

Datasheet for #sbcw19804 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 #sbcw19804 DN (please note that AlN submount numbering is A0PL8)

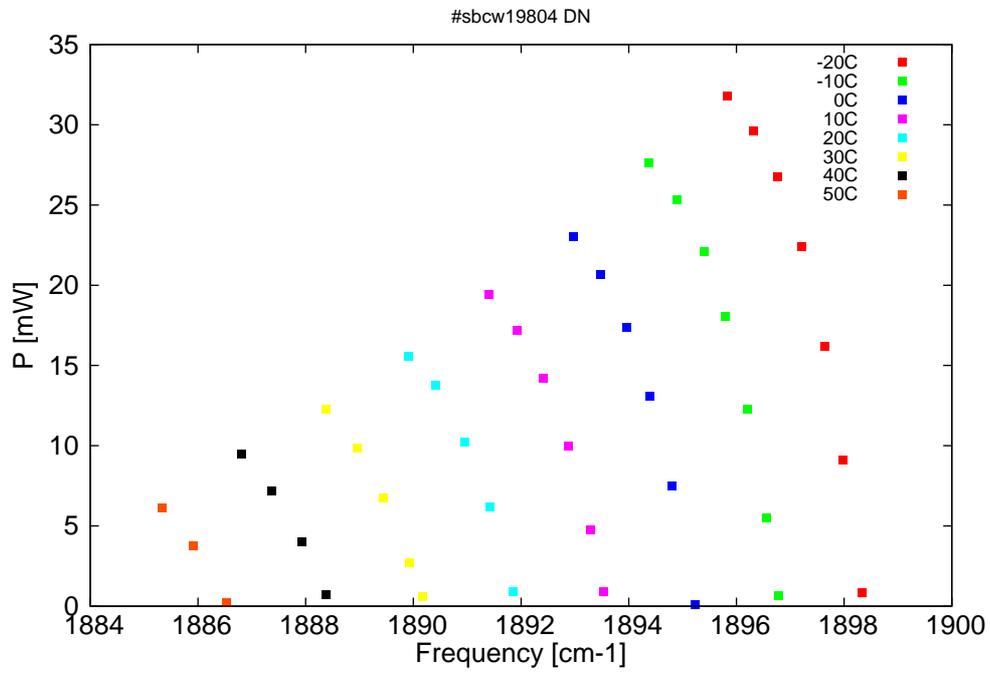


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

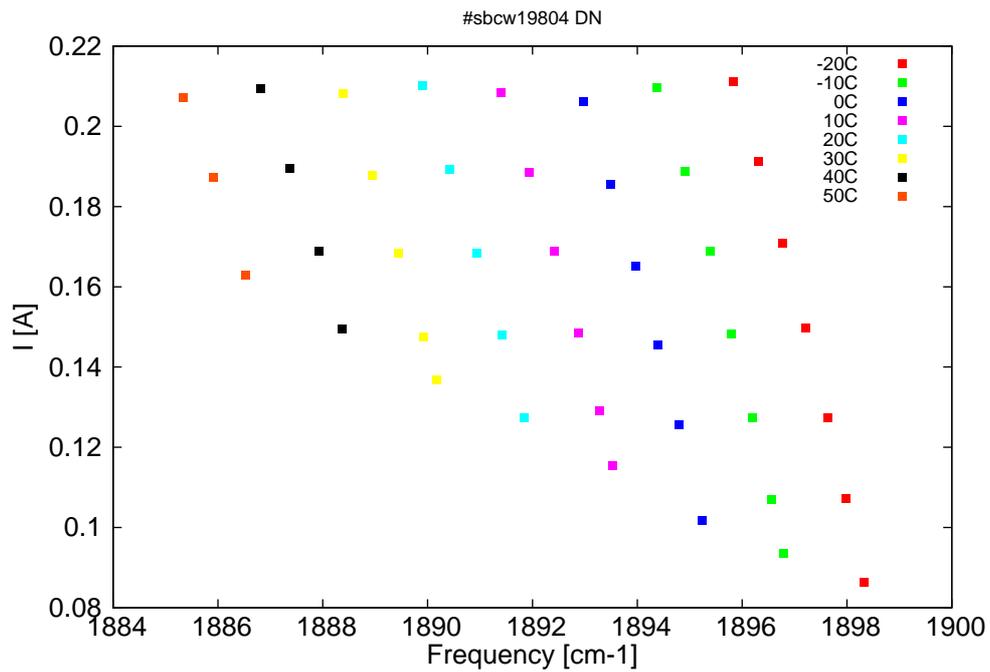


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5267.8	1898.3	0.8	-20	7.34	0.086
5268.7	1898	9.1	-20	7.53	0.107
5269.7	1897.6	16.2	-20	7.71	0.127
5270.9	1897.2	22.4	-20	7.91	0.15
5272.1	1896.8	26.7	-20	8.1	0.171
5273.4	1896.3	29.6	-20	8.3	0.191
5274.7	1895.8	31.8	-20	8.5	0.211
5272.1	1896.8	0.6	-10	7.35	0.094
5272.7	1896.6	5.5	-10	7.48	0.107
5273.7	1896.2	12.3	-10	7.66	0.127
5274.8	1895.8	18.1	-10	7.85	0.148
5275.9	1895.4	22.1	-10	8.04	0.169
5277.3	1894.9	25.4	-10	8.22	0.189
5278.8	1894.4	27.6	-10	8.43	0.21
5276.4	1895.2	0.1	0	7.38	0.102
5277.6	1894.8	7.5	0	7.6	0.126
5278.7	1894.4	13.1	0	7.78	0.145
5279.9	1894	17.4	0	7.96	0.165
5281.3	1893.5	20.6	0	8.15	0.186
5282.7	1893	23	0	8.36	0.206
