

Datasheet for #sbcw24100 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 bias and positive bias on the specific zones drawn below. 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 #sbcw24100 DN (please note that AlN submount numbering is A11ZN)

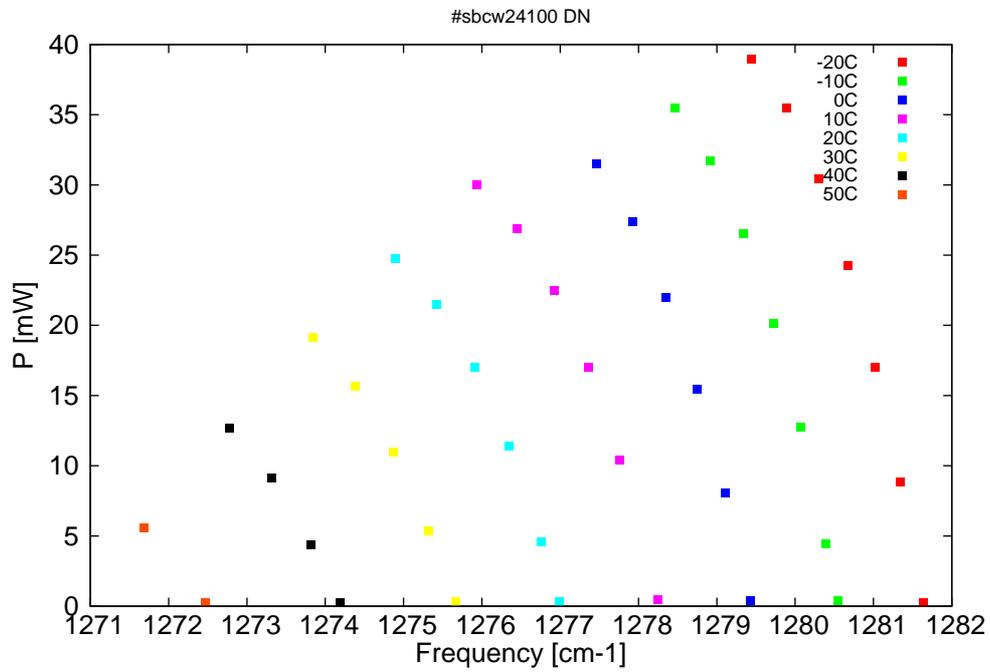


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

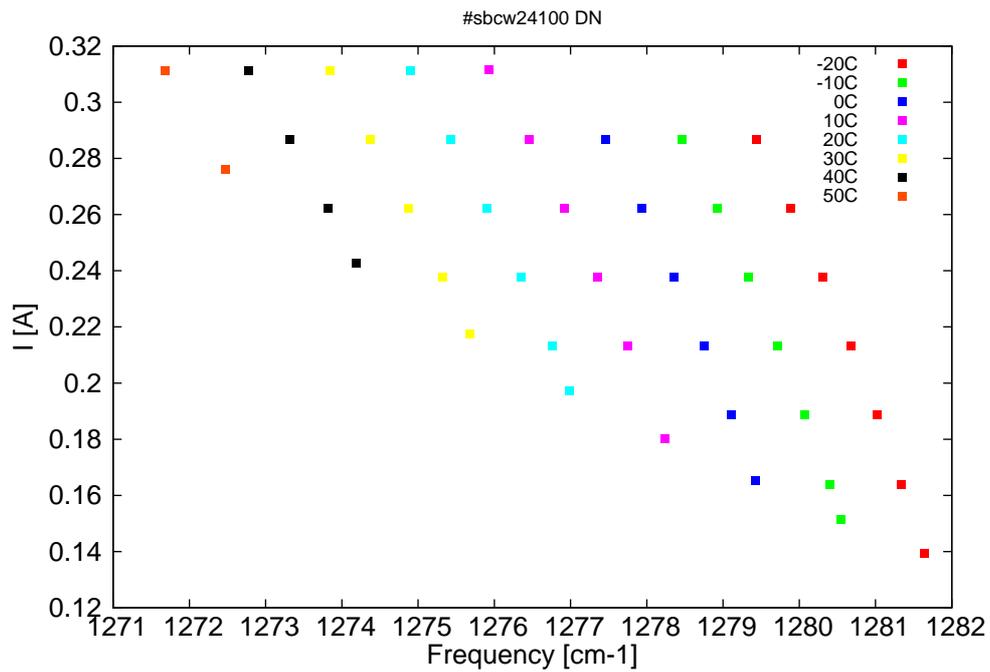


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7802.5	1281.6	0.3	-20	8.81	0.139
7804.3	1281.3	8.9	-20	9.06	0.164
7806.3	1281	17	-20	9.3	0.189
7808.4	1280.7	24.2	-20	9.54	0.213
7810.7	1280.3	30.5	-20	9.78	0.238
7813.2	1279.9	35.5	-20	10.01	0.262
7815.9	1279.4	39	-20	10.25	0.287
7809.1	1280.6	0.4	-10	8.77	0.151
7810.1	1280.4	4.5	-10	8.9	0.164
7812.1	1280.1	12.8	-10	9.14	0.189
7814.2	1279.7	20.1	-10	9.38	0.213
7816.6	1279.3	26.5	-10	9.61	0.238
7819.1	1278.9	31.7	-10	9.84	0.262
7821.9	1278.5	35.5	-10	10.08	0.287
7816	1279.4	0.4	0	8.76	0.165
7818	1279.1	8	0	8.99	0.189
7820.2	1278.7	15.4	0	9.22	0.213
7822.6	1278.4	22	0	9.45	0.238
