

Datasheet for #sbcw23919 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 #sbcw23919 DN (please note that AlN submount numbering is A0V8R)

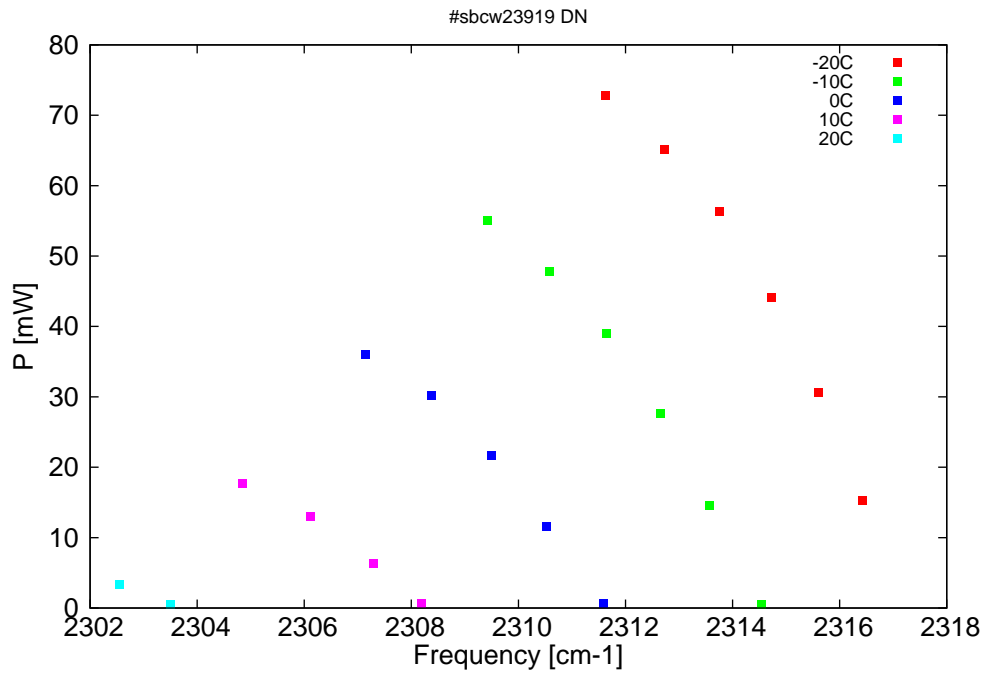


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

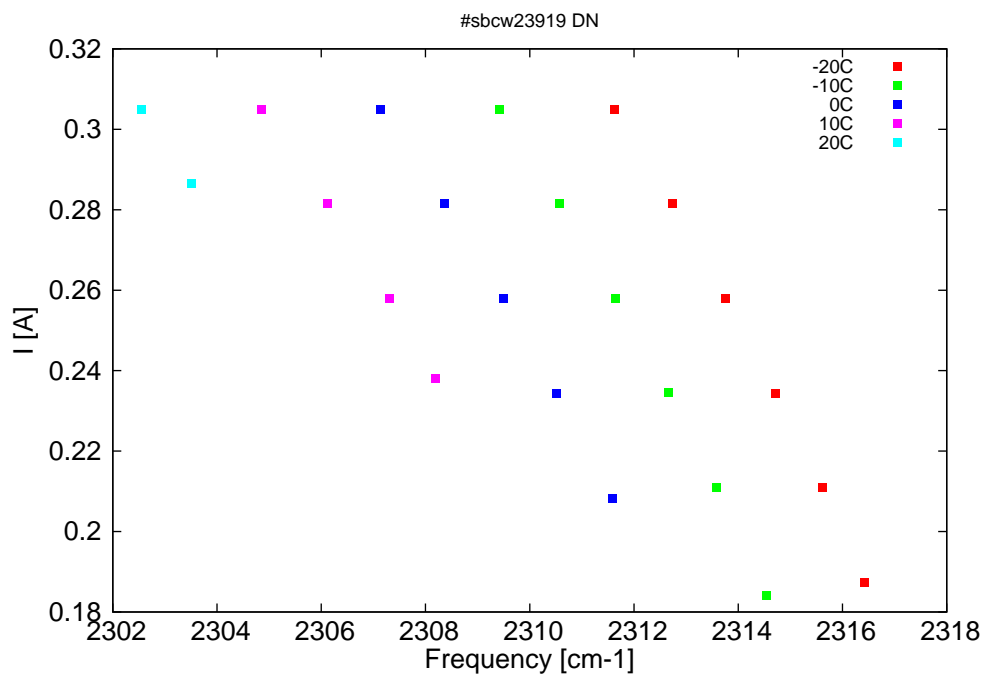


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4317	2316.4	15.2	-20	12.44	0.187
4318.5	2315.6	30.7	-20	12.63	0.211
4320.2	2314.7	44.1	-20	12.82	0.234
4322	2313.8	56.3	-20	13.01	0.258
4323.9	2312.7	65.1	-20	13.19	0.282
4326	2311.6	72.9	-20	13.38	0.305
4320.5	2314.5	0.6	-10	12.33	0.184
4322.3	2313.6	14.6	-10	12.54	0.211
4324	2312.7	27.6	-10	12.73	0.235
4325.9	2311.7	39	-10	12.91	0.258
