

Datasheet for #sbcw23902 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 #sbcw23902 DN (please note that AlN submount numbering is A0U3W)

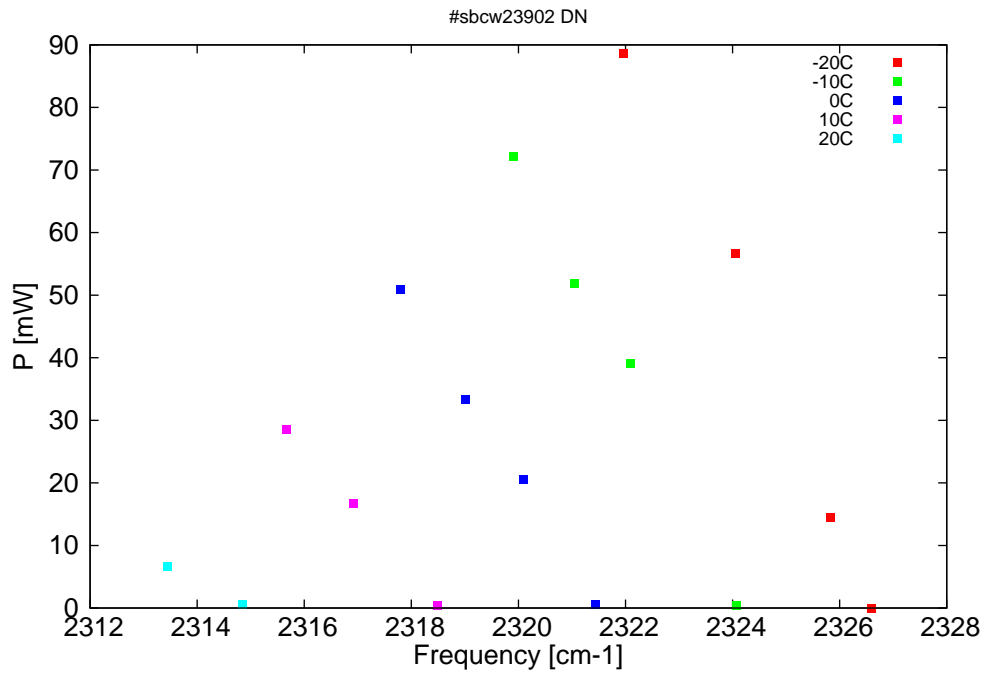


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

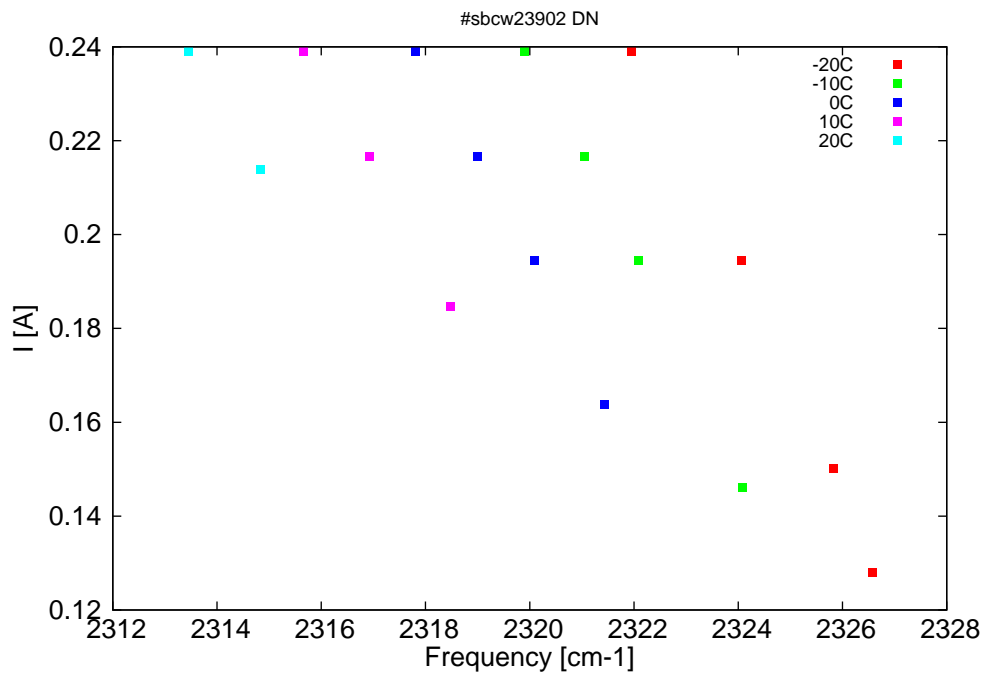


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4298.1	2326.6	0	-20	12.85	0.128
4299.5	2325.8	14.4	-20	13.08	0.15
4302.8	2324.1	56.6	-20	13.6	0.195
4306.7	2322	88.7	-20	14.1	0.239
4302.8	2324.1	0.4	-10	12.94	0.146
4306.5	2322.1	39	-10	13.49	0.195
4308.4	2321	51.8	-10	13.74	0.217
