

Datasheet for #sbcw19773 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 #sbcw19773 DN (please note that AlN submount numbering is A0RXV)

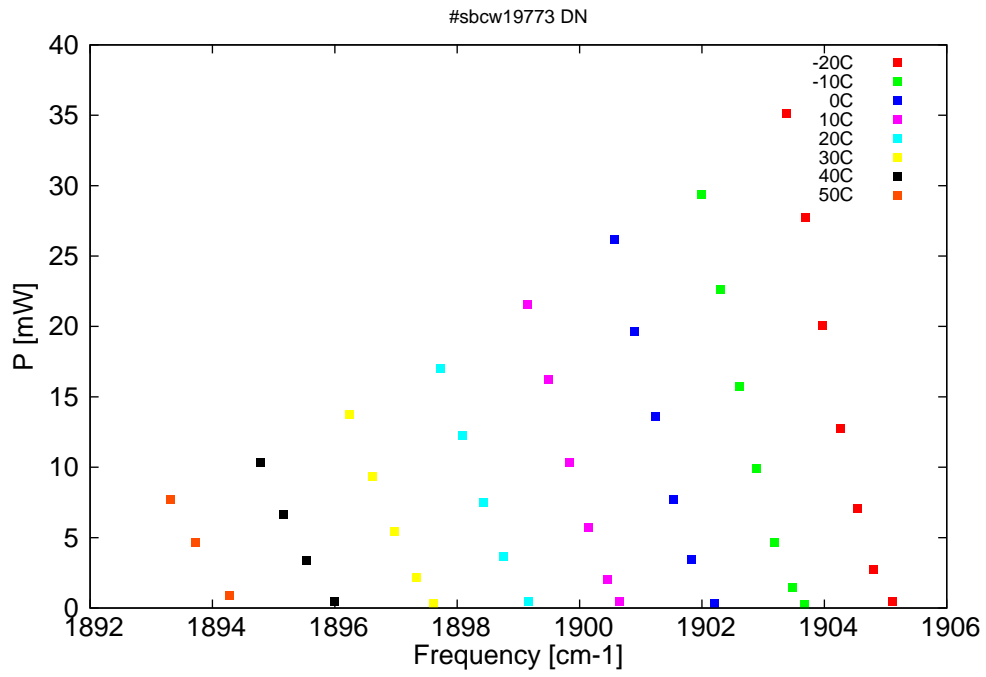


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

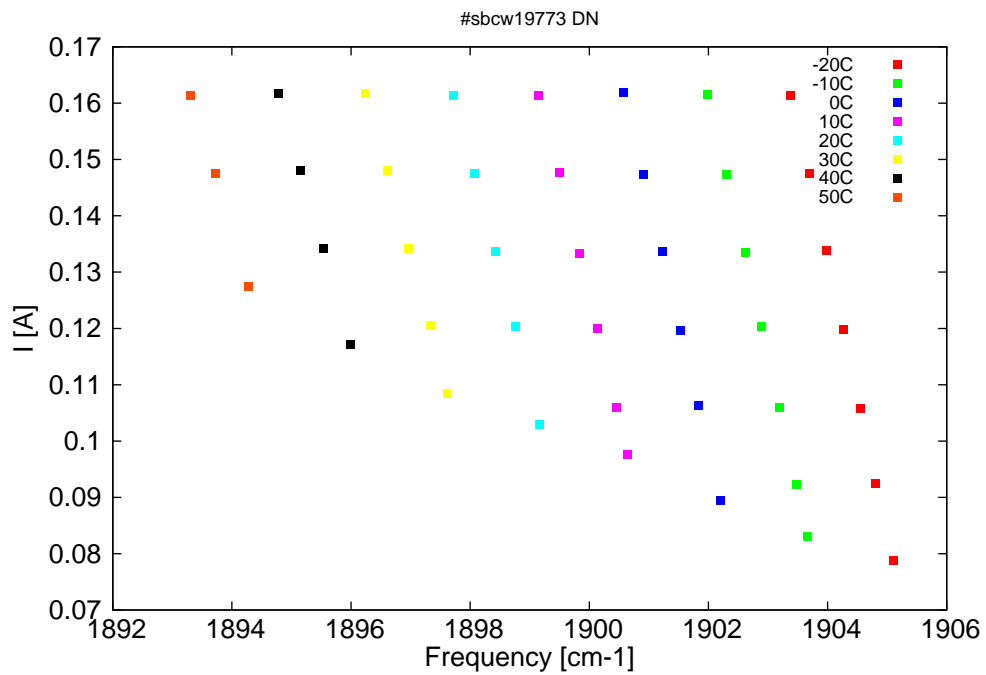


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5249.1	1905.1	0.4	-20	7.49	0.079
5249.9	1904.8	2.8	-20	7.67	0.093
5250.6	1904.5	7.1	-20	7.83	0.106
5251.4	1904.3	12.7	-20	7.99	0.12
5252.2	1904	20.1	-20	8.17	0.134
5252.9	1903.7	27.8	-20	8.35	0.147
5253.8	1903.4	35.1	-20	8.55	0.161
5253	1903.7	0.2	-10	7.51	0.083
5253.6	1903.5	1.5	-10	7.63	0.092
5254.3	1903.2	4.7	-10	7.8	0.106
5255.2	1902.9	9.9	-10	7.97	0.12
5255.9	1902.6	15.7	-10	8.14	0.134
5256.8	1902.3	22.6	-10	8.33	0.147
5257.7	1902	29.4	-10	8.54	0.162
5257.1	1902.2	0.3	0	7.56	0.089
5258.1	1901.8	3.4	0	7.78	0.106
5258.9	1901.5	7.7	0	7.94	0.12
5259.7	1901.2	13.6	0	8.12	0.134
5260.7	1900.9	19.6	0	8.32	0.147
5261.6	1900.6	26.2	0	8.53	0.162
