

**Datasheet for #sbcw23907 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 #sbcw23907 DN (please note that AlN submount numbering is A0V90)

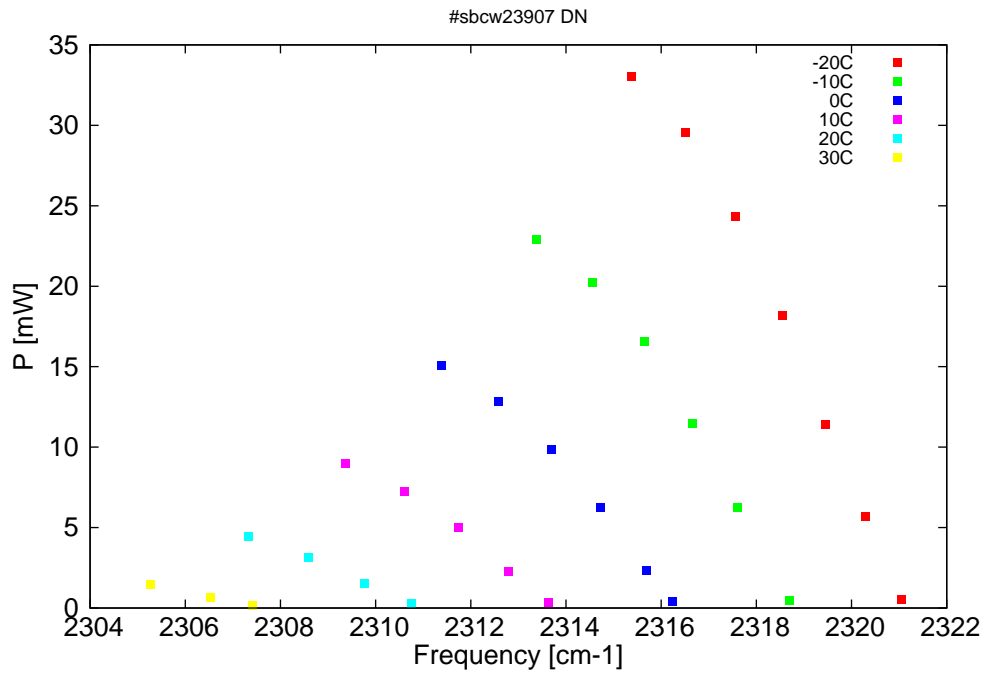


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

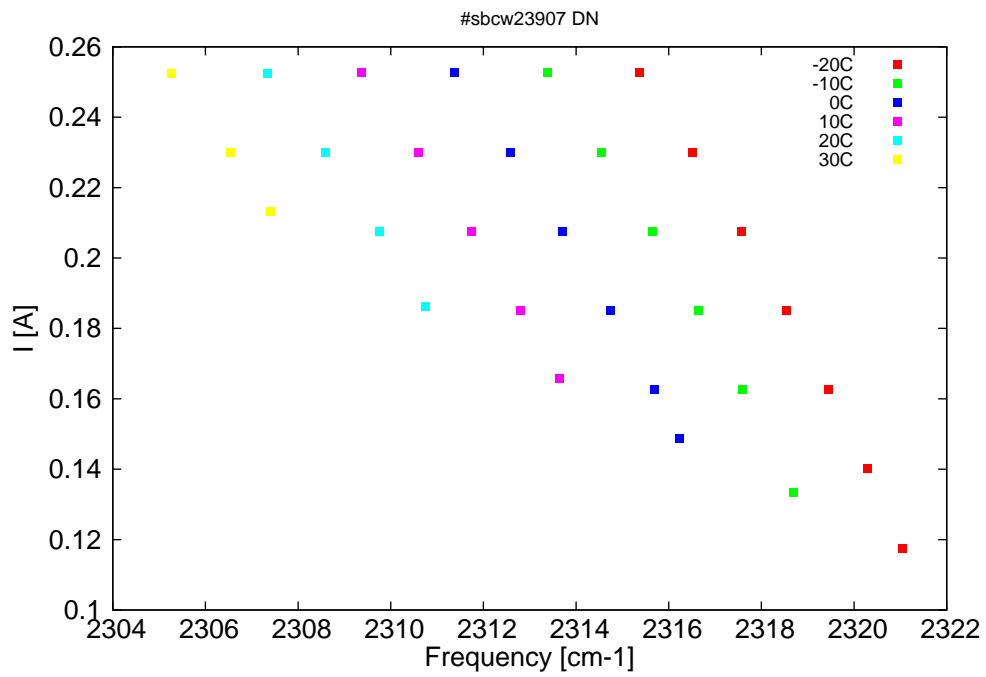


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4308.4	2321	0.6	-20	12.37	0.118
4309.8	2320.3	5.7	-20	12.64	0.14
4311.4	2319.5	11.4	-20	12.92	0.163
4313	2318.6	18.2	-20	13.19	0.185
4314.9	2317.6	24.3	-20	13.45	0.208
4316.8	2316.5	29.6	-20	13.72	0.23
4319	2315.4	33	-20	13.99	0.253
4312.8	2318.7	0.5	-10	12.47	0.133
4314.8	2317.6	6.3	-10	12.8	0.163
4316.6	2316.7	11.5	-10	13.07	0.185
4318.5	2315.6	16.6	-10	13.33	0.208
4320.5	2314.6	20.2	-10	13.6	0.23
4322.7	2313.4	22.9	-10	13.87	0.253
4317.3	2316.2	0.4	0	12.55	0.149
