

**Datasheet for #sbcw24270 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 #sbcw24270 DN (please note that AlN submount numbering is A11A0)

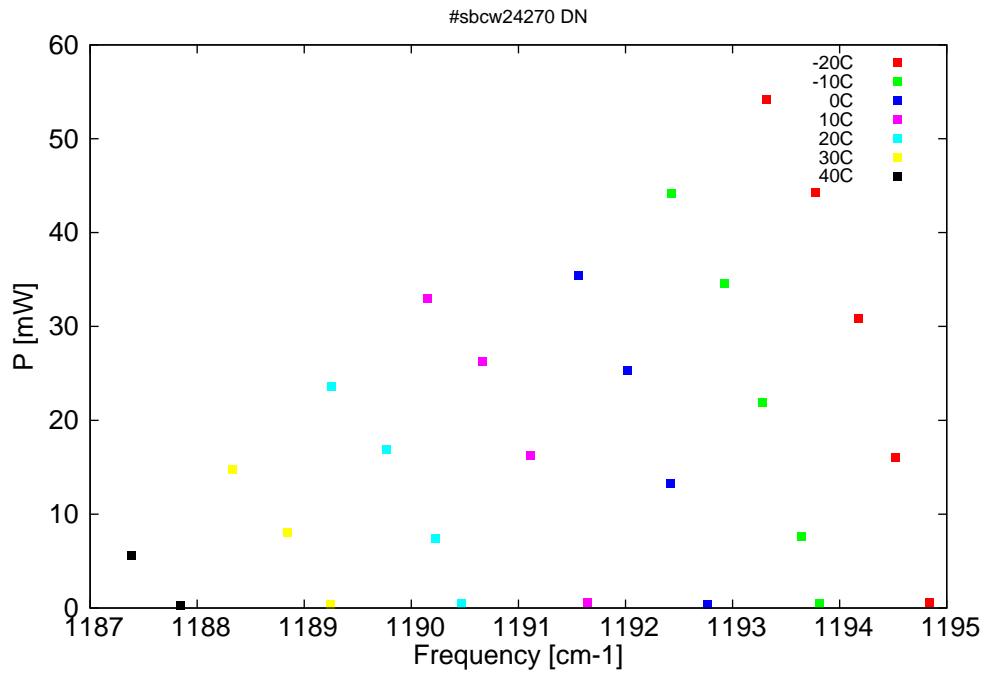


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

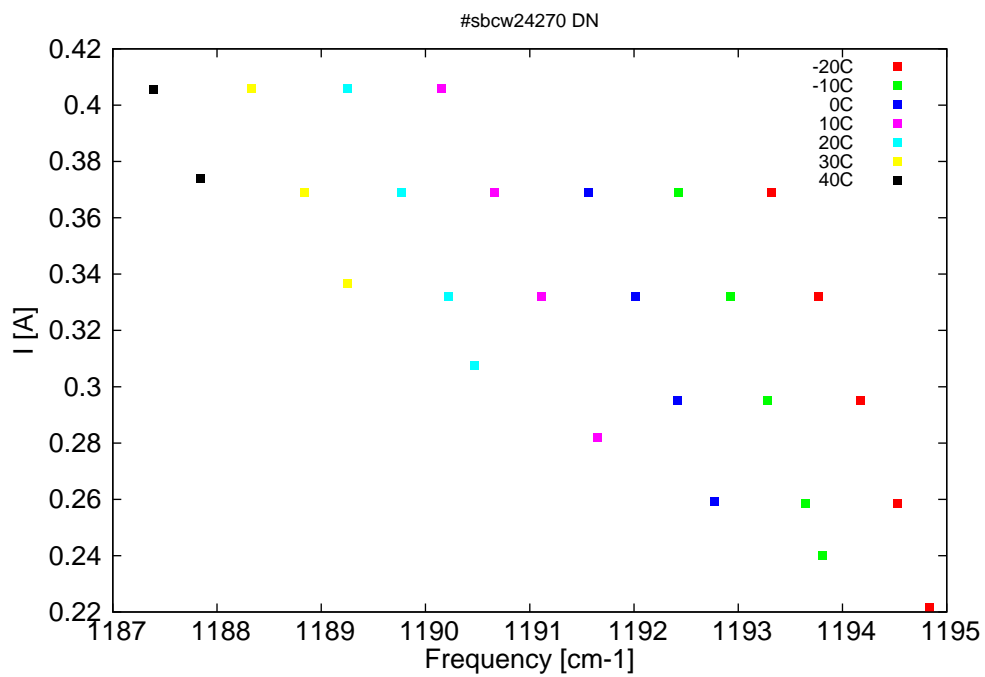


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
8369.3	1194.8	0.6	-20	8.98	0.222
8371.5	1194.5	16	-20	9.4	0.259
8374	1194.2	30.9	-20	9.83	0.295
8376.8	1193.8	44.2	-20	10.26	0.332
8380	1193.3	54.2	-20	10.7	0.369
8376.6	1193.8	0.5	-10	9.02	0.24
8377.7	1193.6	7.7	-10	9.23	0.259
8380.3	1193.3	21.9	-10	9.63	0.295
8382.8	1192.9	34.6	-10	10.04	0.332
8386.2	1192.4	44.2	-10	10.45	0.369
8383.8	1192.8	0.4	0	9.07	0.259
8386.3	1192.4	13.2	0	9.44	0.295
8389.2	1192	25.3	0	9.83	0.332
