

**Datasheet for #sbcw22708 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 #sbcw22708 DN (please note that AlN submount numbering is A0Y1U)

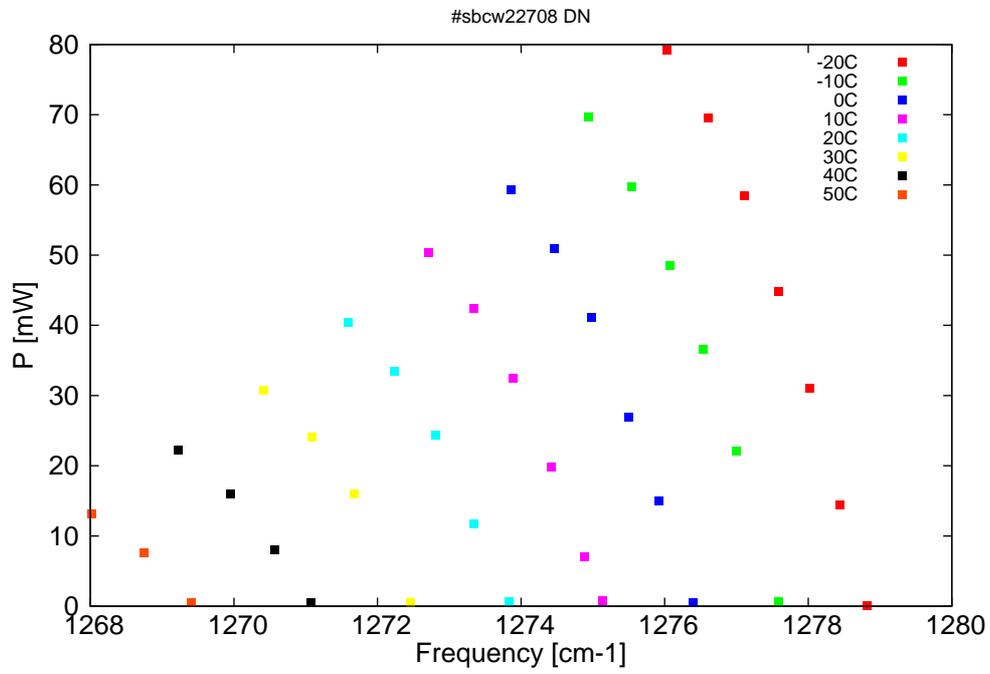


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

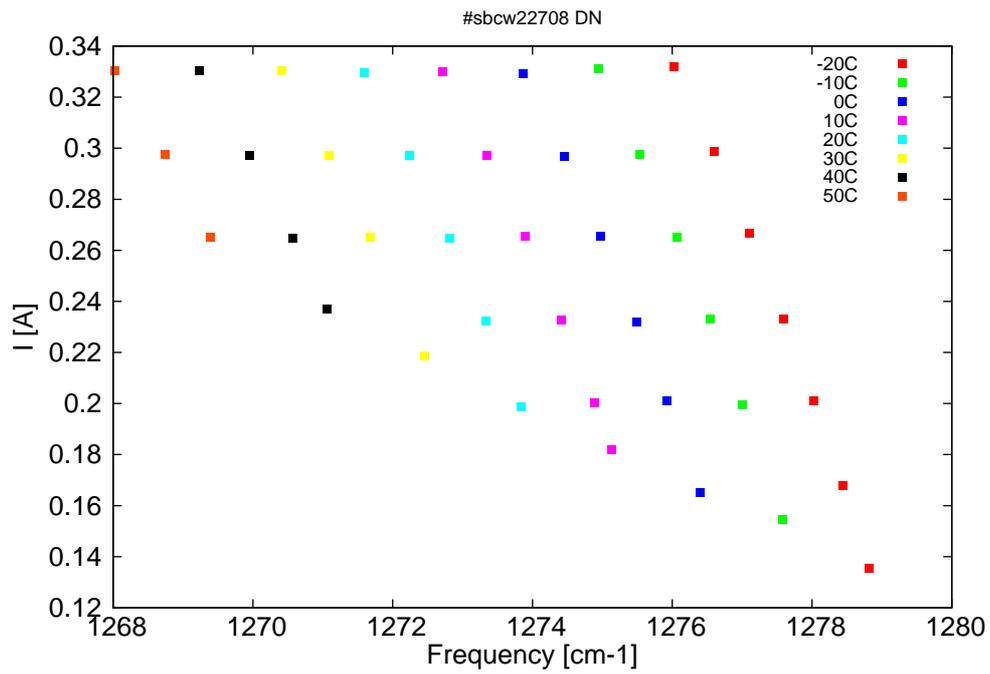


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7819.7	1278.8	0.1	-20	8.5	0.136
7822	1278.4	14.4	-20	8.77	0.168
7824.6	1278	31	-20	9.03	0.201
7827.2	1277.6	44.8	-20	9.26	0.233
7830.2	1277.1	58.4	-20	9.5	0.267
7833.3	1276.6	69.5	-20	9.71	0.299
7836.8	1276	79.1	-20	9.94	0.332
7827.3	1277.6	0.7	-10	8.46	0.154
7830.8	1277	22	-10	8.83	0.2
7833.7	1276.5	36.6	-10	9.07	0.233
7836.6	1276.1	48.6	-10	9.3	0.265
7839.8	1275.5	59.8	-10	9.52	0.298
7843.5	1274.9	69.7	-10	9.76	0.331
7834.5	1276.4	0.5	0	8.37	0.165
7837.4	1275.9	14.9	0	8.66	0.201
7840.1	1275.5	27	0	8.89	0.232
7843.3	1275	41.1	0	9.13	0.266
7846.5	1274.5	50.9	0	9.35	0.297
7850.1	1273.9	59.3	0	9.58	0.329
7842.3	1275.1	0.8	10	8.33	0.182
