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Datasheet for #sbcw16316 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.

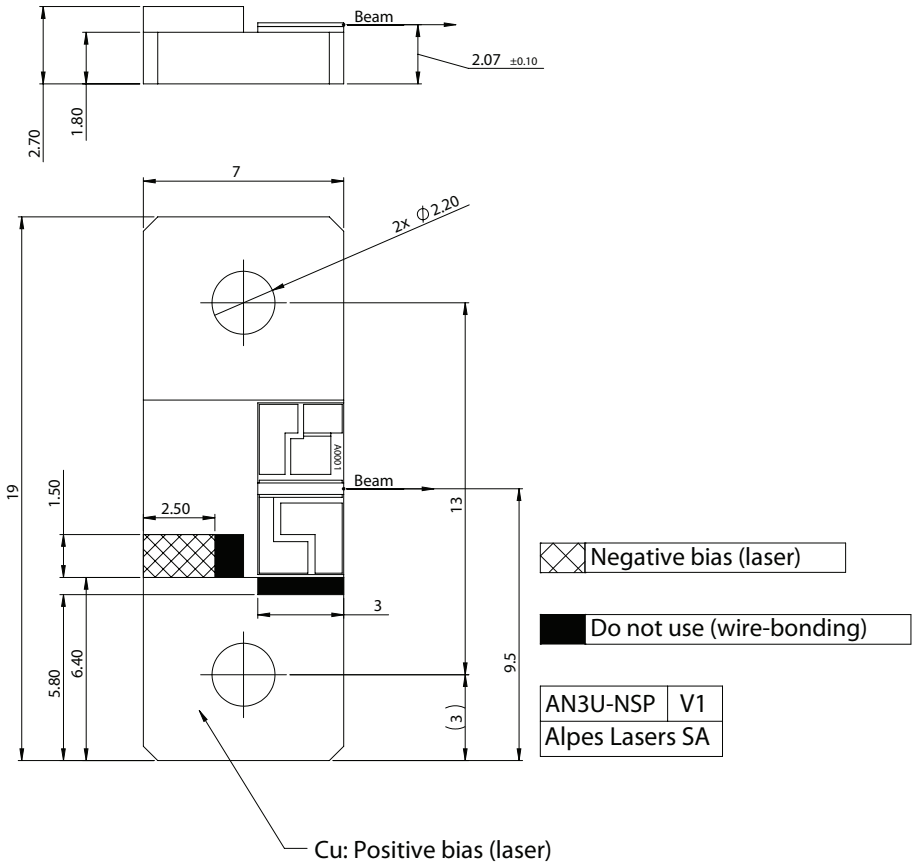

Figure 1: Mechanical and electrical interface for #sbcw16316 DN

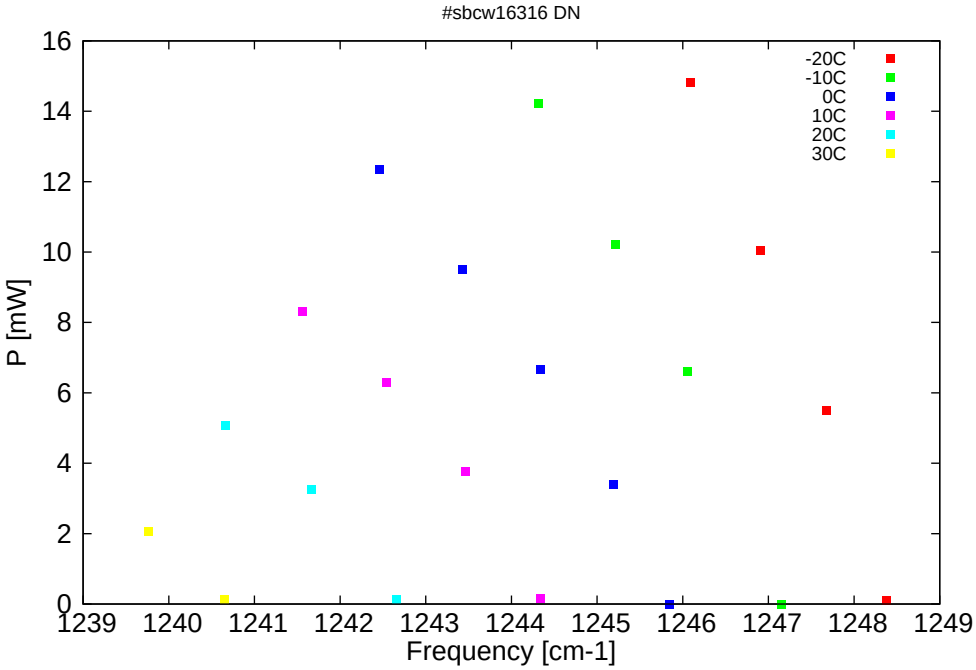

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

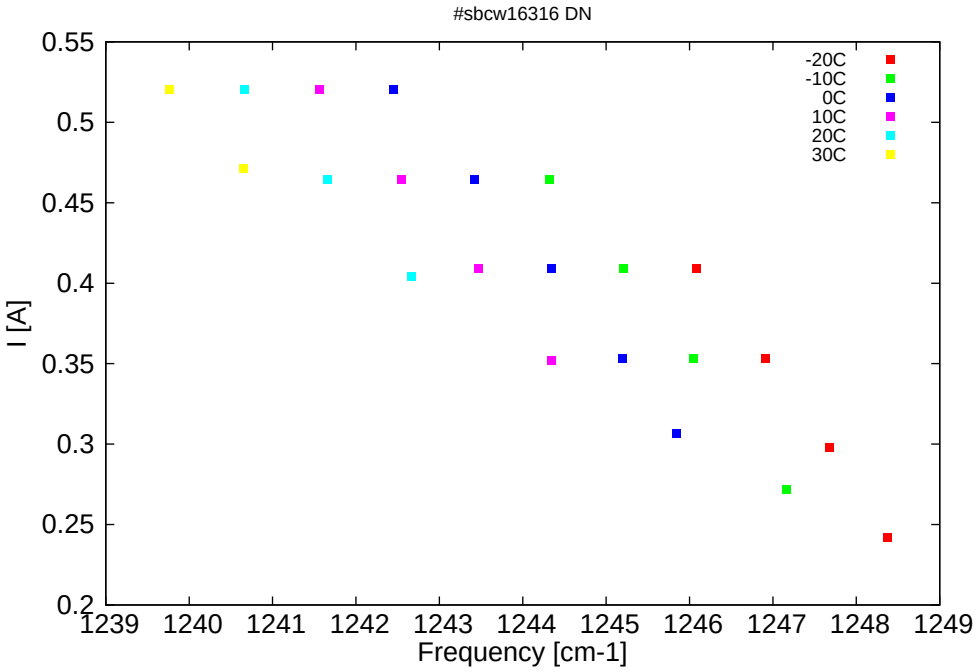

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
8010.4	1248.4	0.1	-20	7.15	0.242
8014.9	1247.7	5.5	-20	7.35	0.298
8019.8	1246.9	10.1	-20	7.54	0.353
8025.1	1246.1	14.8	-20	7.74	0.409
8018.2	1247.2	0	-10	7.19	0.272
8025.3	1246.1	6.6	-10	7.48	0.353
8030.8	1245.2	10.2	-10	7.68	0.409
8036.5	1244.3	14.2	-10	7.87	0.465
8026.7	1245.8	0	0	7.25	0.307
8030.9	1245.2	3.4	0	7.42	0.353
8036.4	1244.3	6.7	0	7.61	0.409
8042.3	1243.4	9.5	0	7.81	0.465
8048.6	1242.5	12.4	0	8.02	0.52
8036.4	1244.3	0.1	10	7.34	0.352
8042	1243.5	3.8	10	7.55	0.409
8048	1242.5	6.3	10	7.75	0.465
8054.4	1241.6	8.3	10	7.95	0.52
8047.3	1242.7	0.1	20	7.47	0.404
8053.7	1241.7	3.3	20	7.69	0.465
8060.2	1240.7	5.1	20	7.89	0.52
8060.3	1240.7	0.1	30	7.65	0.471
8066.1	1239.8	2.1	30	7.83	0.52

