

**Datasheet for #sbcw22709 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 #sbcw22709 DN (please note that AlN submount numbering is A0XF9)

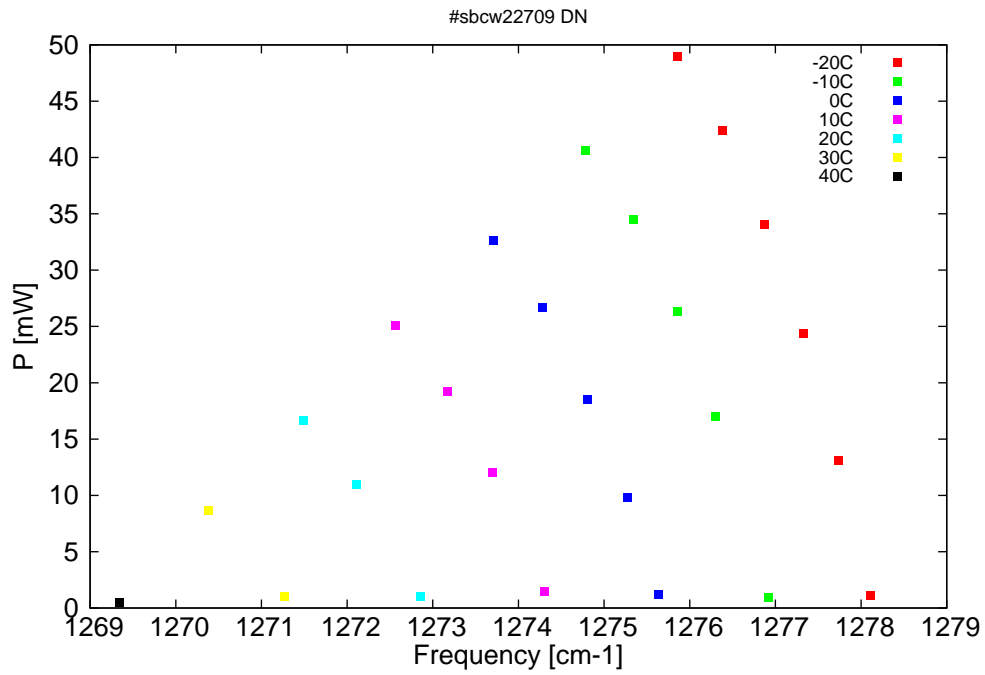


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

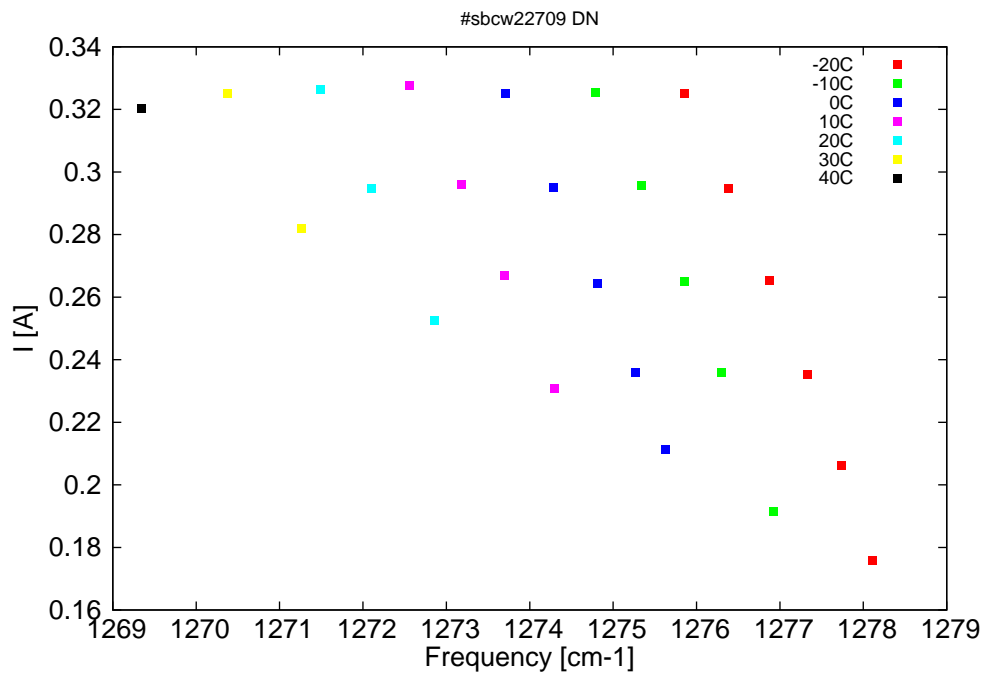


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7824	1278.1	1.1	-20	9.14	0.176
7826.4	1277.7	13.1	-20	9.39	0.206
7828.8	1277.3	24.3	-20	9.63	0.235
7831.6	1276.9	34	-20	9.86	0.265
7834.6	1276.4	42.4	-20	10.08	0.295
7837.9	1275.9	49	-20	10.3	0.325
7831.3	1276.9	1	-10	9.09	0.192
7835.1	1276.3	17	-10	9.45	0.236
7837.9	1275.9	26.3	-10	9.67	0.265
7841	1275.3	34.5	-10	9.9	0.296
7844.4	1274.8	40.6	-10	10.13	0.326
7839.2	1275.6	1.2	0	9.08	0.211
