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Datasheet for #sbcw9107 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.

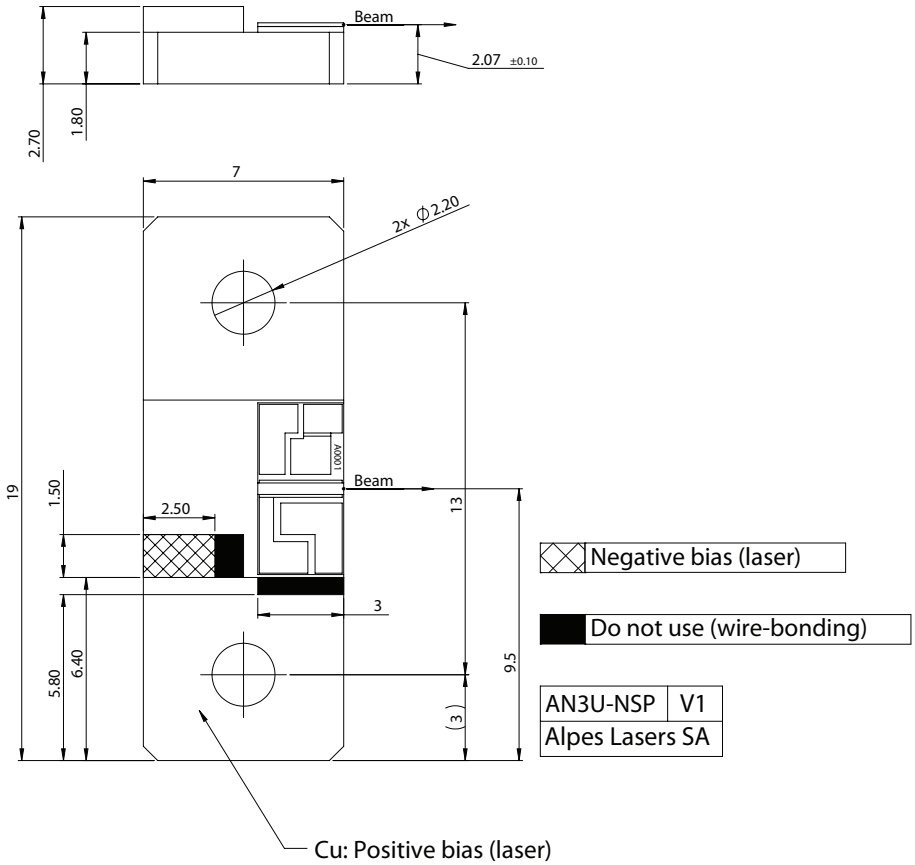

Figure 1: Mechanical and electrical interface for #sbcw9107 DN

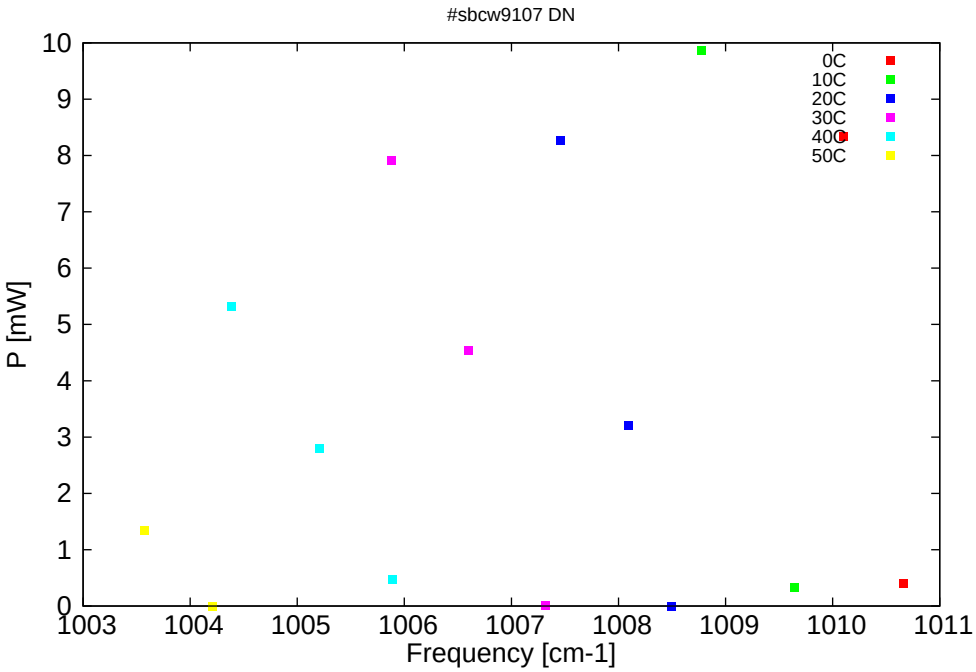

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

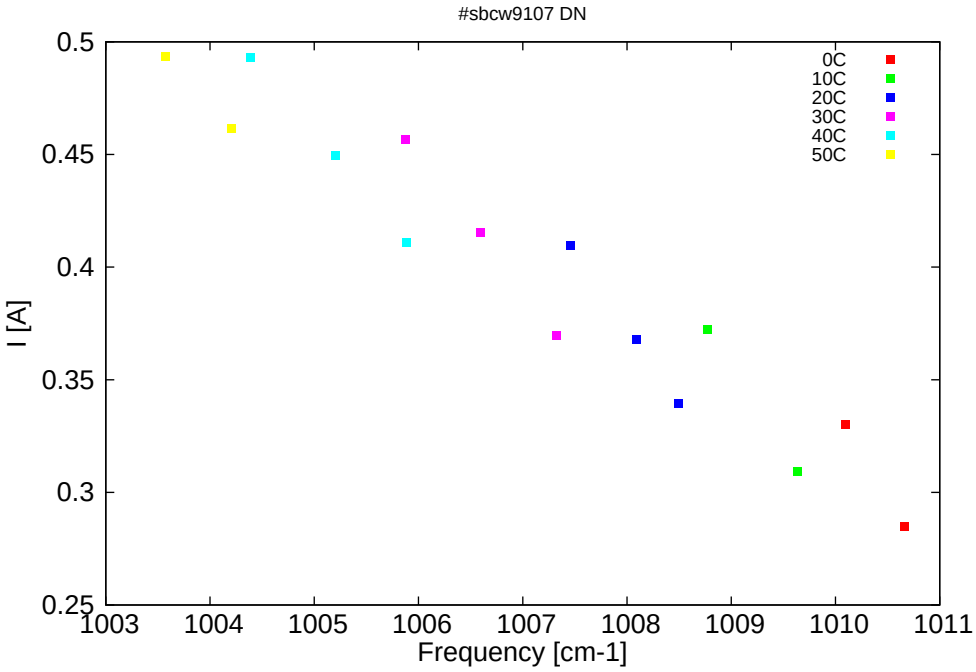

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
9894.5	1010.7	0.4	0	9.05	0.285
9900	1010.1	8.3	0	9.42	0.33
9904.5	1009.6	0.3	10	9.17	0.309
9913	1008.8	9.9	10	9.68	0.372
9915.8	1008.5	0	20	9.35	0.339
9919.7	1008.1	3.2	20	9.57	0.368
9926	1007.5	8.3	20	9.9	0.409
9927.3	1007.3	0	30	9.51	0.369
9934.5	1006.6	4.5	30	9.88	0.415
9941.6	1005.9	7.9	30	10.21	0.457
9941.5	1005.9	0.5	40	9.78	0.411
9948.2	1005.2	2.8	40	10.1	0.449
9956.3	1004.4	5.3	40	10.45	0.493
9958.1	1004.2	0	50	10.13	0.461
9964.4	1003.6	1.3	50	10.39	0.493

