

Datasheet for #sbcw19934 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 #sbcw19934 DN (please note that AlN submount numbering is A0MJ9)

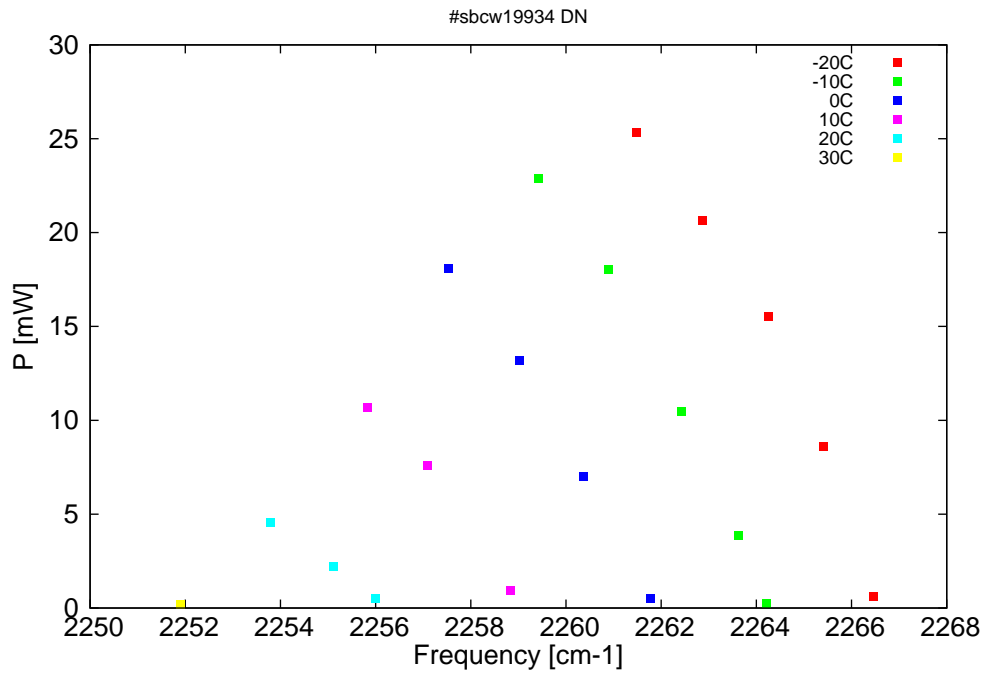


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

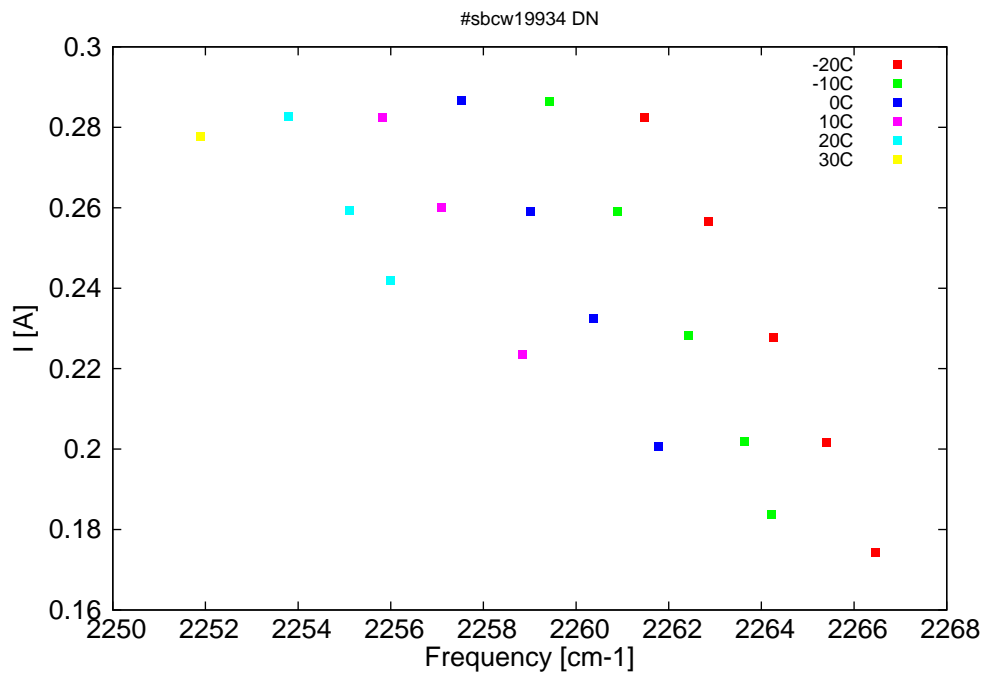


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4412.2	2266.5	0.6	-20	13.15	0.174
4414.2	2265.4	8.6	-20	13.43	0.202
4416.4	2264.3	15.5	-20	13.72	0.228
4419.2	2262.9	20.7	-20	14.05	0.257
4421.9	2261.5	25.3	-20	14.34	0.283
4416.6	2264.2	0.3	-10	13.15	0.184
4417.7	2263.6	3.9	-10	13.29	0.202
4420	2262.4	10.5	-10	13.58	0.228
4423	2260.9	18	-10	13.92	0.259