4318.4	2315.7	2.3	0	12.71	0.163
4320.1	2314.7	6.2	0	12.96	0.185
4322.1	2313.7	9.8	0	13.23	0.208
4324.2	2312.6	12.9	0	13.49	0.23
4326.4	2311.4	15	0	13.75	0.253
4322.2	2313.6	0.3	10	12.66	0.166
4323.8	2312.8	2.3	10	12.87	0.185
4325.7	2311.7	5	10	13.13	0.208
4327.9	2310.6	7.3	10	13.38	0.23
4330.2	2309.4	9	10	13.64	0.253
4327.6	2310.8	0.3	20	12.82	0.186
4329.4	2309.8	1.6	20	13.04	0.208
4331.6	2308.6	3.1	20	13.29	0.23
4334	2307.3	4.5	20	13.55	0.253
4333.9	2307.4	0.2	30	13.07	0.213
4335.5	2306.5	0.7	30	13.23	0.23
4337.9	2305.3	1.5	30	13.47	0.253

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

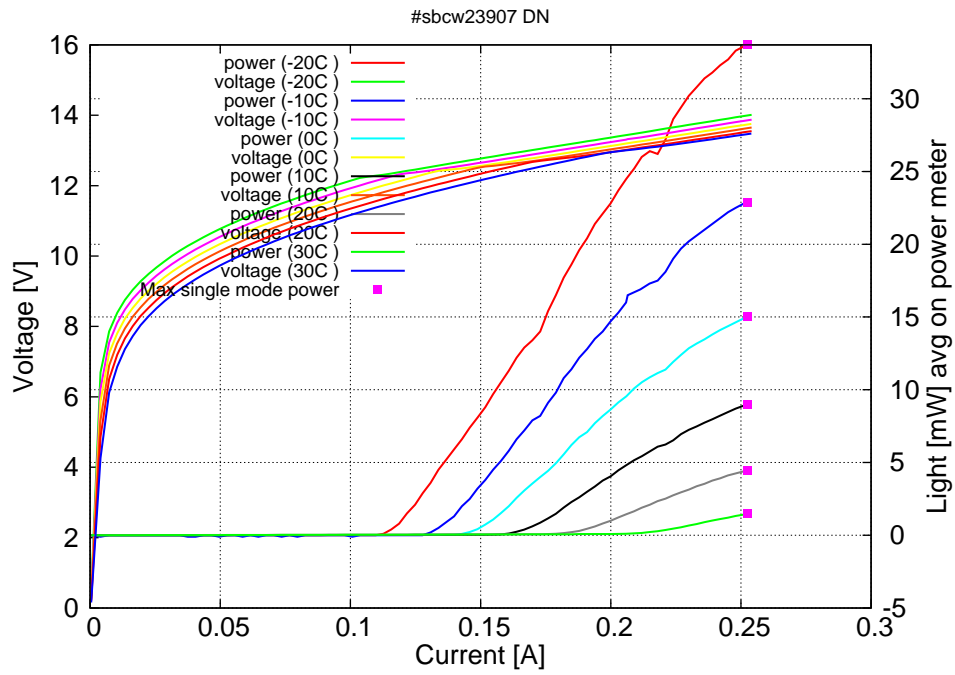


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=12.3V$  (2-wires measurements). Maximum operation current: 0.255A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

