

Datasheet for #sbcw23903 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 #sbcw23903 DN (please note that AlN submount numbering is A0VNC)

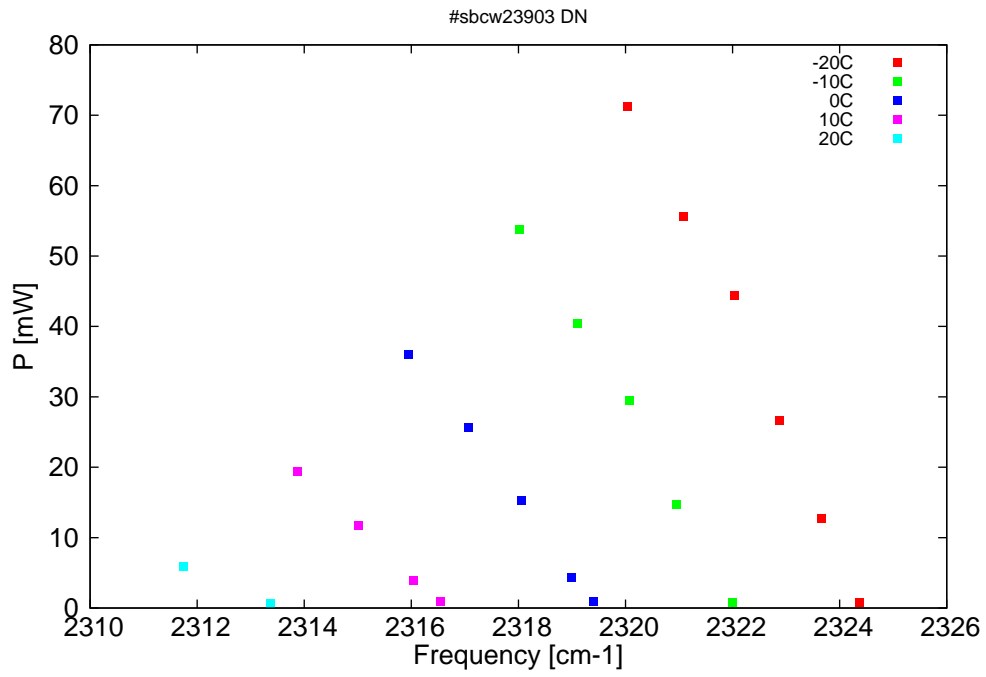


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

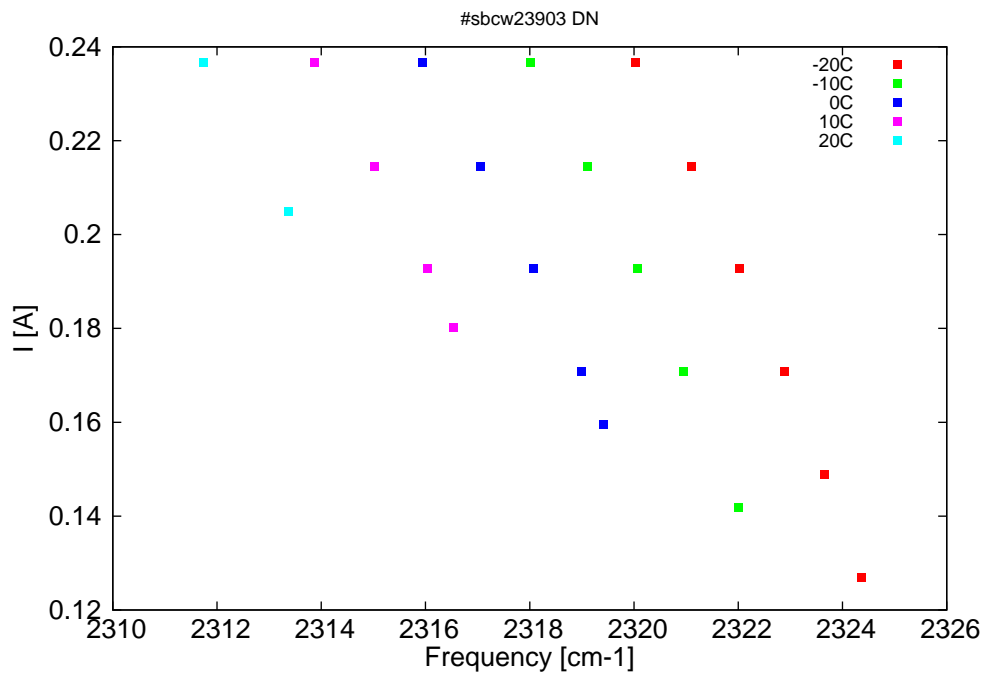


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4302.2	2324.4	0.8	-20	12.33	0.127
4303.6	2323.7	12.7	-20	12.55	0.149
4305	2322.9	26.7	-20	12.79	0.171
4306.6	2322	44.3	-20	13.04	0.193
4308.3	2321.1	55.6	-20	13.29	0.215
4310.3	2320	71.3	-20	13.55	0.237
4306.6	2322	0.8	-10	12.41	0.142
4308.6	2321	14.8	-10	12.7	0.171
4310.2	2320.1	29.5	-10	12.94	0.193
