

**Datasheet for #sbcw23908 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 #sbcw23908 DN (please note that AlN submount numbering is A0V9V)

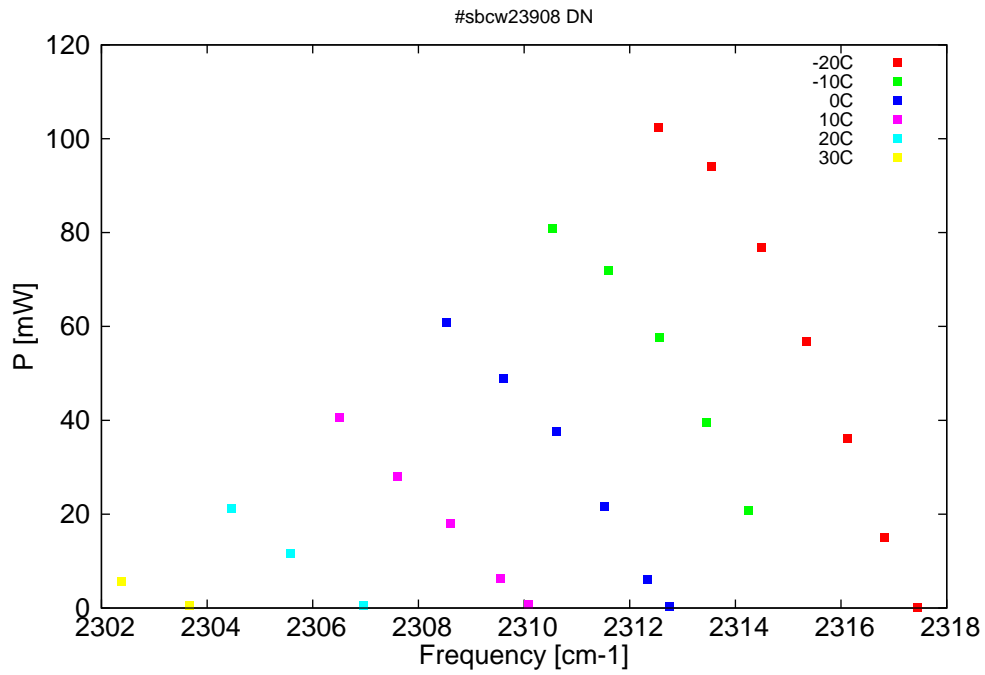


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

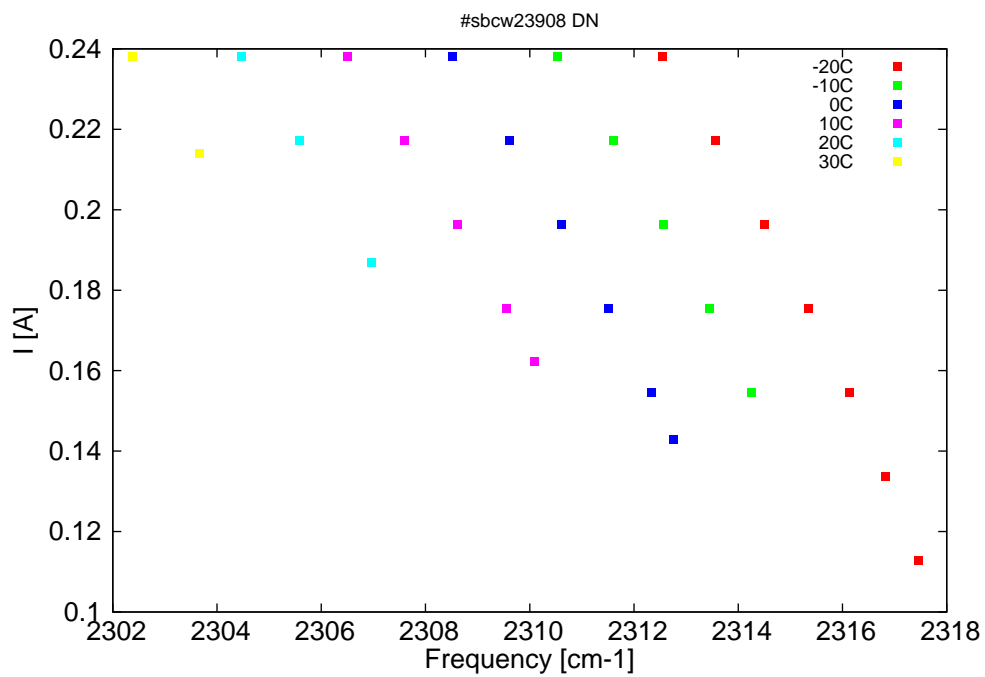


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4315.1	2317.5	0.2	-20	12.05	0.113
4316.3	2316.8	15.1	-20	12.26	0.134
4317.5	2316.1	36.1	-20	12.49	0.155
4319	2315.4	56.8	-20	12.72	0.176
4320.6	2314.5	76.7	-20	12.95	0.196
4322.3	2313.6	94	-20	13.2	0.217
4324.2	2312.5	102.5	-20	13.45	0.238
4321.1	2314.2	20.7	-10	12.41	0.155
4322.5	2313.5	39.6	-10	12.63	0.176
4324.2	2312.6	57.7	-10	12.87	0.196
4326	2311.6	72	-10	13.11	0.217
4328	2310.5	80.9	-10	13.36	0.238
4323.9	2312.8	0.4	0	12.23	0.143