7843.8	1274.9	7.1	10	8.49	0.2
7846.7	1274.4	19.8	10	8.74	0.233
7850	1273.9	32.5	10	8.98	0.265
7853.4	1273.3	42.4	10	9.2	0.297
7857.2	1272.7	50.4	10	9.43	0.33
7850.3	1273.8	0.7	20	8.32	0.199
7853.4	1273.3	11.7	20	8.58	0.232
7856.6	1272.8	24.3	20	8.83	0.265
7860.2	1272.2	33.5	20	9.06	0.297
7864.1	1271.6	40.5	20	9.29	0.329
7858.8	1272.5	0.5	30	8.34	0.219
7863.6	1271.7	15.9	30	8.7	0.265
7867.3	1271.1	24.1	30	8.93	0.297
7871.4	1270.4	30.7	30	9.17	0.33
7867.4	1271.1	0.5	40	8.37	0.237
7870.5	1270.6	8	40	8.58	0.265
7874.3	1269.9	16	40	8.82	0.297
7878.8	1269.2	22.3	40	9.06	0.33
7877.7	1269.4	0.5	50	8.48	0.265
7881.8	1268.7	7.6	50	8.72	0.298
7886.3	1268	13.2	50	8.96	0.331

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

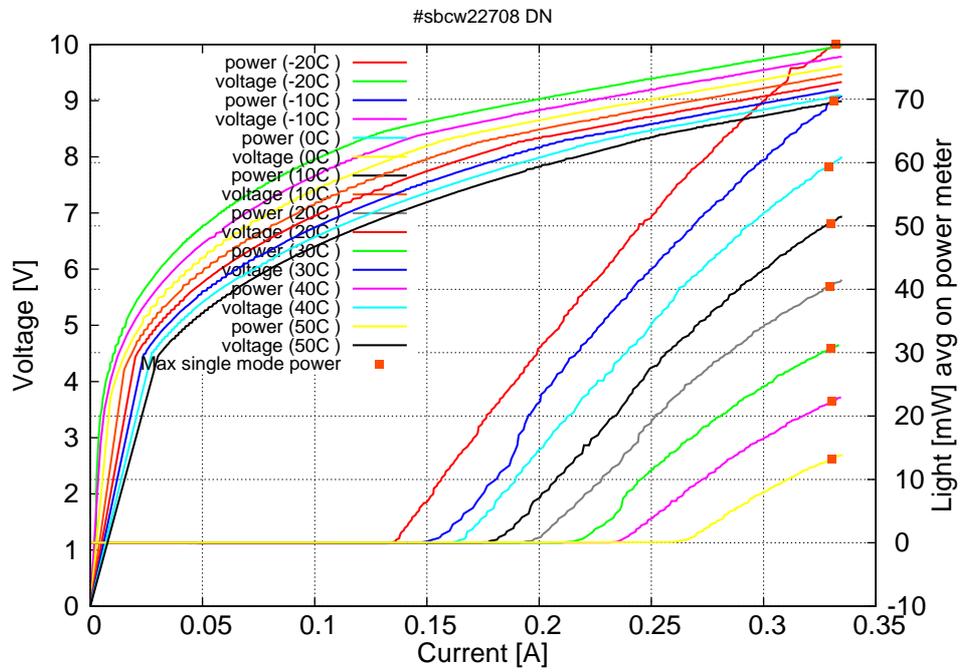


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.135A$  /  $V_{th}=8.5V$  (2-wires measurements). Maximum operation current: 0.335A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