4312	2319.1	40.4	-10	13.19	0.215
4314	2318	53.7	-10	13.45	0.237
4311.4	2319.4	0.9	0	12.52	0.16
4312.2	2319	4.4	0	12.63	0.171
4313.9	2318.1	15.3	0	12.86	0.193
4315.8	2317.1	25.6	0	13.1	0.215
4317.9	2315.9	36	0	13.36	0.237
4316.8	2316.5	0.9	10	12.69	0.18
4317.7	2316	3.9	10	12.8	0.193
4319.6	2315	11.7	10	13.03	0.215
4321.8	2313.9	19.4	10	13.28	0.237
4322.7	2313.4	0.6	20	12.91	0.205
4325.7	2311.7	5.9	20	13.23	0.237

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

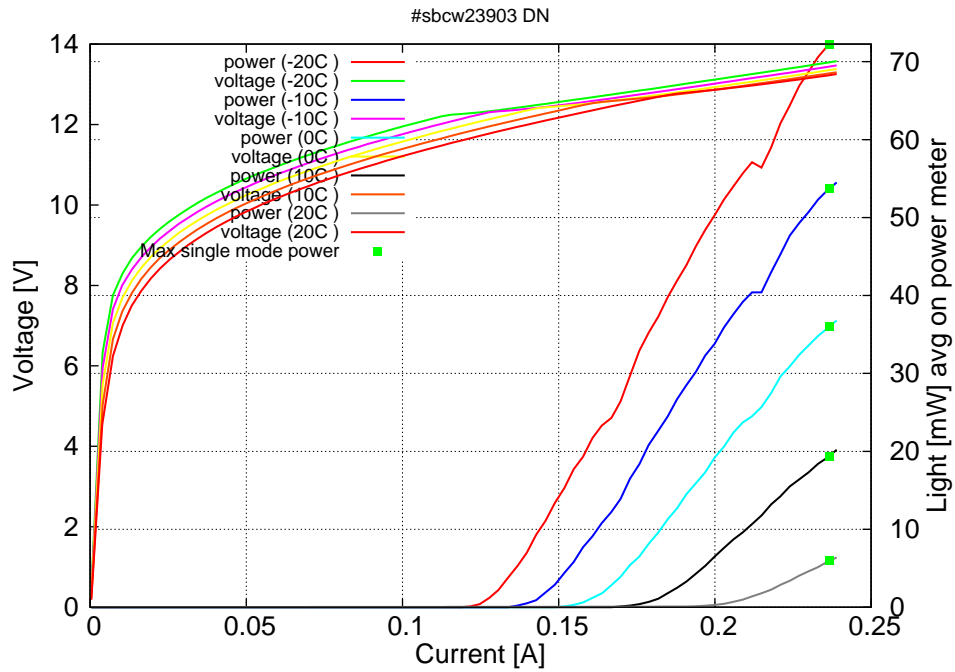


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.24A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

