

**Datasheet for #sbcw24101 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.

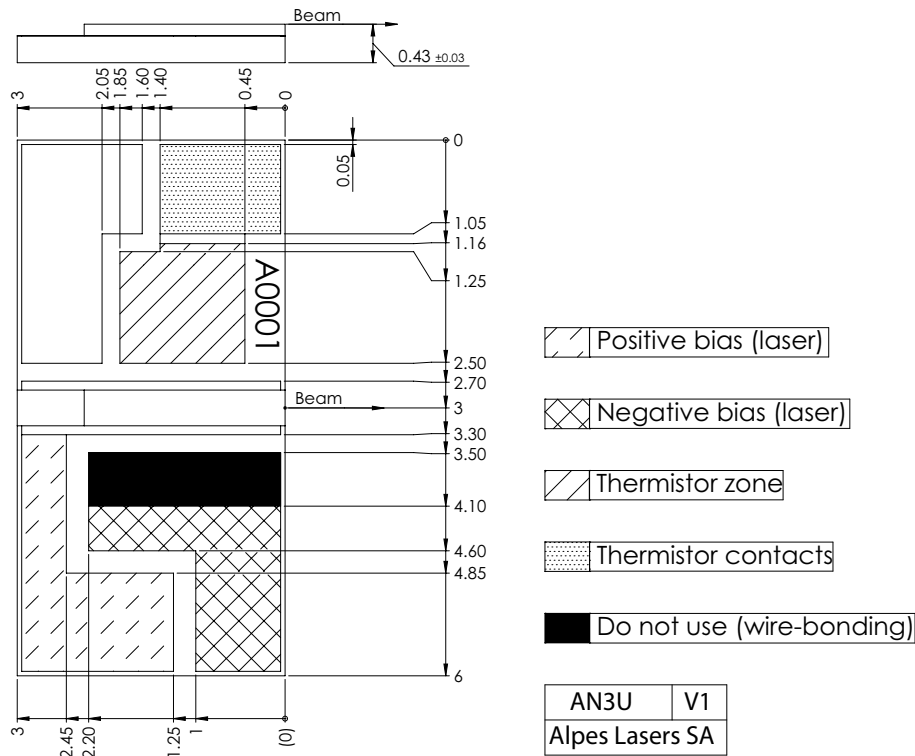


Figure 1: Mechanical and electrical interface for #sbcw24101 DN (please note that AlN submount numbering is A1220)

