

Datasheet for #sbcw23905 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 #sbcw23905 DN (please note that AlN submount numbering is A0W3J)

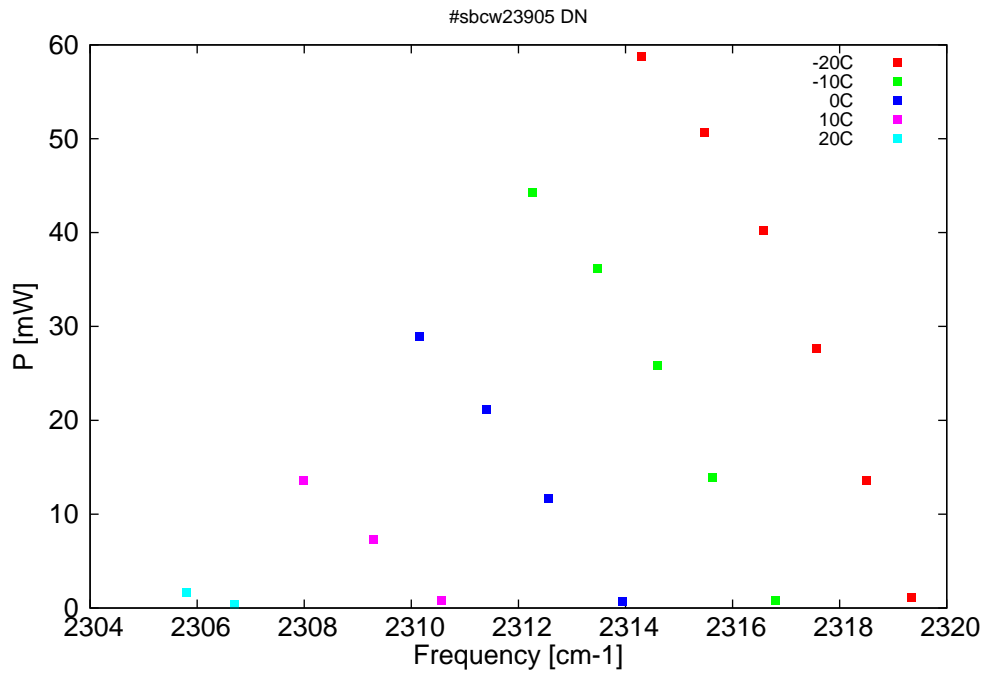


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

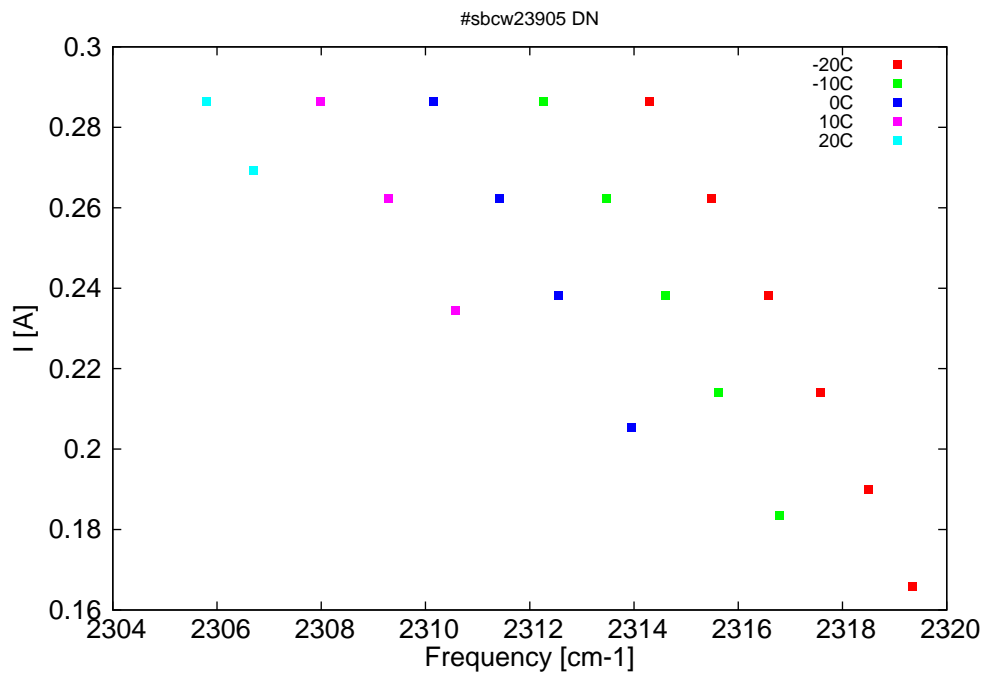


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4311.6	2319.3	1.1	-20	12.35	0.166
4313.1	2318.5	13.5	-20	12.55	0.19
4314.9	2317.6	27.7	-20	12.76	0.214
4316.7	2316.6	40.2	-20	12.97	0.238
4318.8	2315.5	50.6	-20	13.19	0.262
4321	2314.3	58.7	-20	13.41	0.286
4316.3	2316.8	0.8	-10	12.43	0.184
