

Datasheet for #sbcw20221 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.

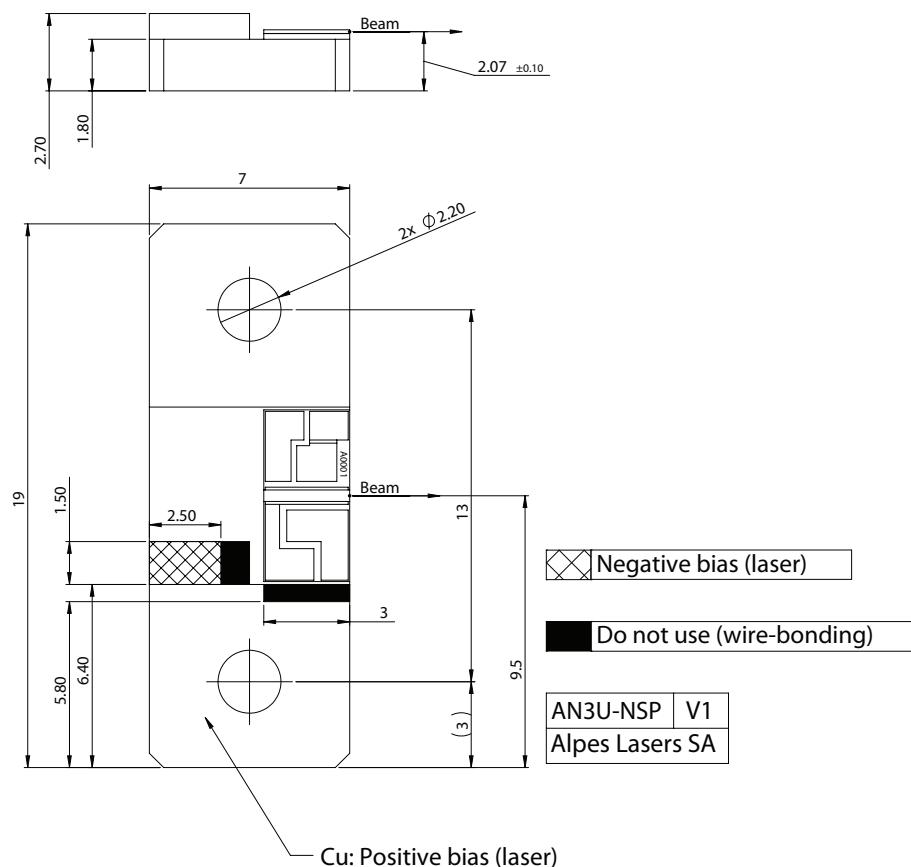


Figure 1: Mechanical and electrical interface for #sbcw20221 DN

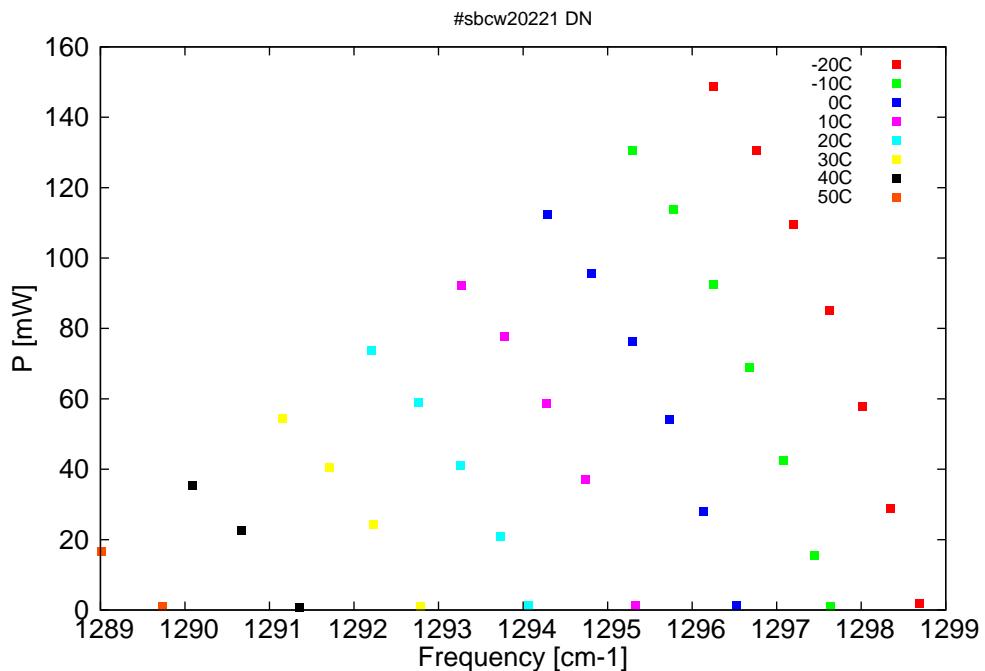


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

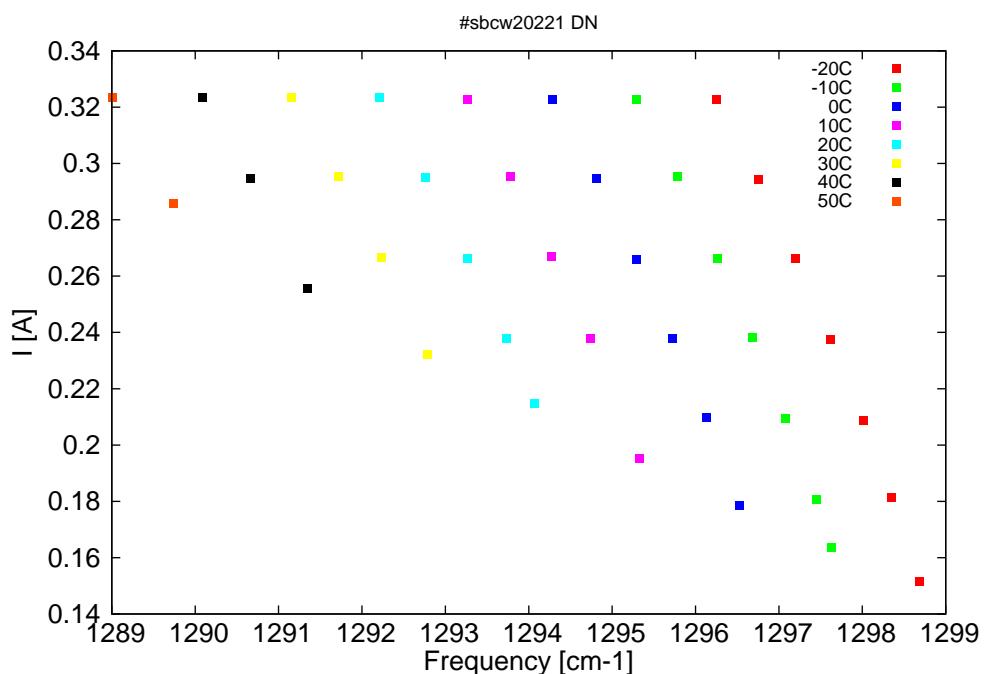


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7700.1	1298.7	2	-20	8.85	0.152
7702.1	1298.3	28.8	-20	9.1	0.181
7704.1	1298	57.8	-20	9.31	0.209
7706.4	1297.6	85.2	-20	9.54	0.237
7708.9	1297.2	109.4	-20	9.75	0.266
7711.5	1296.8	130.5	-20	9.96	0.294
7714.6	1296.3	148.8	-20	10.17	0.323
