

Datasheet for #sbcw19808 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 #sbcw19808 DN (please note that AlN submount numbering is A0RCM)

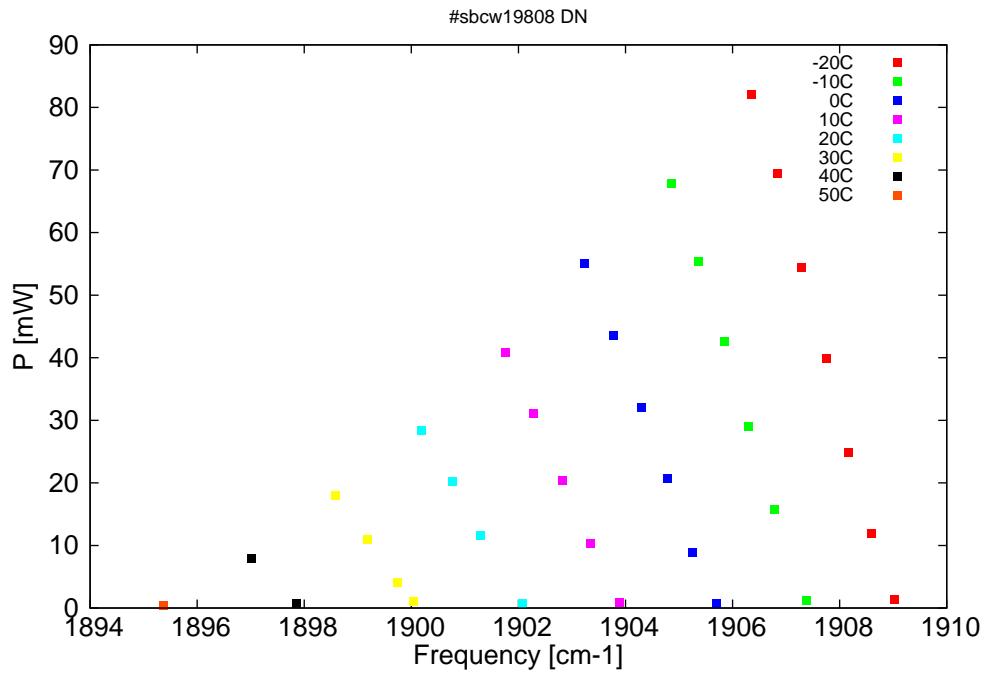


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

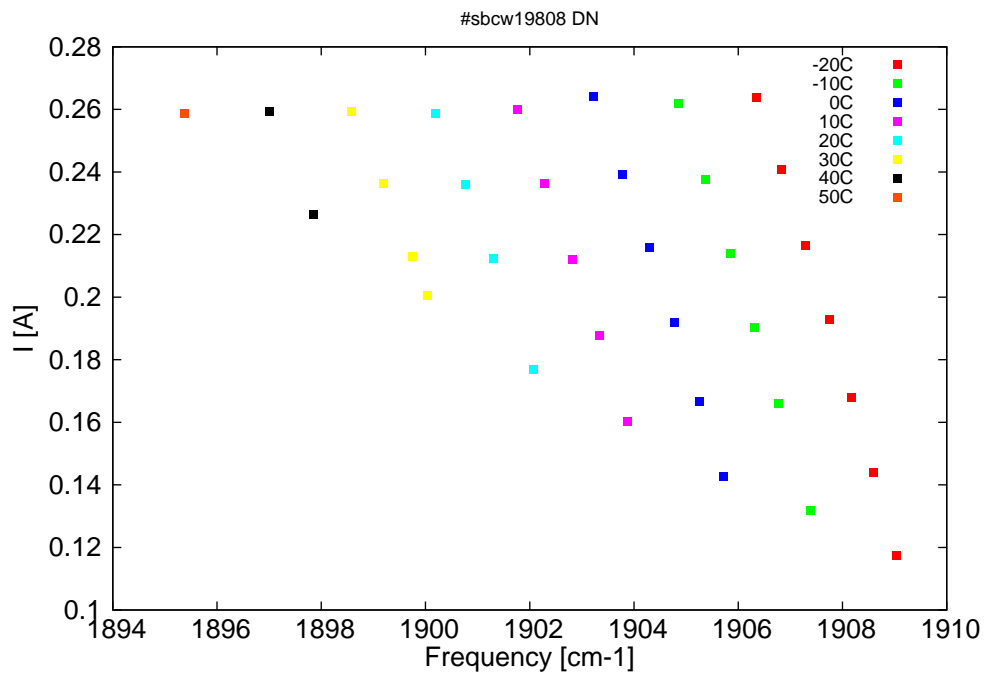


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5238.3	1909	1.3	-20	7.6	0.117
5239.5	1908.6	11.9	-20	7.82	0.144
5240.6	1908.2	24.8	-20	8.03	0.168
5241.8	1907.7	39.9	-20	8.24	0.193
5243	1907.3	54.4	-20	8.44	0.217
5244.3	1906.8	69.4	-20	8.65	0.241
5245.6	1906.3	82.1	-20	8.86	0.264
5242.8	1907.4	1.2	-10	7.65	0.132
5244.4	1906.8	15.8	-10	7.94	0.166
5245.7	1906.3	29.1	-10	8.15	0.19
5247	1905.8	42.5	-10	8.35	0.214
5248.3	1905.4	55.4	-10	8.56	0.238
5249.7	1904.9	67.8	-10	8.77	0.262
5247.4	1905.7	0.7	0	7.64	0.143
5248.6	1905.3	8.9	0	7.84	0.167
