

**Datasheet for #sbcw24103 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 #sbcw24103 DN (please note that AlN submount numbering is A11Z5)

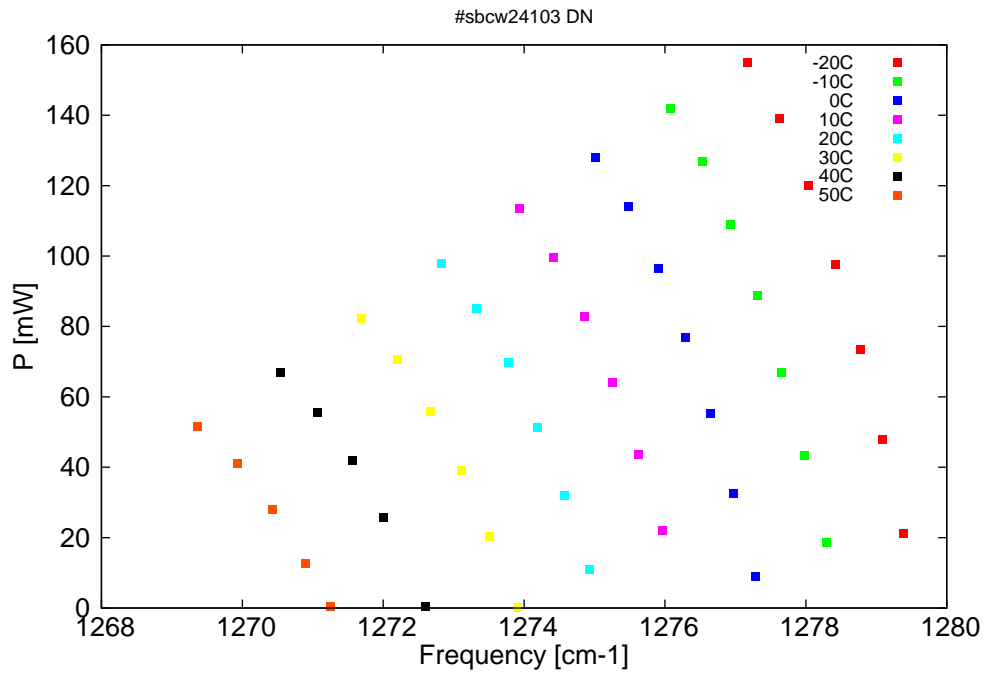


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

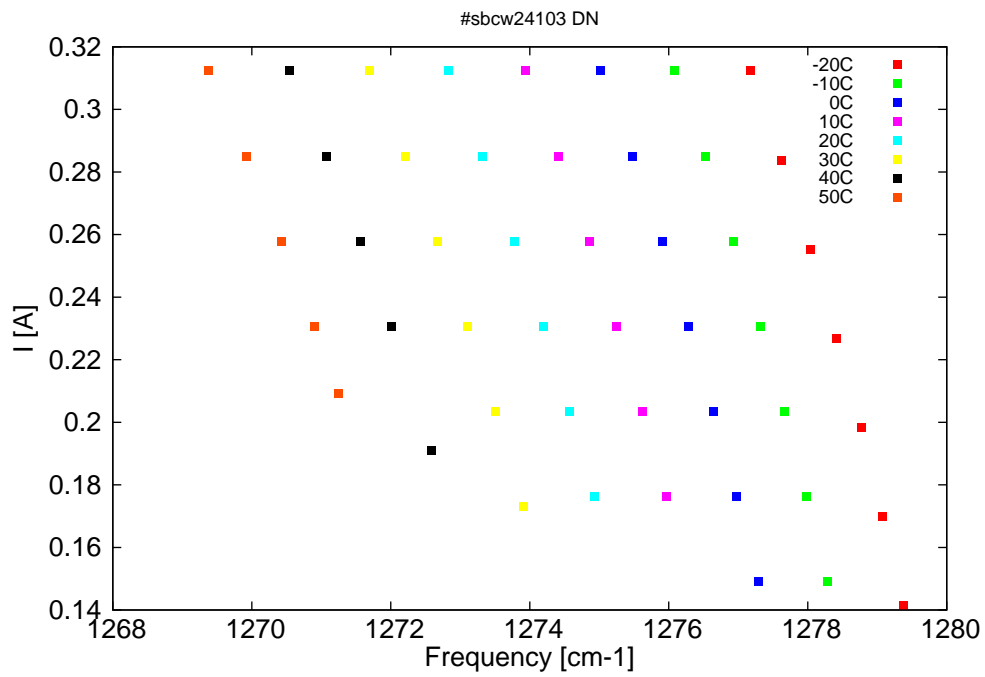


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7816.3	1279.4	21.1	-20	8.4	0.141
7818.1	1279.1	47.8	-20	8.68	0.17
7820	1278.8	73.5	-20	8.95	0.198
7822.2	1278.4	97.7	-20	9.21	0.227
7824.5	1278	120	-20	9.48	0.255
7827	1277.6	139.2	-20	9.74	0.284
7829.8	1277.2	155	-20	10.02	0.312
7823	1278.3	18.7	-10	8.32	0.149
7824.8	1278	43.3	-10	8.57	0.176
7826.8	1277.7	67	-10	8.81	0.204
7828.9	1277.3	88.9	-10	9.05	0.231
7831.2	1276.9	109	-10	9.3	0.258
7833.7	1276.5	126.9	-10	9.54	0.285
7836.5	1276.1	142	-10	9.79	0.312
7829.1	1277.3	8.9	0	8.22	0.149
7831	1277	32.5	0	8.47	0.176
7833	1276.6	55.4	0	8.71	0.204
7835.2	1276.3	76.8	0	8.95	0.231
7837.6	1275.9	96.5	0	9.2	0.258
7840.2	1275.5	114	0	9.45	0.285
7843	1275	128.1	0	9.7	0.312
7837.2	1276	21.9	10	8.37	0.176
7839.3	1275.6	43.7	10	8.62	0.204
7841.6	1275.3	64.1	10	8.86	0.231