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

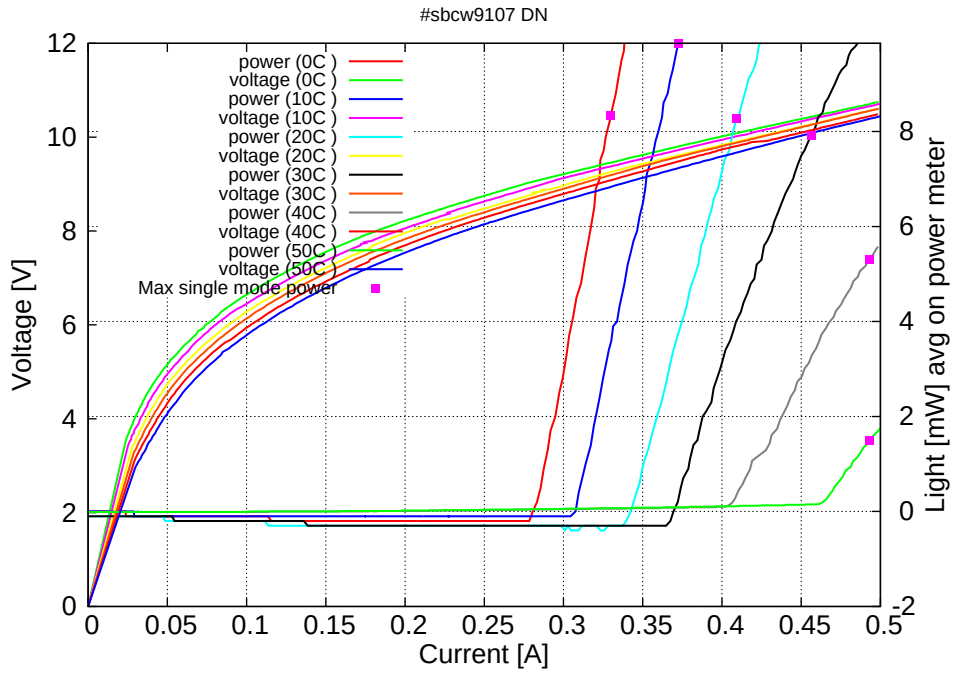

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: Ith=0.28A / Vth=9.0V (2-wires measurements). Maximum operation current: 0.33A at 0C, 0.38A at 10C, 0.41A at 20C, 0.46A at 30C, 0.50A between 40C and 50C.

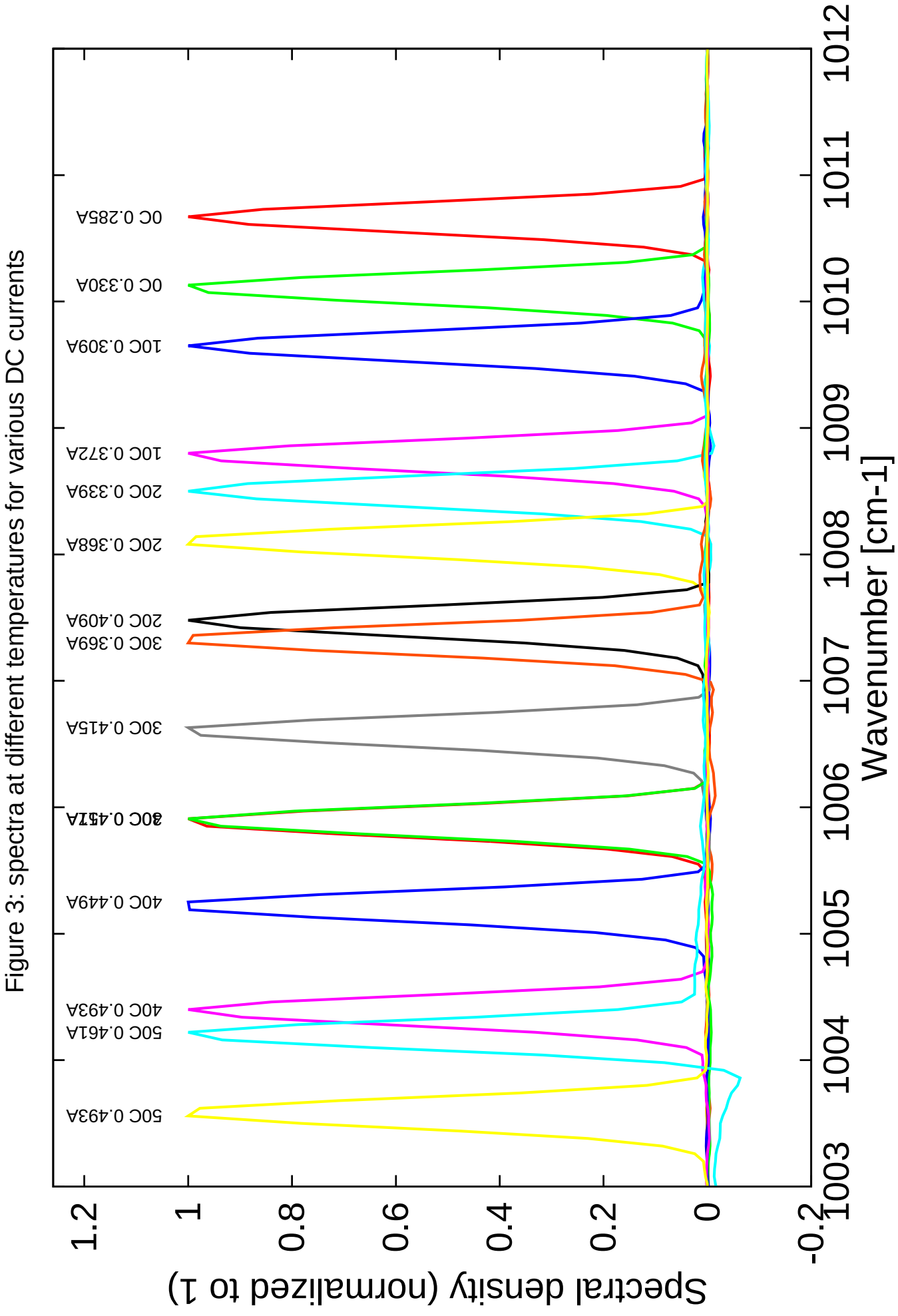

Figure 3: spectra at different temperatures for various DC currents