4310.5	2319.9	72.2	-10	13.99	0.239
4307.7	2321.4	0.6	0	13.06	0.164
4310.2	2320.1	20.6	0	13.39	0.195
4312.2	2319	33.4	0	13.64	0.217
4314.4	2317.8	50.8	0	13.89	0.239
4313.2	2318.5	0.5	10	13.23	0.185
4316.1	2316.9	16.7	10	13.56	0.217
4318.4	2315.7	28.6	10	13.82	0.239
4319.9	2314.8	0.6	20	13.5	0.214
4322.6	2313.4	6.7	20	13.78	0.239

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

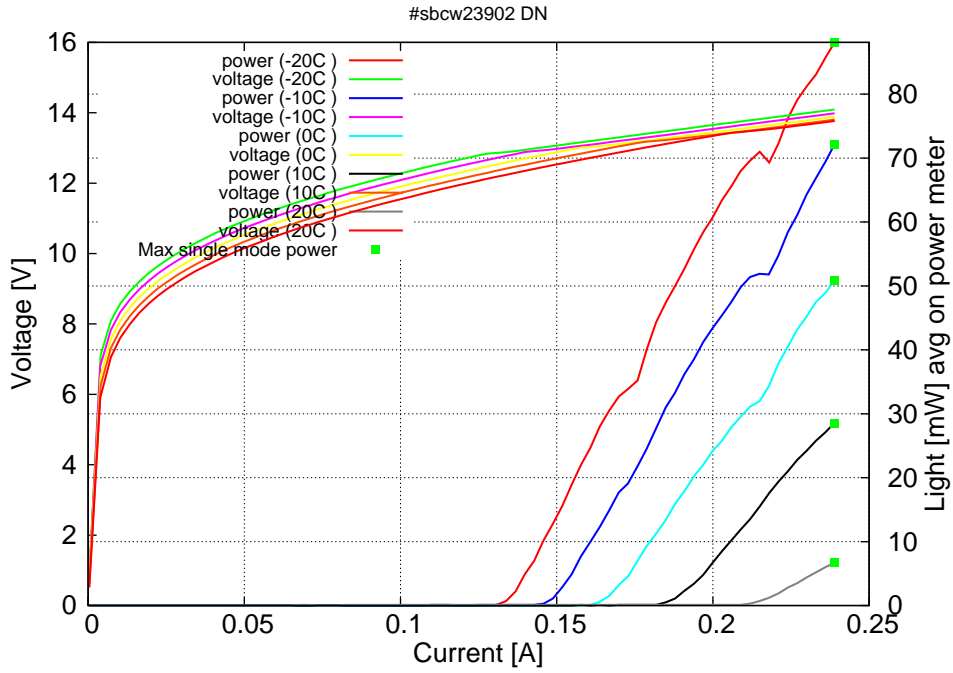


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=12.9V$ (2-wires measurements). Maximum operation current: 0.24A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