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

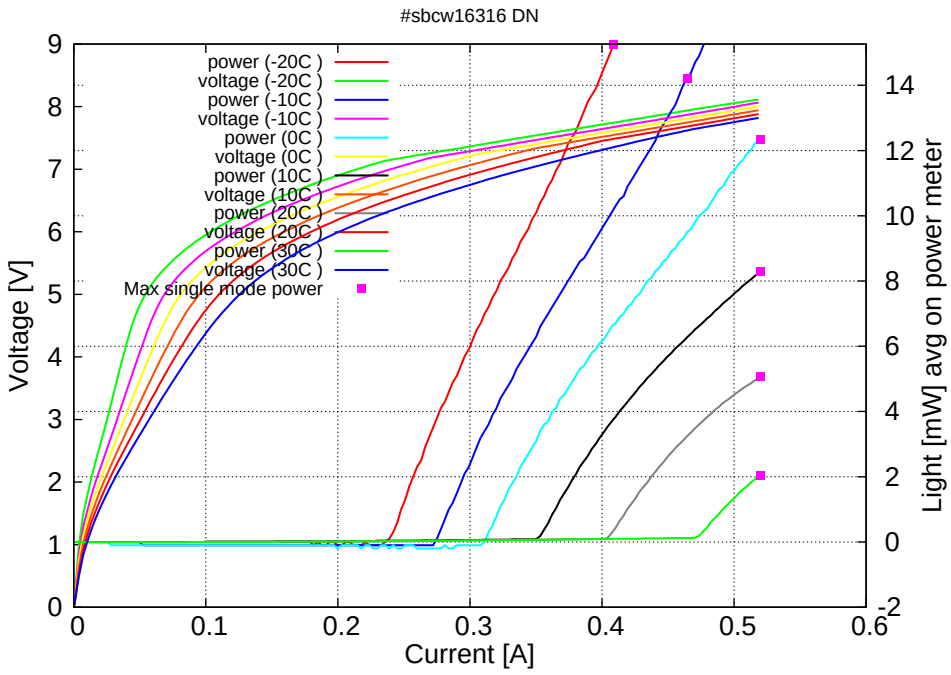

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.23A / Vth=7.1V (2-wires measurements). Maximum operation current: 0.41A at -20C, 0.465A at -10C, 0.52A between 0C and 30C.

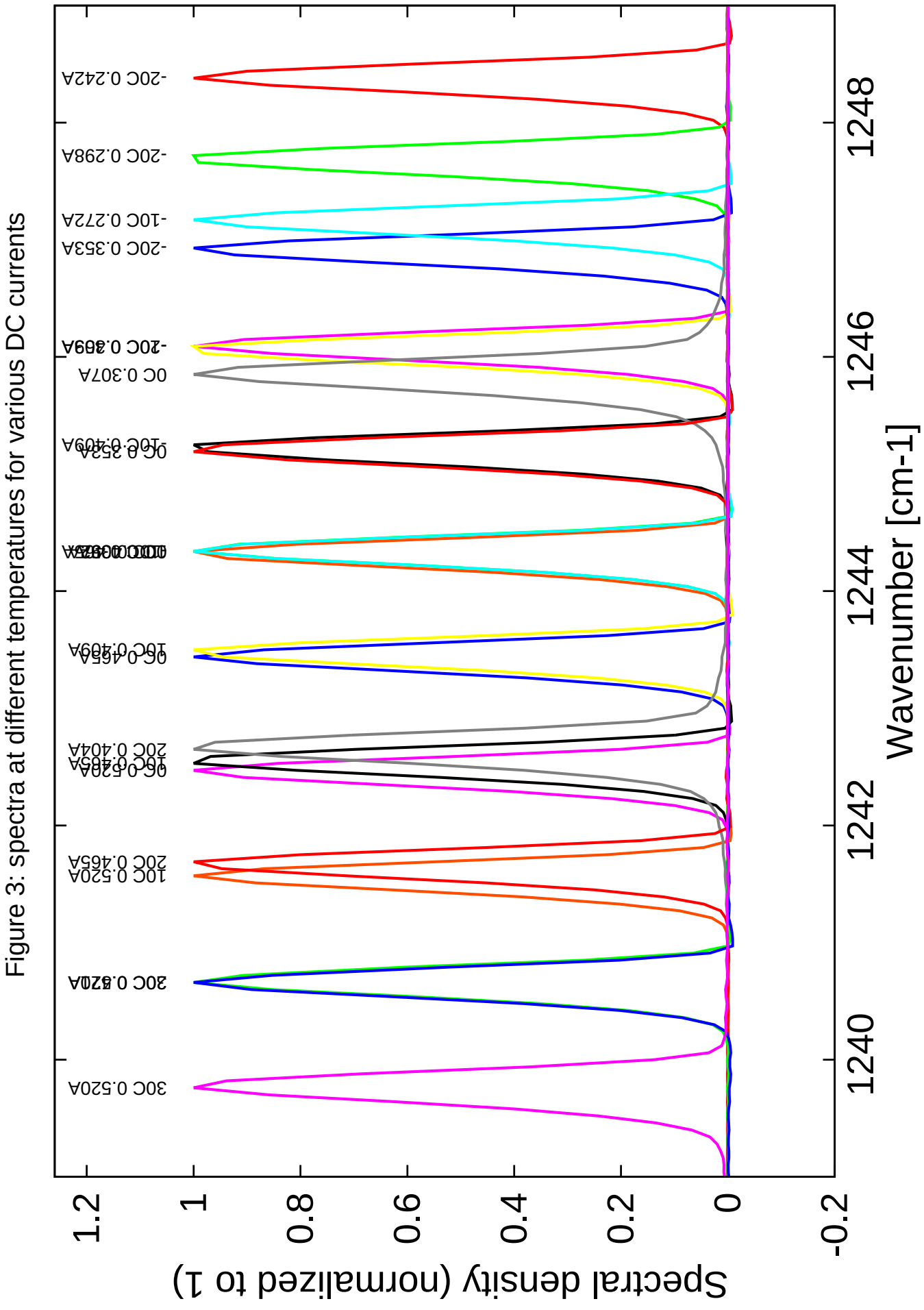

Figure 3: spectra at different temperatures for various DC currents