

Datasheet for #sbcw10003 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 #sbcw10003 DN

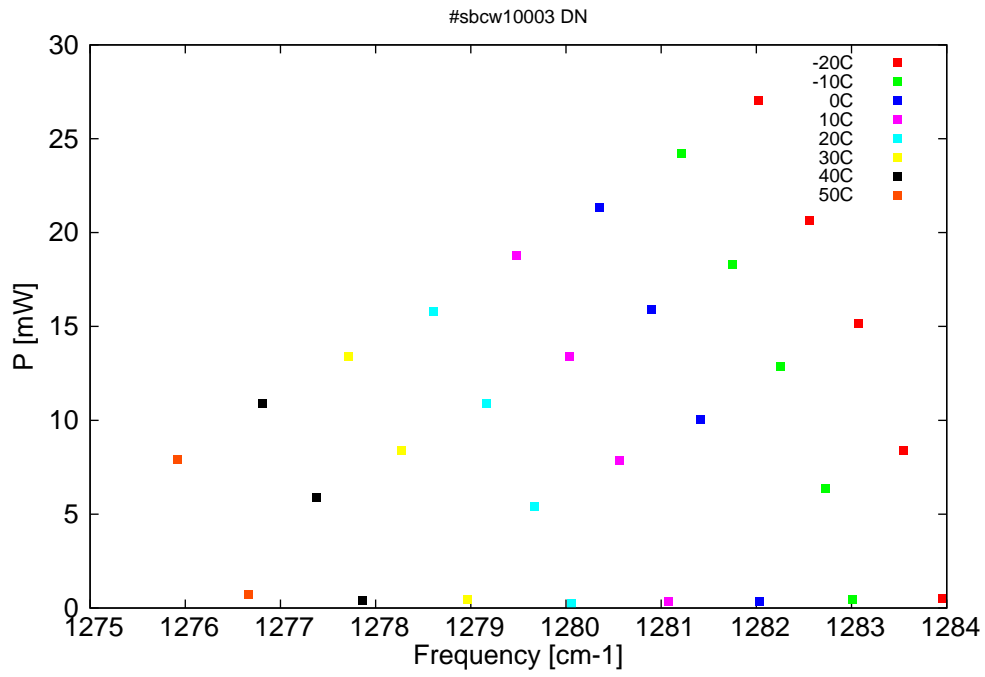


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

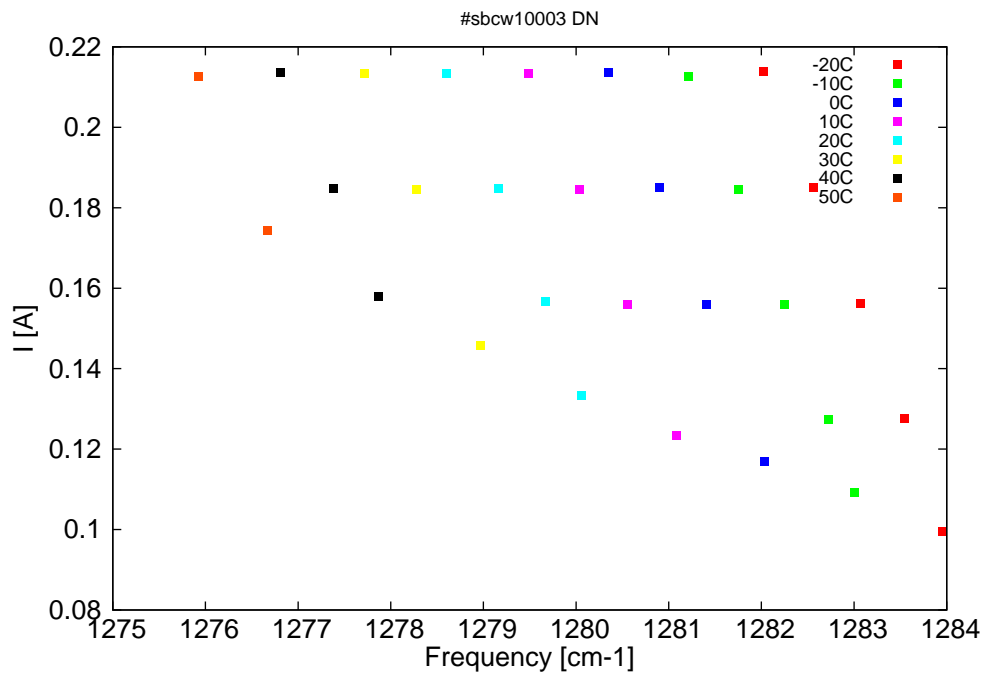


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7788.4	1284	0.5	-20	8.4	0.099
7790.9	1283.5	8.4	-20	8.83	0.128
7793.8	1283.1	15.2	-20	9.22	0.156
7796.9	1282.6	20.7	-20	9.57	0.185
7800.2	1282	27	-20	9.89	0.214
7794.2	1283	0.5	-10	8.31	0.109
7795.9	1282.7	6.4	-10	8.58	0.127
7798.8	1282.3	12.8	-10	8.96	0.156
7801.8	1281.7	18.3	-10	9.31	0.184
7805.1	1281.2	24.2	-10	9.62	0.213
7800.1	1282	0.4	0	8.22	0.117
7803.9	1281.4	10.1	0	8.74	0.156
7807	1280.9	15.9	0	9.09	0.185
7810.4	1280.3	21.4	0	9.41	0.214
7805.9	1281.1	0.4	10	8.12	0.123