7844	1274.9	82.9	10	9.11	0.258
7846.7	1274.4	99.5	10	9.36	0.285
7849.7	1273.9	113.4	10	9.61	0.312
7843.6	1274.9	10.9	20	8.28	0.176
7845.7	1274.6	31.9	20	8.53	0.204
7848.1	1274.2	51.3	20	8.78	0.231
7850.6	1273.8	69.6	20	9.02	0.258
7853.4	1273.3	85.2	20	9.27	0.285
7856.5	1272.8	97.8	20	9.53	0.312
7849.8	1273.9	0.1	30	8.18	0.173
7852.3	1273.5	20.4	30	8.46	0.204
7854.8	1273.1	39.1	30	8.7	0.231
7857.5	1272.7	55.8	30	8.95	0.258
7860.4	1272.2	70.6	30	9.2	0.285
7863.6	1271.7	82.3	30	9.46	0.312
7858	1272.6	0.4	40	8.28	0.191
7861.6	1272	25.8	40	8.64	0.231
7864.4	1271.6	41.8	40	8.88	0.258
7867.4	1271.1	55.5	40	9.13	0.285
7870.7	1270.5	66.8	40	9.39	0.312
7866.3	1271.2	0.5	50	8.37	0.209
7868.4	1270.9	12.7	50	8.57	0.231
7871.3	1270.4	28.1	50	8.82	0.258
7874.5	1269.9	41	50	9.07	0.285
7877.9	1269.4	51.4	50	9.33	0.312

*continued on next page*

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

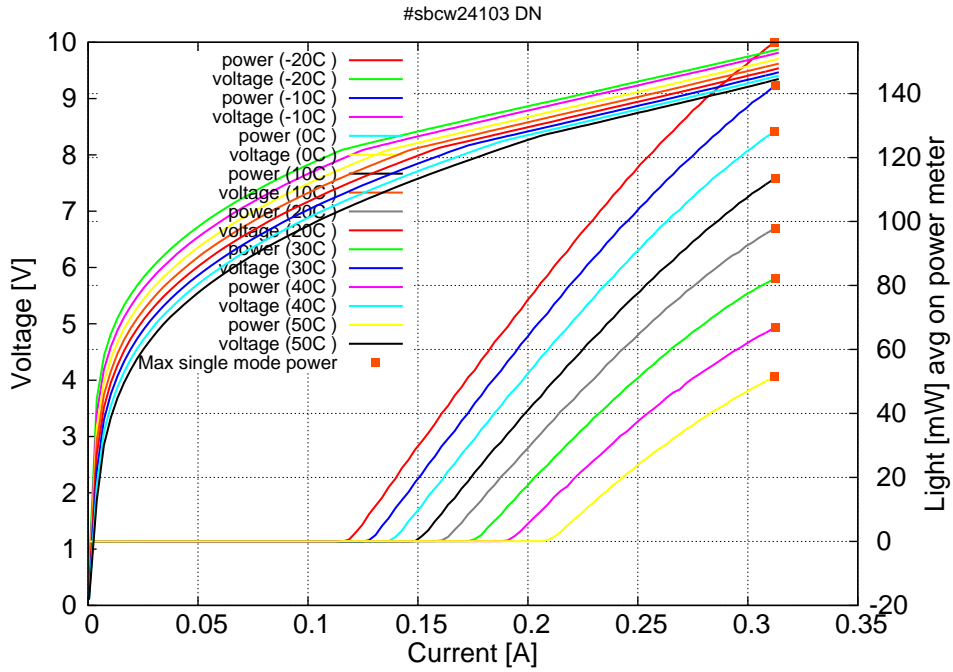


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12\text{A}$  /  $V_{th}=8.1\text{V}$  (2-wires measurements). Maximum operation current: 0.315A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