5250	1904.8	20.7	0	8.05	0.192
5251.3	1904.3	32	0	8.24	0.216
5252.7	1903.8	43.6	0	8.44	0.239
5254.2	1903.2	55.1	0	8.65	0.264
5252.4	1903.9	0.8	10	7.71	0.16
5253.9	1903.3	10.3	10	7.93	0.188
5255.3	1902.8	20.4	10	8.13	0.212
5256.8	1902.3	31	10	8.33	0.236
5258.3	1901.8	40.9	10	8.53	0.26
5257.4	1902.1	0.7	20	7.79	0.177
5259.6	1901.3	11.5	20	8.08	0.212
5261.1	1900.8	20.3	20	8.27	0.236
5262.6	1900.2	28.4	20	8.46	0.259
5263	1900	1	30	7.92	0.201
5263.9	1899.7	4.1	30	8.02	0.213
5265.4	1899.2	10.9	30	8.22	0.236
5267.1	1898.6	17.9	30	8.41	0.259
5269.1	1897.9	0.8	40	8.08	0.226
5271.5	1897	7.9	40	8.35	0.259
5276	1895.4	0.4	50	8.31	0.259

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

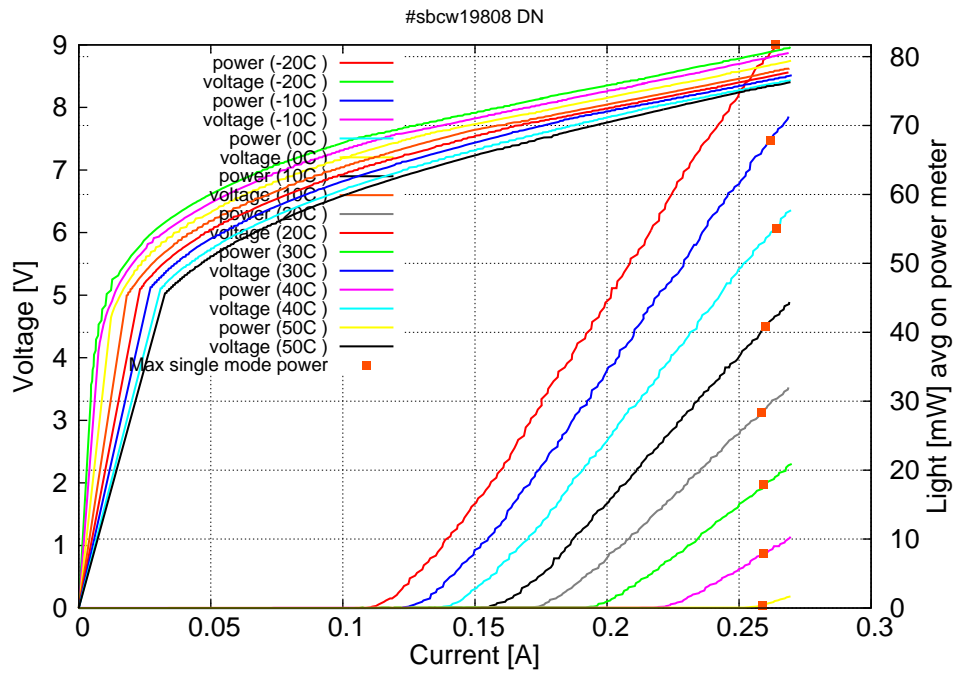


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.270A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