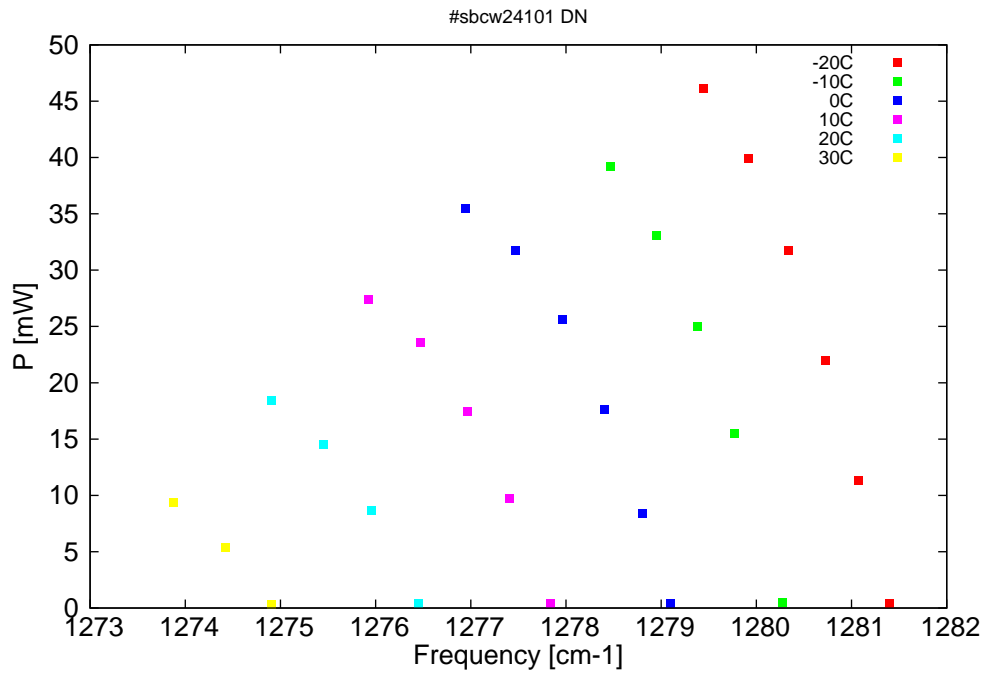


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

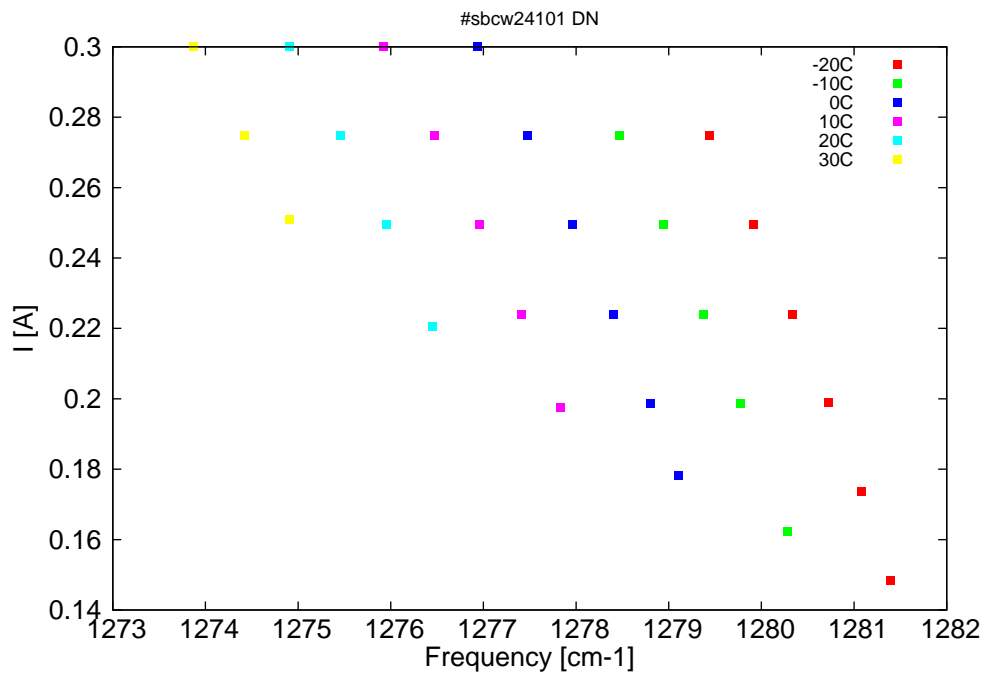


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7804	1281.4	0.4	-20	8.94	0.148
7805.9	1281.1	11.3	-20	9.21	0.174
7808.1	1280.7	22	-20	9.47	0.199
7810.4	1280.3	31.7	-20	9.72	0.224
7813	1279.9	39.9	-20	9.98	0.249
7815.9	1279.4	46.1	-20	10.23	0.275
7810.8	1280.3	0.5	-10	8.94	0.162
7813.9	1279.8	15.5	-10	9.31	0.199
7816.3	1279.4	25	-10	9.56	0.224
7818.9	1278.9	33	-10	9.81	0.249
7821.9	1278.5	39.2	-10	10.06	0.275
7818	1279.1	0.4	0	8.95	0.178
7819.8	1278.8	8.4	0	9.15	0.199
7822.3	1278.4	17.7	0	9.4	0.224
7825	1278	25.6	0	9.65	0.249
7828	1277.5	31.7	0	9.9	0.275
7831.2	1276.9	35.5	0	10.15	0.3
7825.7	1277.8	0.4	10	9	0.198
7828.4	1277.4	9.8	10	9.25	0.224
7831.1	1277	17.4	10	9.5	0.249
7834.1	1276.5	23.5	10	9.74	0.275
7837.5	1275.9	27.4	10	10	0.3
7834.2	1276.5	0.4	20	9.08	0.221
7837.2	1276	8.6	20	9.36	0.249
7840.3	1275.5	14.5	20	9.6	0.275
7843.7	1274.9	18.4	20	9.84	0.3
7843.7	1274.9	0.3	30	9.24	0.251
7846.7	1274.4	5.4	30	9.46	0.275
7850.1	1273.9	9.4	30	9.7	0.3

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

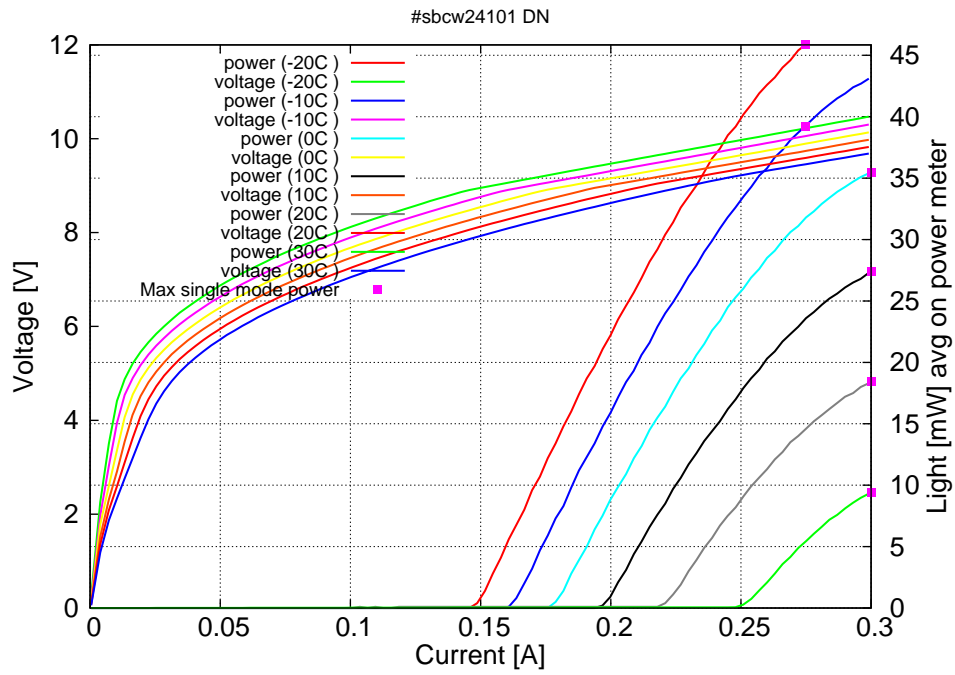


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.15A$  /  $V_{th}=8.9V$  (2-wires measurements). Maximum operation current: 0.275A between -20C and -10C, 0.30A between 0C and 30C.

Figure 3: spectra at different temperatures for various DC currents