7841.5	1275.3	9.8	0	9.28	0.236
7844.3	1274.8	18.6	0	9.5	0.264
7847.5	1274.3	26.6	0	9.73	0.295
7851.1	1273.7	32.6	0	9.96	0.325
7847.4	1274.3	1.5	10	9.08	0.231
7851.1	1273.7	12.1	10	9.37	0.267
7854.4	1273.2	19.2	10	9.6	0.296
7858.2	1272.6	25	10	9.84	0.328
7856.3	1272.9	1	20	9.14	0.253
7861	1272.1	10.9	20	9.47	0.295
7864.8	1271.5	16.6	20	9.71	0.326
7866.2	1271.3	1	30	9.21	0.282
7871.7	1270.4	8.6	30	9.55	0.325
7878.1	1269.3	0.5	40	9.39	0.32

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

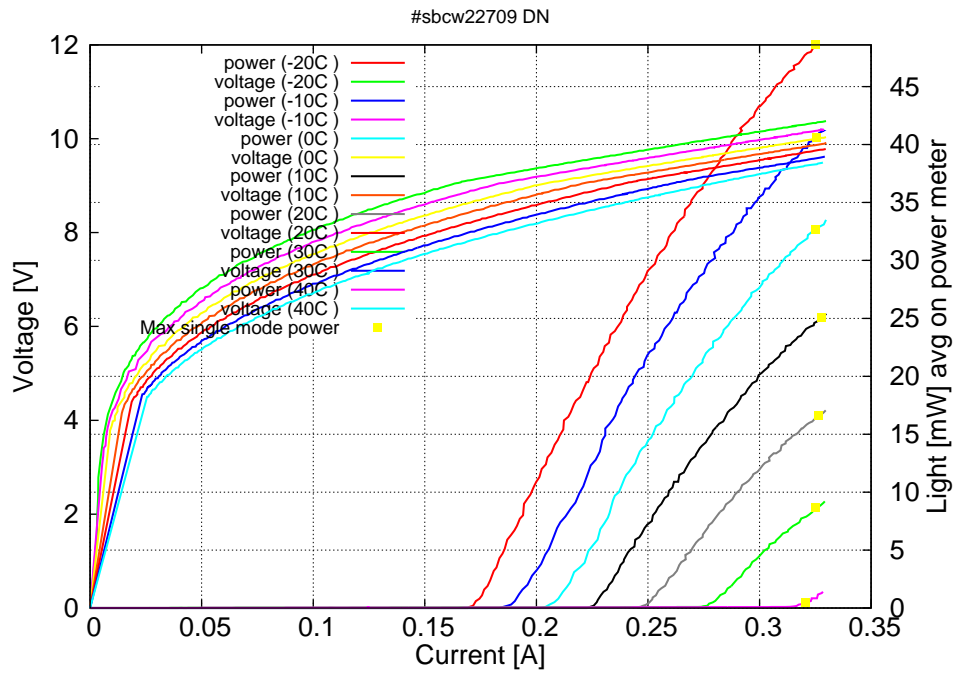


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.17A$  /  $V_{th}=9.1V$  (2-wires measurements). Maximum operation current: 0.33A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

