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Datasheet for #sbcw8505 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.

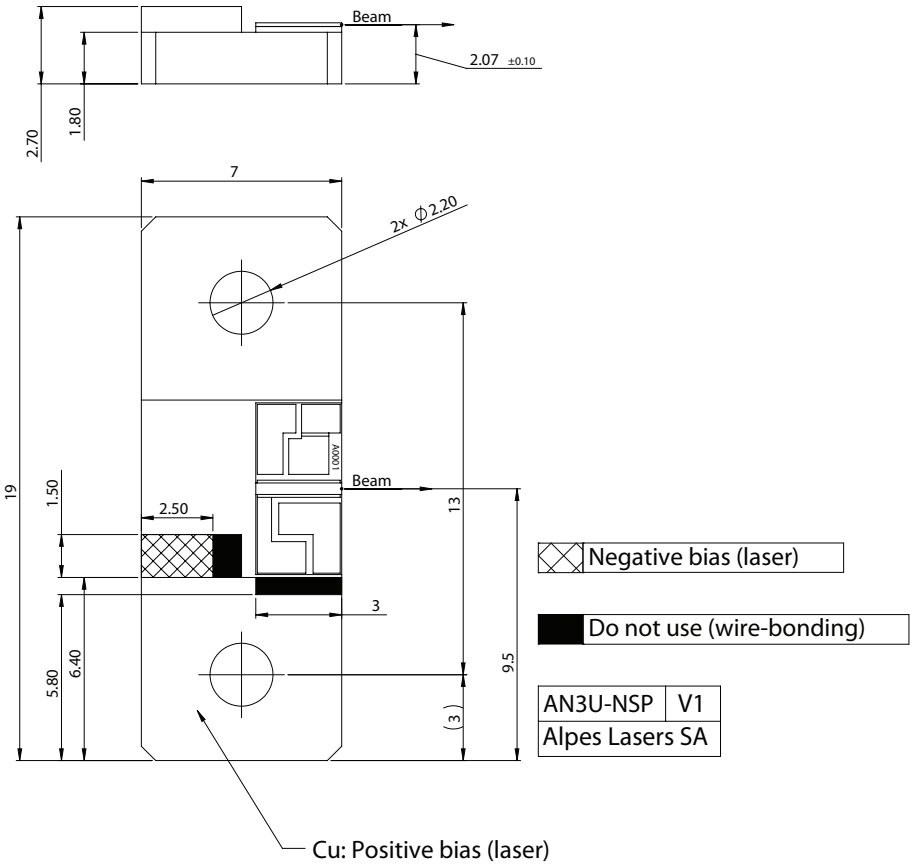

Figure 1: Mechanical and electrical interface for #sbcw8505 DN

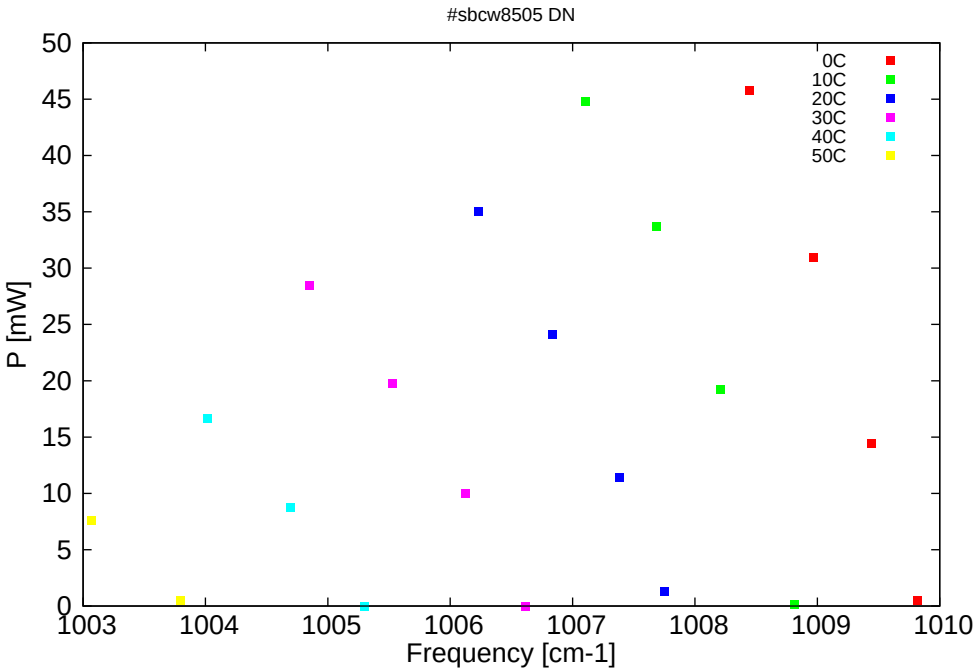

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

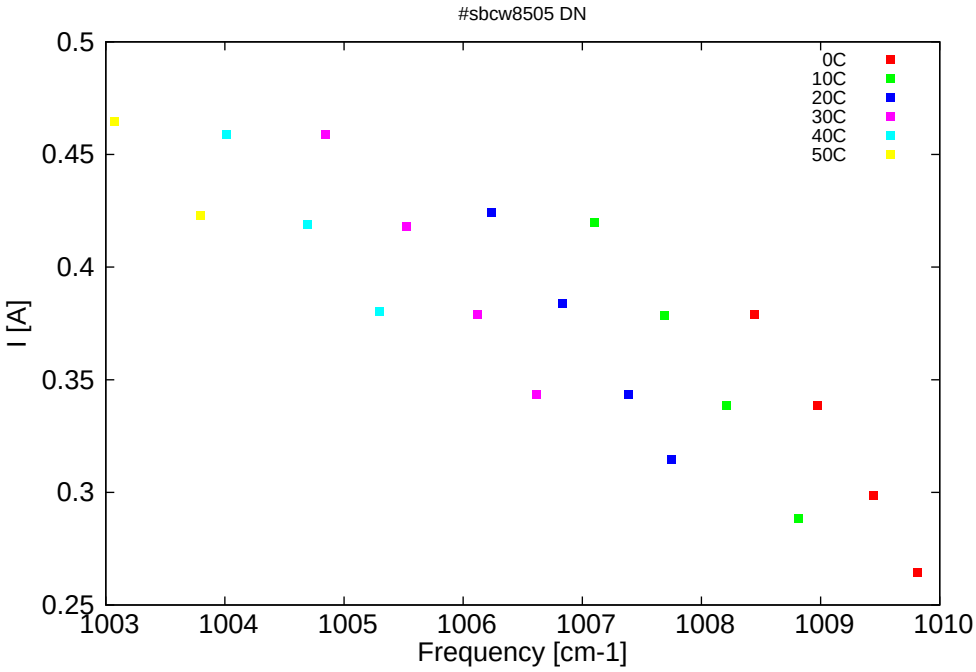

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
9902.8	1009.8	0.5	0	8.93	0.264
9906.4	1009.4	14.5	0	9.2	0.298
9911.1	1009	31	0	9.51	0.339
9916.2	1008.4	45.8	0	9.82	0.379
9912.6	1008.8	0.2	10	9.05	0.288
9918.6	1008.2	19.2	10	9.44	0.338
9923.7	1007.7	33.7	10	9.75	0.378