4324.6	2312.3	6.2	0	12.33	0.155
4326.2	2311.5	21.7	0	12.55	0.176
4327.9	2310.6	37.7	0	12.79	0.196
4329.7	2309.6	48.8	0	13.03	0.217
4331.8	2308.5	60.8	0	13.27	0.238
4328.8	2310.1	0.7	10	12.37	0.162
4329.8	2309.6	6.2	10	12.49	0.176
4331.6	2308.6	18	10	12.72	0.196
4333.5	2307.6	28	10	12.95	0.217
4335.6	2306.5	40.6	10	13.19	0.238
4334.7	2307	0.5	20	12.59	0.187
4337.3	2305.6	11.6	20	12.88	0.217
4339.4	2304.5	21.3	20	13.11	0.238
4340.9	2303.7	0.5	30	12.82	0.214
4343.3	2302.4	5.6	30	13.06	0.238

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

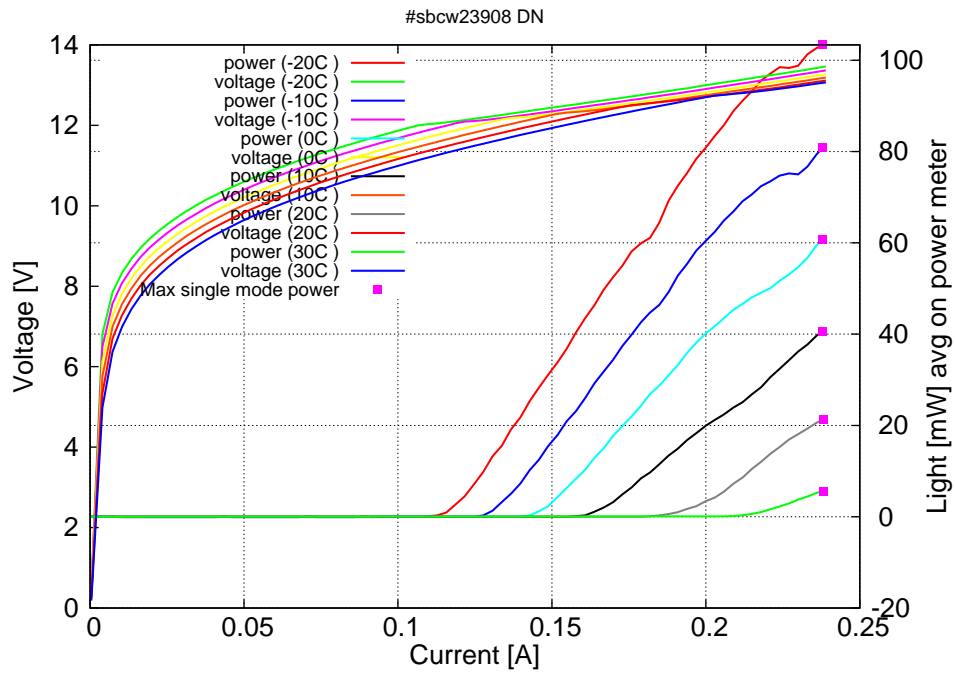


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12A$  /  $V_{th}=12.1V$  (2-wires measurements). Maximum operation current: 0.24A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