7825.2	1277.9	27.4	0	9.68	0.262
7828	1277.5	31.5	0	9.91	0.287
7823.2	1278.2	0.5	10	8.77	0.18
7826.2	1277.8	10.4	10	9.08	0.213
7828.7	1277.4	17	10	9.31	0.238
7831.3	1276.9	22.5	10	9.54	0.262
7834.2	1276.5	26.9	10	9.76	0.287
7837.4	1275.9	30	10	10	0.312
7830.9	1277	0.3	20	8.81	0.197
7832.3	1276.8	4.6	20	8.95	0.213
7834.8	1276.4	11.4	20	9.18	0.238
7837.6	1275.9	17	20	9.4	0.262
7840.5	1275.4	21.5	20	9.63	0.287
7843.8	1274.9	24.7	20	9.86	0.311
7839	1275.7	0.3	30	8.88	0.218
7841.1	1275.3	5.3	30	9.06	0.238
7843.9	1274.9	11	30	9.28	0.262
7847	1274.4	15.7	30	9.51	0.287
7850.2	1273.8	19.2	30	9.73	0.311
7848.1	1274.2	0.3	40	9	0.243
7850.4	1273.8	4.4	40	9.17	0.262
7853.5	1273.3	9.1	40	9.39	0.287
7856.9	1272.8	12.7	40	9.61	0.311
7858.7	1272.5	0.3	50	9.19	0.276
7863.6	1271.7	5.5	50	9.5	0.311

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

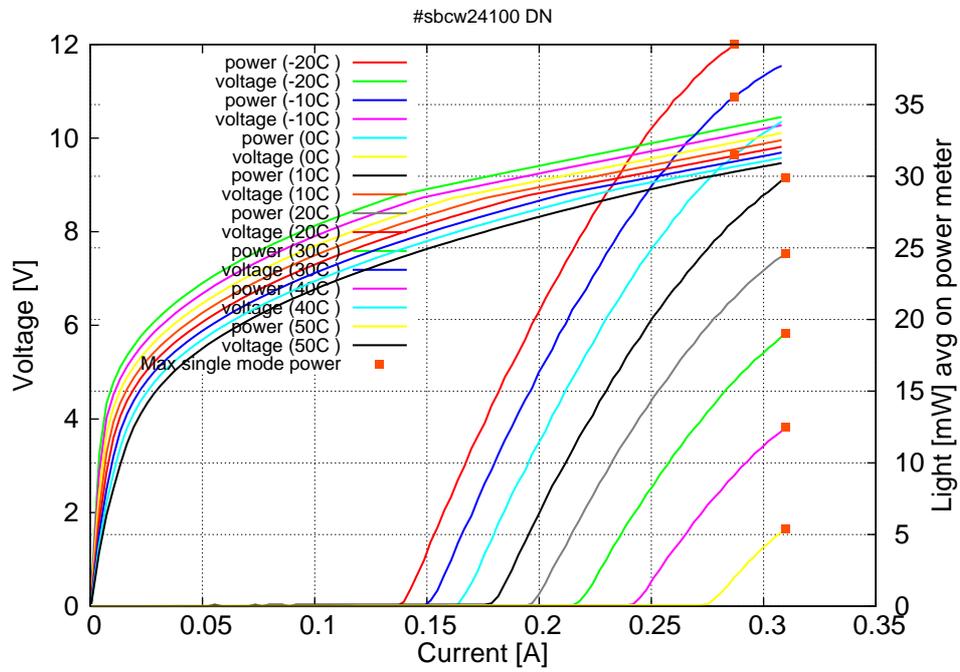


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.29A between -20C and 0C, 0.31A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