8392.3	1191.6	35.4	0	10.22	0.369
8391.7	1191.6	0.6	10	9.14	0.282
8395.5	1191.1	16.3	10	9.65	0.332
8398.7	1190.7	26.3	10	10.02	0.369
8402.3	1190.2	33	10	10.39	0.406
8400	1190.5	0.5	20	9.24	0.308
8401.8	1190.2	7.4	20	9.48	0.332
8405	1189.8	16.9	20	9.83	0.369
8408.6	1189.3	23.6	20	10.19	0.406
8408.7	1189.2	0.4	30	9.36	0.337
8411.5	1188.8	8	30	9.66	0.369
8415.1	1188.3	14.7	30	10	0.406
8418.6	1187.8	0.3	40	9.54	0.374
8421.8	1187.4	5.6	40	9.82	0.406

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

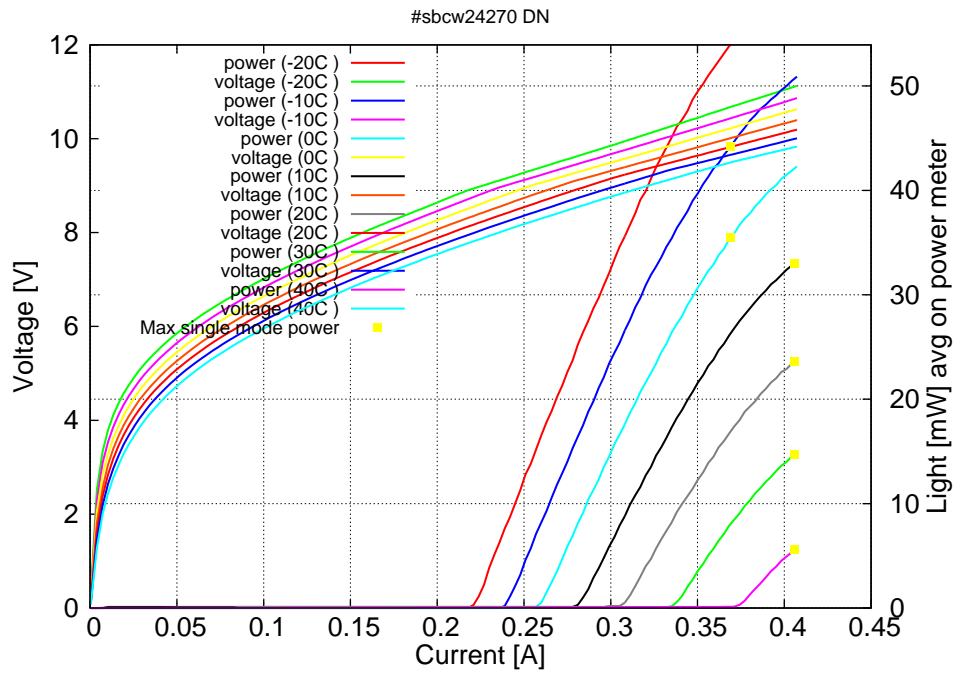


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.22A$  /  $V_{th}=8.9V$  (2-wires measurements). Maximum operation current: 0.37A between -20C and 0C, 0.41A between 10C and 40C.

Figure 3: spectra at different temperatures for various DC currents