7706.3	1297.6	1.1	-10	8.8	0.164
7707.4	1297.4	15.4	-10	8.93	0.181
7709.6	1297.1	42.5	-10	9.17	0.209
7712	1296.7	69	-10	9.39	0.238
7714.5	1296.3	92.6	-10	9.61	0.266
7717.3	1295.8	113.8	-10	9.82	0.295
7720.3	1295.3	130.4	-10	10.03	0.323
7712.9	1296.5	1.2	0	8.78	0.179
7715.2	1296.1	28.1	0	9.03	0.21
7717.7	1295.7	54	0	9.25	0.238
7720.3	1295.3	76.4	0	9.47	0.266
7723.1	1294.8	95.6	0	9.68	0.295
7726.3	1294.3	112.5	0	9.9	0.323
7720	1295.3	1.3	10	8.77	0.195
7723.6	1294.7	37.1	10	9.11	0.238
7726.4	1294.3	58.8	10	9.33	0.267
7729.3	1293.8	77.8	10	9.55	0.296
7732.4	1293.3	92.2	10	9.76	0.323
7727.6	1294.1	1.2	20	8.79	0.215
7729.6	1293.7	21	20	8.97	0.238
7732.4	1293.3	41.1	20	9.2	0.266
7735.4	1292.8	58.8	20	9.41	0.295
7738.7	1292.2	73.7	20	9.63	0.323
7735.2	1292.8	1	30	8.81	0.232
7738.6	1292.2	24.2	30	9.07	0.267
7741.7	1291.7	40.4	30	9.29	0.295
7745	1291.2	54.3	30	9.5	0.324
7743.8	1291.4	0.7	40	8.88	0.255
7748	1290.7	22.5	40	9.17	0.295
7751.4	1290.1	35.3	40	9.39	0.323
7753.5	1289.7	0.9	50	9	0.286
7757.9	1289	16.6	50	9.27	0.323

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

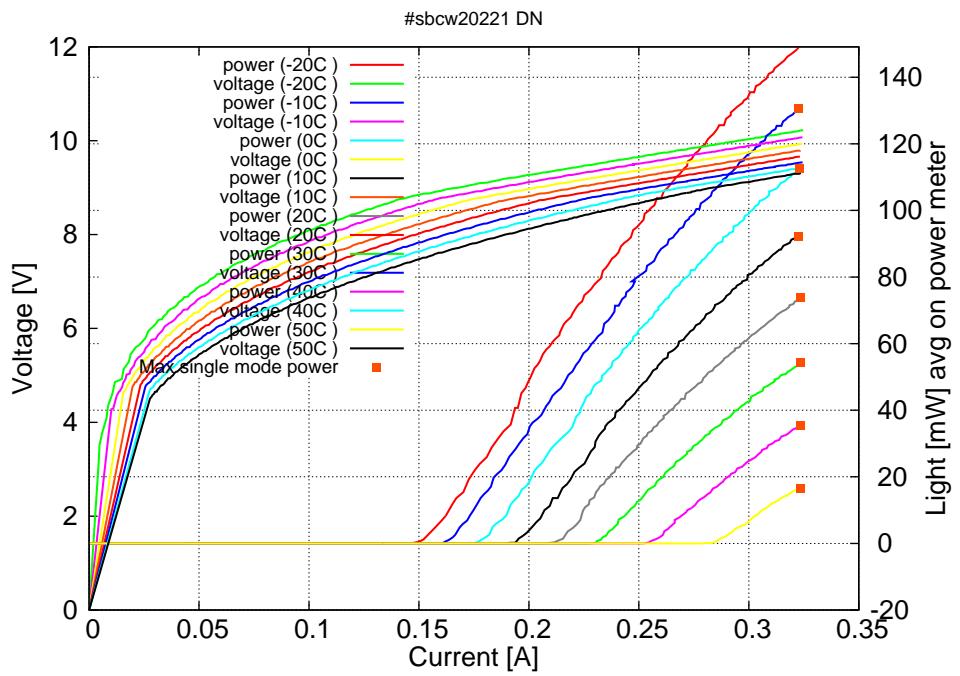


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.325A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