9929.5	1007.1	44.8	10	10.06	0.42
9923.1	1007.8	1.3	20	9.19	0.315
9926.7	1007.4	11.4	20	9.41	0.343
9932.1	1006.8	24.1	20	9.73	0.384
9938	1006.2	35	20	10.04	0.424
9934.3	1006.6	0	30	9.35	0.343
9939.2	1006.1	9.9	30	9.63	0.379
9945	1005.5	19.8	30	9.93	0.418
9951.8	1004.8	28.5	30	10.25	0.459
9947.3	1005.3	0	40	9.58	0.38
9953.3	1004.7	8.8	40	9.89	0.419
9960	1004	16.7	40	10.2	0.459
9962.2	1003.8	0.5	50	9.87	0.423
9969.4	1003.1	7.6	50	10.2	0.465

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

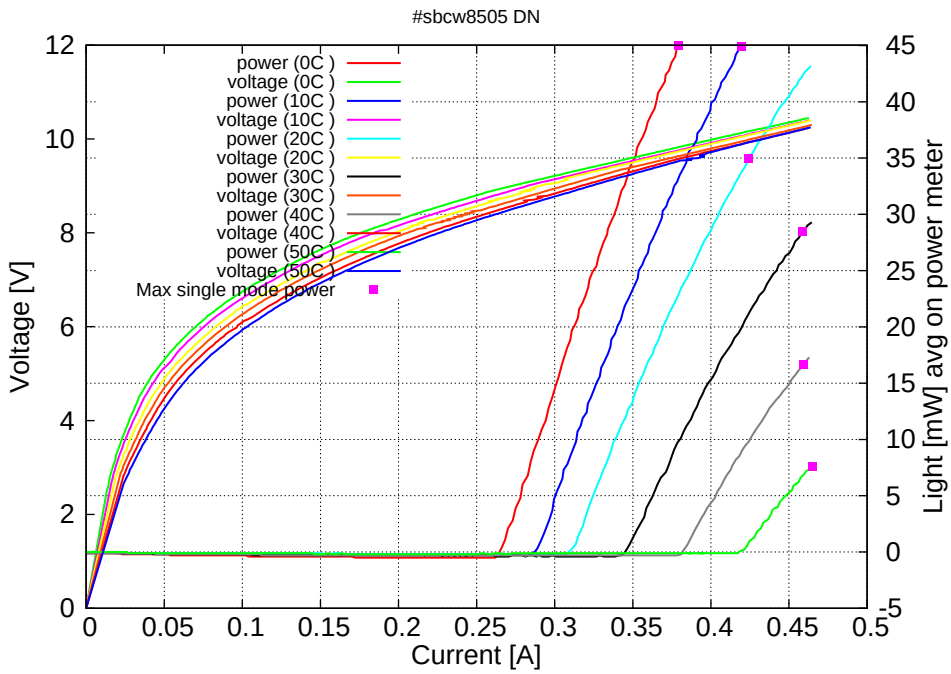

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: Ith=0.26A / Vth=8.9V (2-wires measurements). Maximum operation cur-