5281.1	1893.5	0.9	10	7.47	0.115
5281.8	1893.3	4.8	10	7.59	0.129
5283	1892.9	10	10	7.77	0.148
5284.3	1892.4	14.2	10	7.96	0.169
5285.6	1891.9	17.2	10	8.15	0.189
5287.1	1891.4	19.5	10	8.34	0.208
5285.8	1891.8	0.9	20	7.55	0.127
5287	1891.4	6.2	20	7.74	0.148
5288.4	1890.9	10.2	20	7.93	0.168
5289.8	1890.4	13.8	20	8.13	0.189
5291.3	1889.9	15.5	20	8.34	0.21
5290.5	1890.2	0.6	30	7.59	0.137
5291.2	1889.9	2.7	30	7.69	0.148
5292.5	1889.4	6.7	30	7.88	0.168
5293.9	1889	9.8	30	8.07	0.188
5295.5	1888.4	12.3	30	8.27	0.208
5295.6	1888.4	0.7	40	7.67	0.149
5296.8	1887.9	4	40	7.84	0.169
5298.4	1887.4	7.2	40	8.04	0.189
5299.9	1886.8	9.5	40	8.24	0.209
5300.7	1886.5	0.2	50	7.71	0.163
5302.5	1885.9	3.8	50	7.97	0.187
5304.1	1885.3	6.1	50	8.17	0.207

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

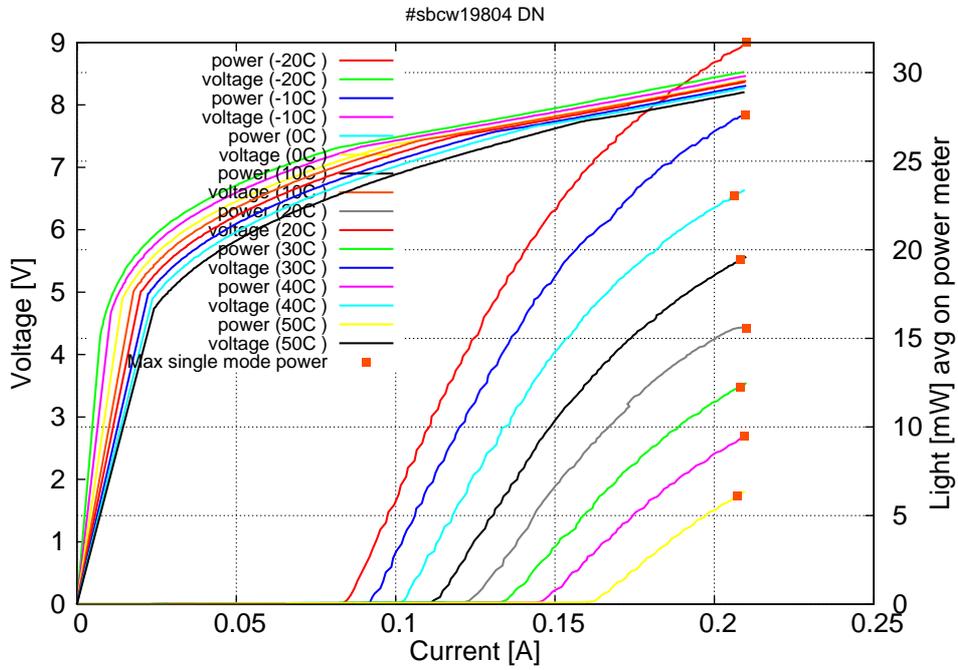


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.3V$ (2-wires measurements). Maximum operation current: 0.210A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