4425.9	2259.4	22.9	-10	14.22	0.286
4421.3	2261.8	0.5	0	13.19	0.201
4424.1	2260.4	7	0	13.5	0.233
4426.7	2259	13.2	0	13.78	0.259
4429.6	2257.5	18.1	0	14.08	0.287
4427.1	2258.8	0.9	10	13.33	0.224
4430.5	2257.1	7.6	10	13.66	0.26
4433	2255.8	10.7	10	13.9	0.282
4432.6	2256	0.5	20	13.43	0.242
4434.4	2255.1	2.2	20	13.57	0.259
4437	2253.8	4.6	20	13.79	0.283
4440.7	2251.9	0.2	30	13.71	0.278

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

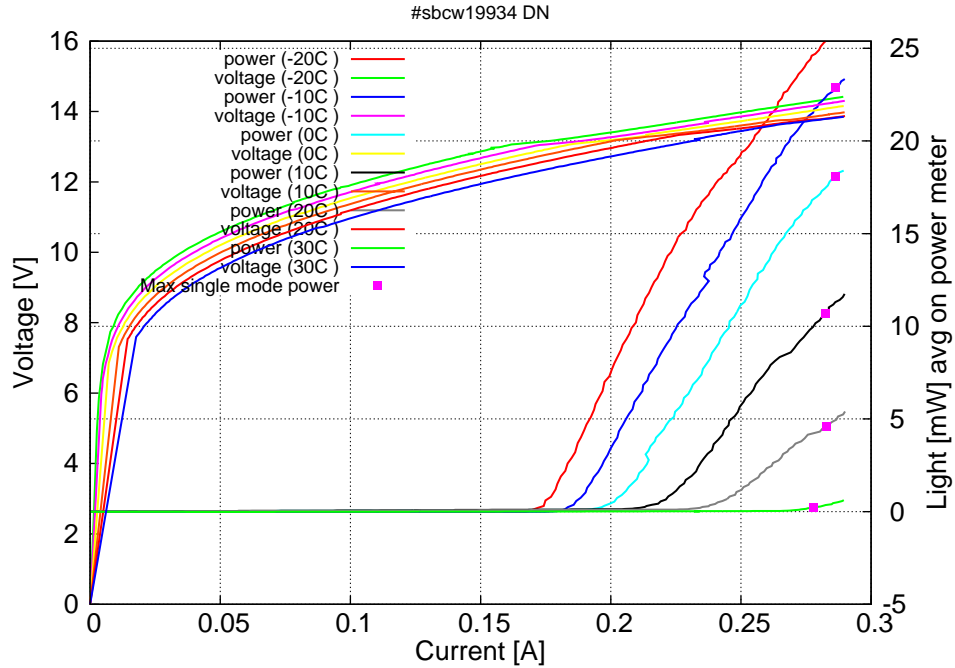


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=13.1V$ (2-wires measurements). Maximum operation

current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

