

Datasheet for #sbcw19803 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 #sbcw19803 DN (please note that AlN submount numbering is A0PMU)

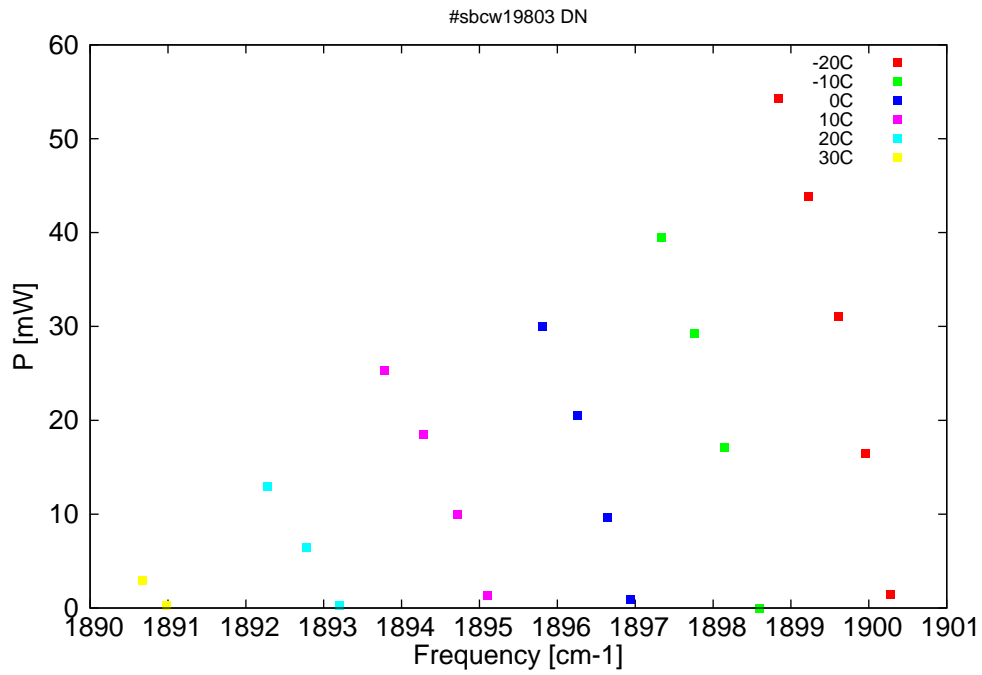


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

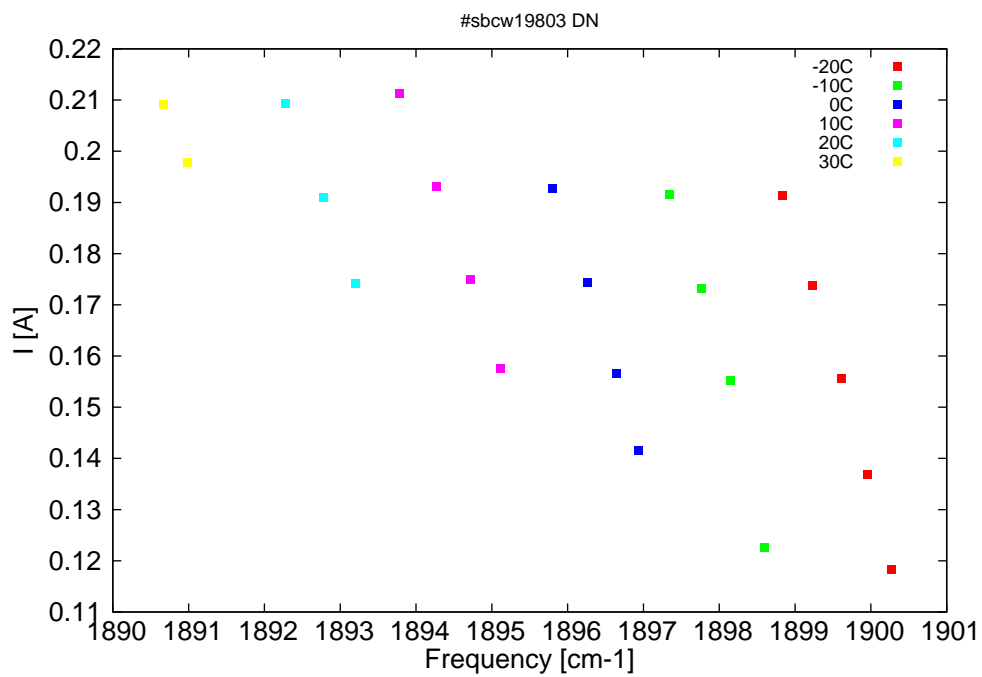


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5262.4	1900.3	1.5	-20	8.04	0.118
5263.3	1900	16.5	-20	8.23	0.137
5264.2	1899.6	31.1	-20	8.44	0.156
5265.3	1899.2	43.9	-20	8.65	0.174
5266.4	1898.8	54.3	-20	8.87	0.191
5267.1	1898.6	0	-10	8.08	0.123
5268.3	1898.1	17.1	-10	8.38	0.155
5269.4	1897.8	29.2	-10	8.59	0.173
5270.5	1897.3	39.5	-10	8.82	0.192
5271.7	1896.9	0.9	0	8.2	0.141