5261.4	1900.6	0.5	10	7.64	0.098
5261.9	1900.5	2.1	10	7.75	0.106
5262.8	1900.1	5.7	10	7.93	0.12
5263.6	1899.8	10.4	10	8.11	0.133
5264.6	1899.5	16.2	10	8.31	0.148
5265.5	1899.2	21.6	10	8.52	0.161
5265.5	1899.2	0.5	20	7.68	0.103
5266.6	1898.8	3.7	20	7.92	0.12
5267.5	1898.4	7.5	20	8.1	0.134
5268.5	1898.1	12.2	20	8.3	0.147
5269.5	1897.7	17	20	8.51	0.161
5269.8	1897.6	0.3	30	7.78	0.108
5270.6	1897.3	2.2	30	7.95	0.121
5271.6	1897	5.5	30	8.14	0.134
5272.5	1896.6	9.3	30	8.35	0.148
5273.6	1896.2	13.7	30	8.57	0.162
5274.3	1896	0.5	40	7.89	0.117
5275.5	1895.5	3.4	40	8.14	0.134
5276.6	1895.2	6.6	40	8.35	0.148
5277.7	1894.8	10.3	40	8.57	0.162
5279.1	1894.3	0.9	50	8.02	0.127
5280.6	1893.7	4.7	50	8.33	0.148
5281.8	1893.3	7.7	50	8.55	0.161

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

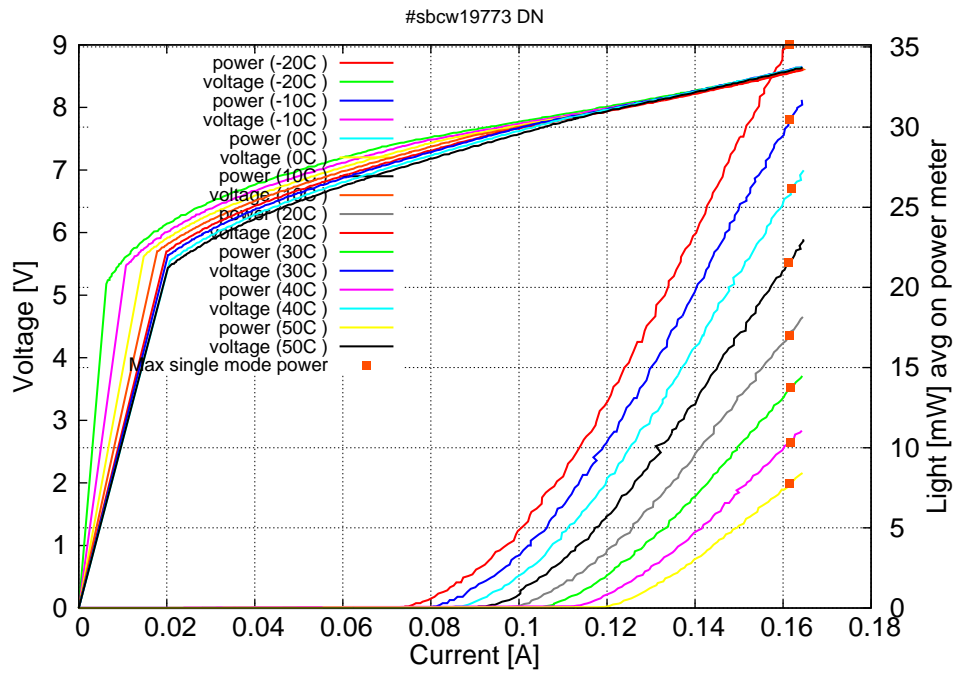


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.075A$ / $V_{th}=7.48V$ (2-wires measurements). Maximum operation current: 0.165A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