rent: 0.38A at 0C, 0.425A between 10C and 20C, 0.46A between 30C and 40C, 0.465A at 50C.

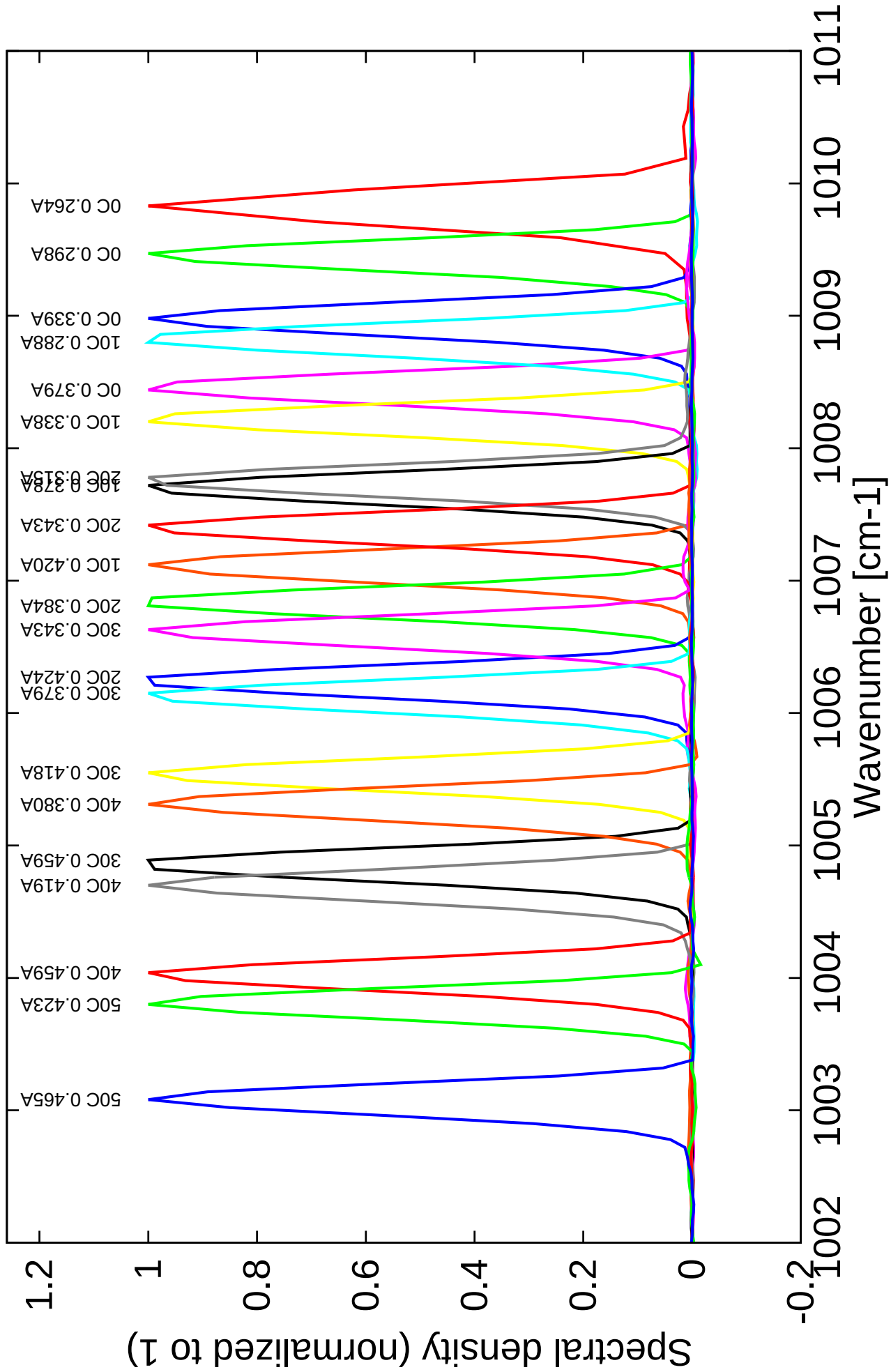

Figure 3: spectra at different temperatures for various DC currents