4327.9	2310.6	47.8	-10	13.1	0.282
4330.1	2309.4	55.1	-10	13.29	0.305
4326	2311.6	0.6	0	12.44	0.208
4328	2310.5	11.5	0	12.64	0.234
4330	2309.5	21.7	0	12.83	0.258
4332.1	2308.4	30.1	0	13.02	0.282
4334.4	2307.1	36	0	13.22	0.305
4332.4	2308.2	0.7	10	12.62	0.238
4334.1	2307.3	6.4	10	12.77	0.258
4336.3	2306.1	13	10	12.96	0.282
4338.7	2304.9	17.7	10	13.15	0.305
4341.2	2303.5	0.5	20	12.97	0.287
4343	2302.6	3.3	20	13.1	0.305

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

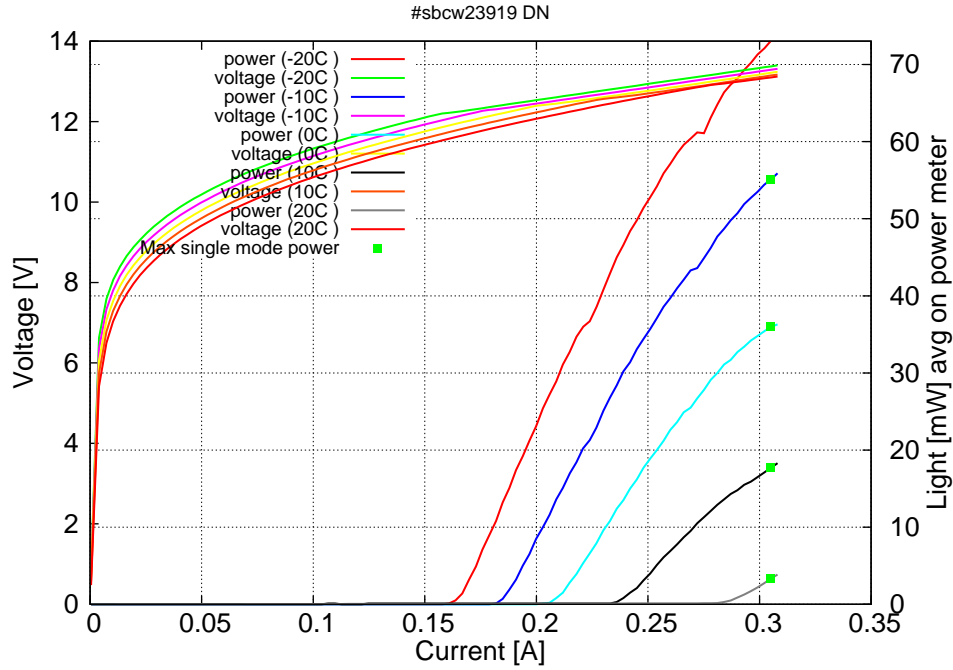


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=12.2V$ (2-wires measurements). Maximum operation current: 0.310A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