7809.1	1280.6	7.8	10	8.55	0.156
7812.3	1280	13.4	10	8.89	0.184
7815.7	1279.5	18.8	10	9.21	0.213
7812.2	1280.1	0.2	20	8.09	0.133
7814.5	1279.7	5.4	20	8.38	0.157
7817.6	1279.2	10.9	20	8.71	0.185
7821	1278.6	15.8	20	9.03	0.213
7818.8	1279	0.5	30	8.11	0.146
7823.1	1278.3	8.4	30	8.56	0.184
7826.5	1277.7	13.4	30	8.88	0.213
7825.5	1277.9	0.4	40	8.12	0.158
7828.5	1277.4	5.9	40	8.43	0.185
7832	1276.8	10.9	40	8.74	0.214
7832.9	1276.7	0.7	50	8.19	0.174
7837.5	1275.9	7.9	50	8.61	0.213

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

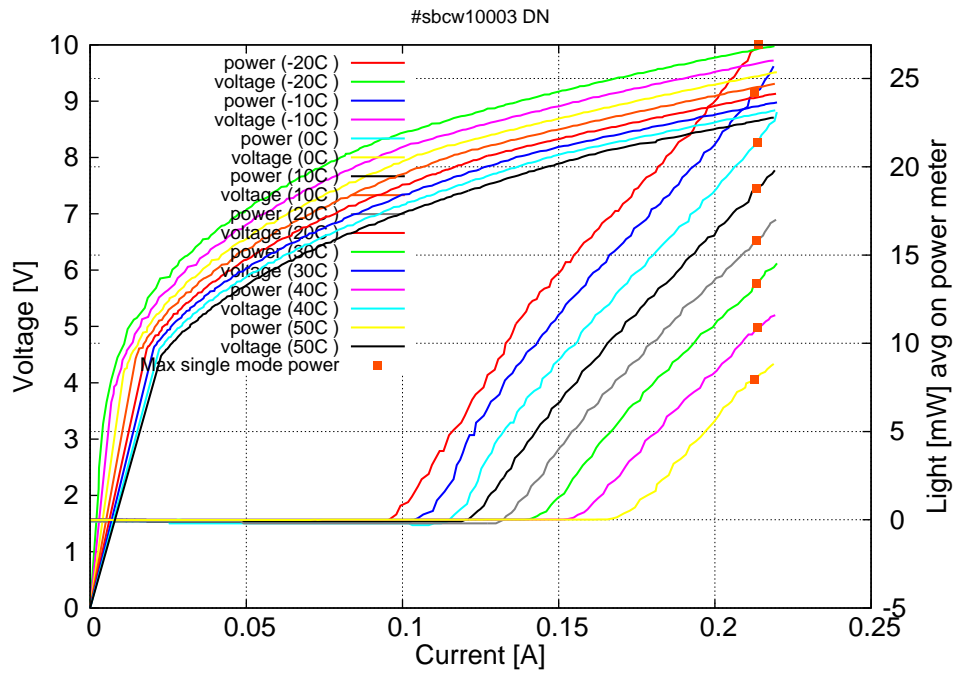


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.099A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.220A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

