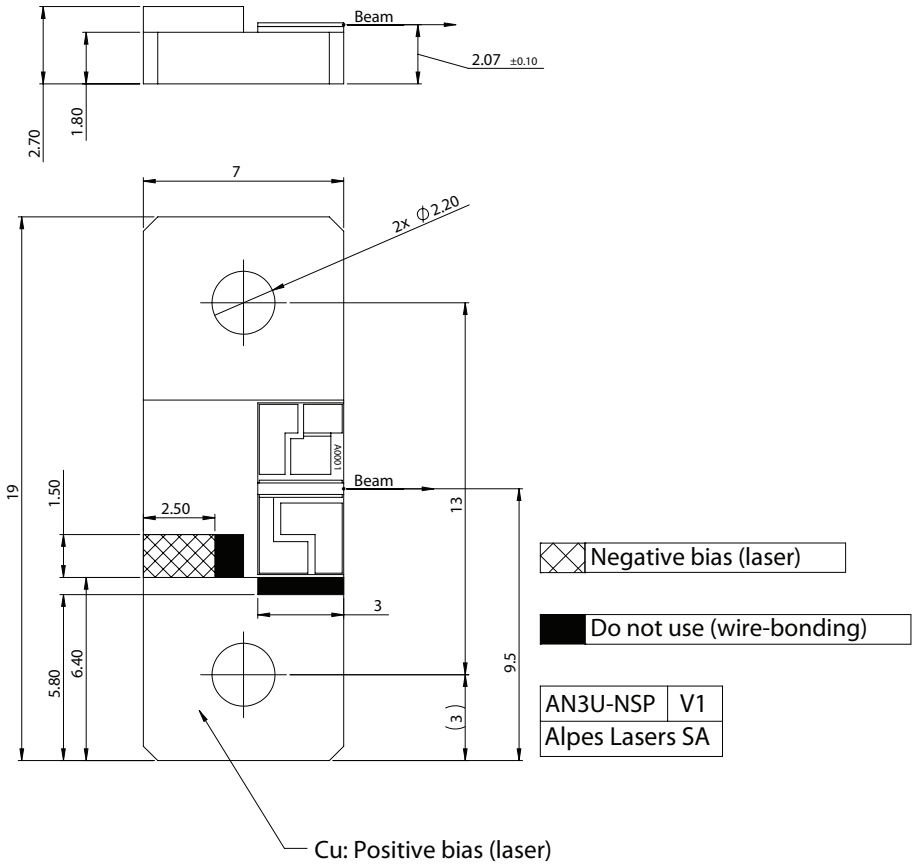

Figure 1: Mechanical and electrical interface for #sbcw24308 DN

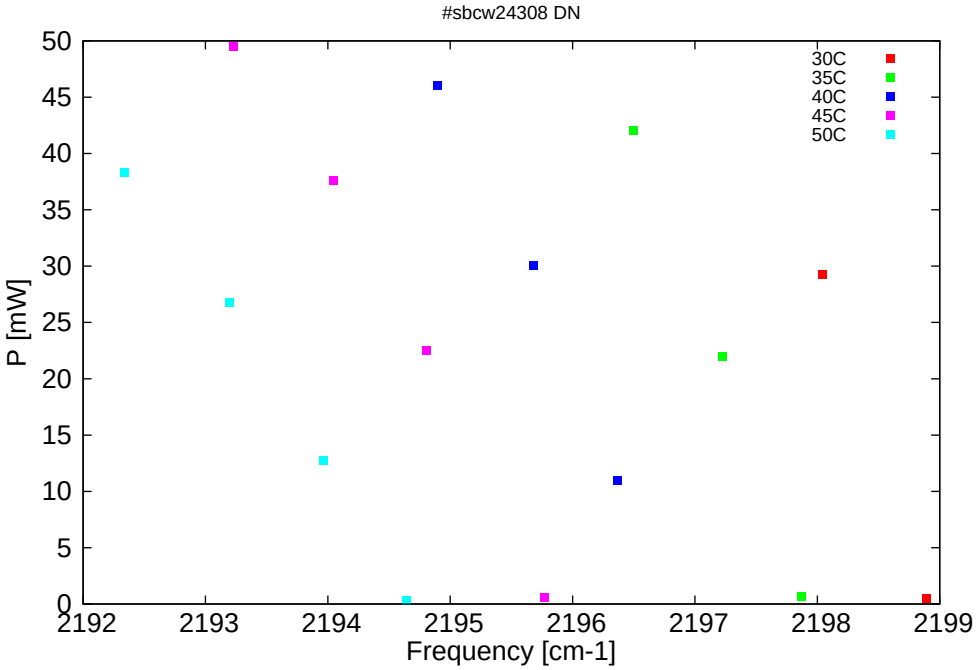

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

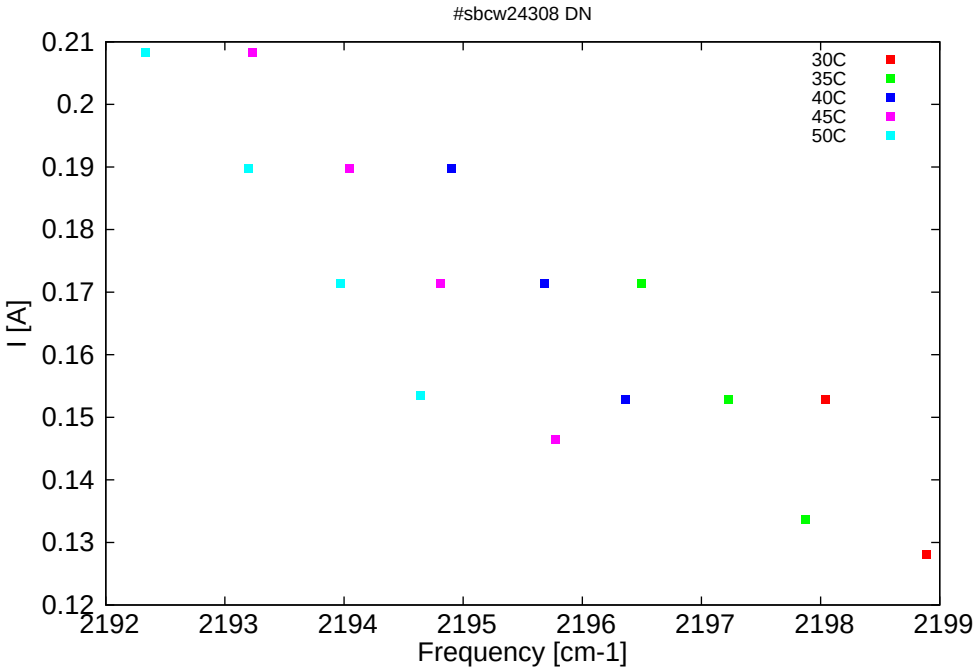

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
4547.7	2198.9	0.5	30	11.58	0.128
4549.5	2198	29.3	30	11.82	0.153
4549.9	2197.9	0.7	35	11.63	0.134
4551.2	2197.2	22	35	11.81	0.153
4552.7	2196.5	42	35	12	0.171
4553	2196.4	11	40	11.8	0.153
4554.4	2195.7	30	40	11.99	0.171
4556	2194.9	46.1	40	12.18	0.19
4554.2	2195.8	0.6	45	11.75	0.147
4556.2	2194.8	22.5	45	11.98	0.171
4557.8	2194	37.6	45	12.17	0.19
4559.5	2193.2	49.5	45	12.37	0.208
4556.5	2194.6	0.3	50	11.81	0.154
4558	2194	12.7	50	11.97	0.171
4559.6	2193.2	26.8	50	12.16	0.19
4561.3	2192.3	38.3	50	12.36	0.208