5272.5	1896.6	9.7	0	8.35	0.157
5273.6	1896.3	20.5	0	8.55	0.174
5274.8	1895.8	30	0	8.78	0.193
5276.7	1895.1	1.3	10	8.34	0.158
5277.8	1894.7	10	10	8.52	0.175
5279.1	1894.3	18.5	10	8.74	0.193
5280.5	1893.8	25.3	10	8.97	0.211
5282.1	1893.2	0.3	20	8.49	0.174
5283.2	1892.8	6.5	20	8.68	0.191
5284.7	1892.3	13	20	8.91	0.209
5288.3	1891	0.3	30	8.75	0.198
5289.1	1890.7	3	30	8.88	0.209

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

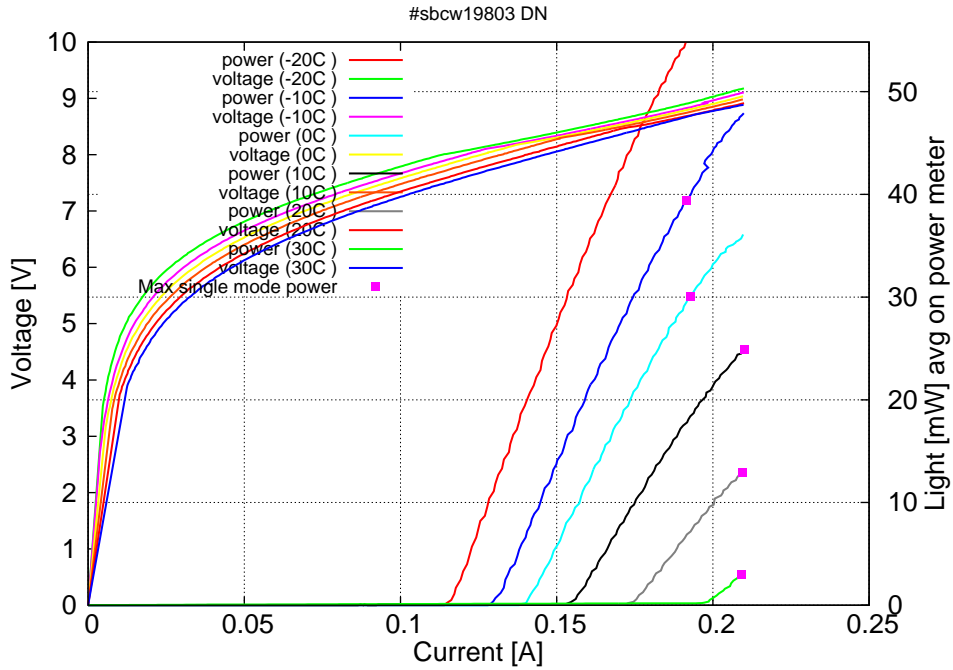


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.195A between -20C and 0C, 0.21A between 10C and 30C.

Figure 3: spectra at different temperatures for various DC currents