4318.5	2315.6	13.9	-10	12.67	0.214
4320.4	2314.6	25.8	-10	12.88	0.238
4322.5	2313.5	36.1	-10	13.1	0.262
4324.8	2312.3	44.3	-10	13.32	0.286
4321.6	2313.9	0.6	0	12.55	0.205
4324.2	2312.6	11.7	0	12.8	0.238
4326.4	2311.4	21.2	0	13.02	0.262
4328.7	2310.2	28.9	0	13.24	0.286
4327.9	2310.6	0.8	10	12.74	0.235
4330.3	2309.3	7.3	10	12.96	0.262
4332.8	2308	13.6	10	13.17	0.286
4335.2	2306.7	0.4	20	13.02	0.269
4336.9	2305.8	1.6	20	13.15	0.286

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

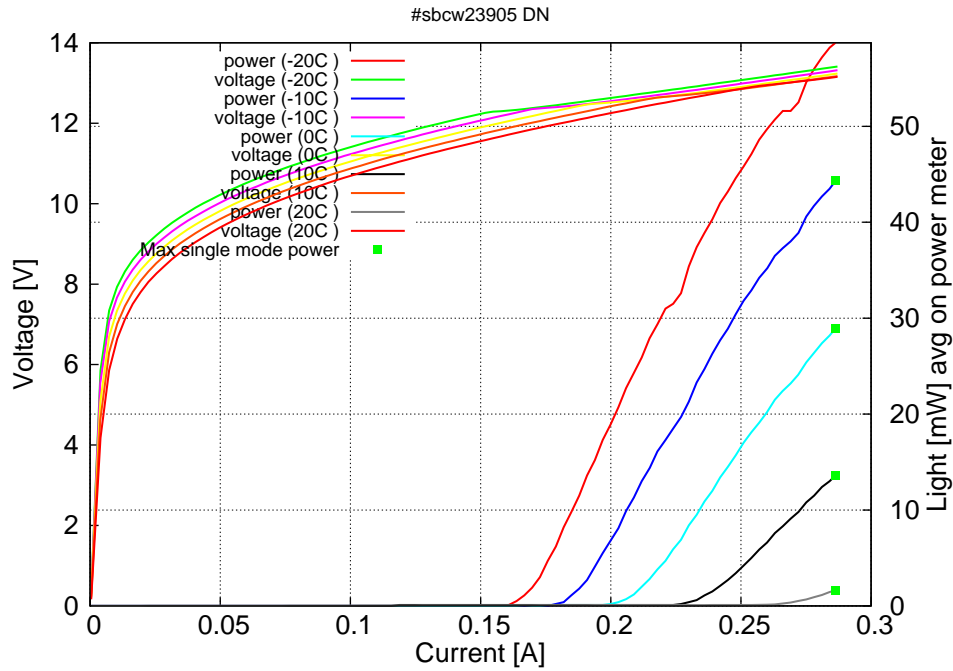


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