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

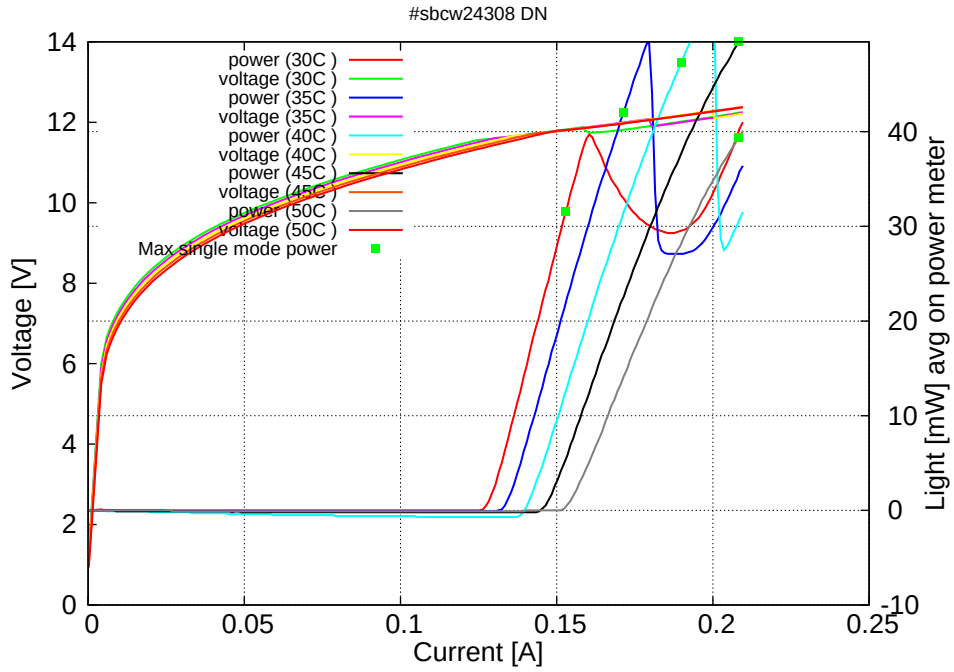

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 30C: Ith=0.13A / Vth=11.6V (2-wires measurements). Maximum operation current: 0.155A at 30C, 0.17A at 35C, 0.19A at 40C, 0.21A between 45C and 50C.

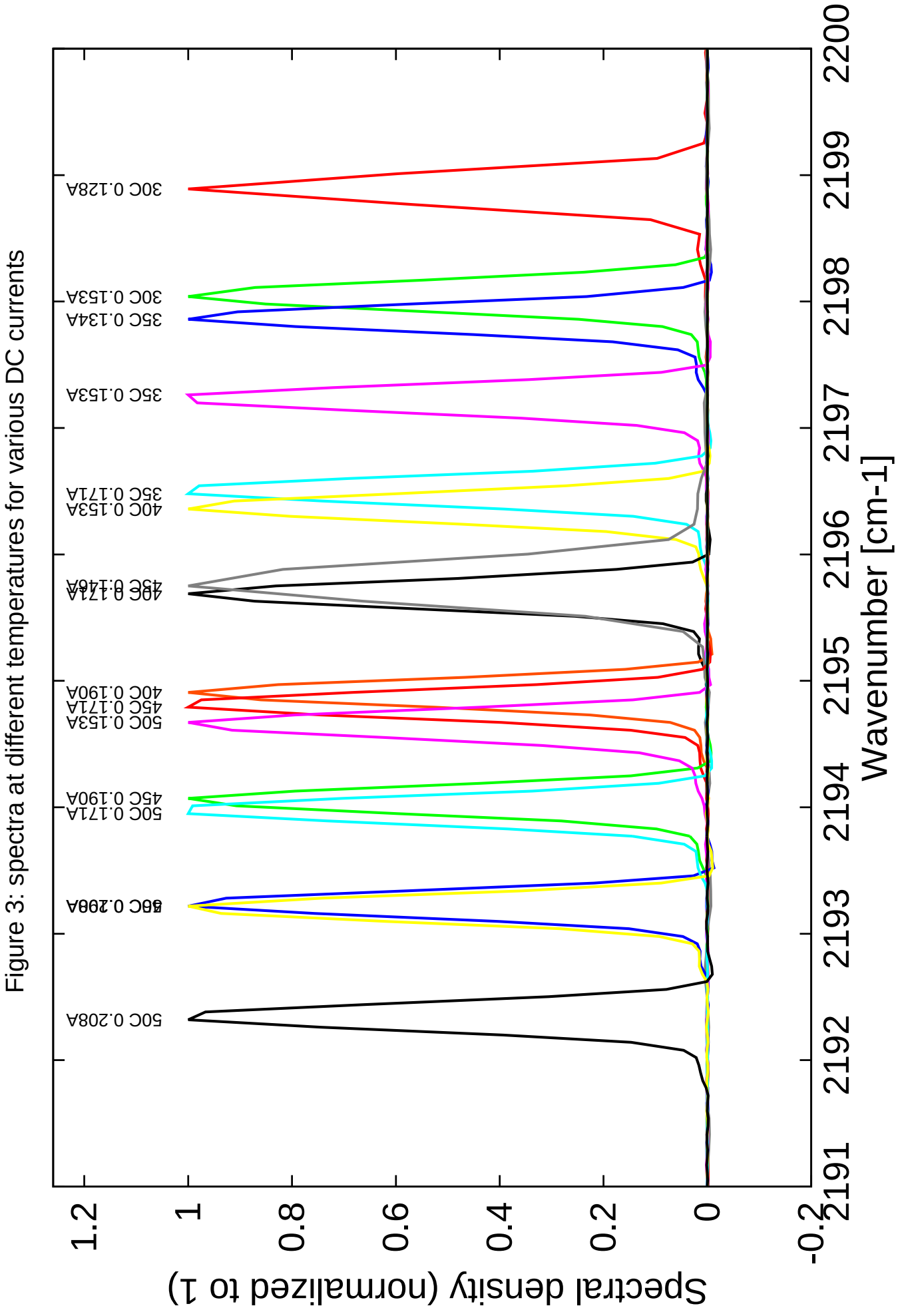

Figure 3: spectra at different temperatures for various DC currents