

Datasheet for #sbcw19772 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 #sbcw19772 DN (please note that AlN submount numbering is A0R2C)

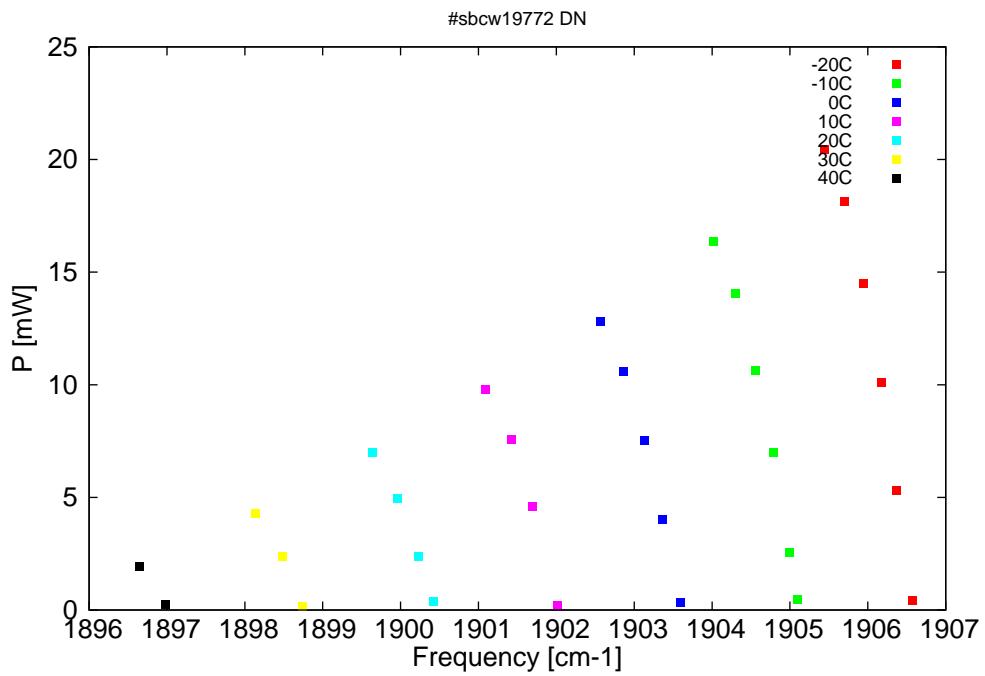


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

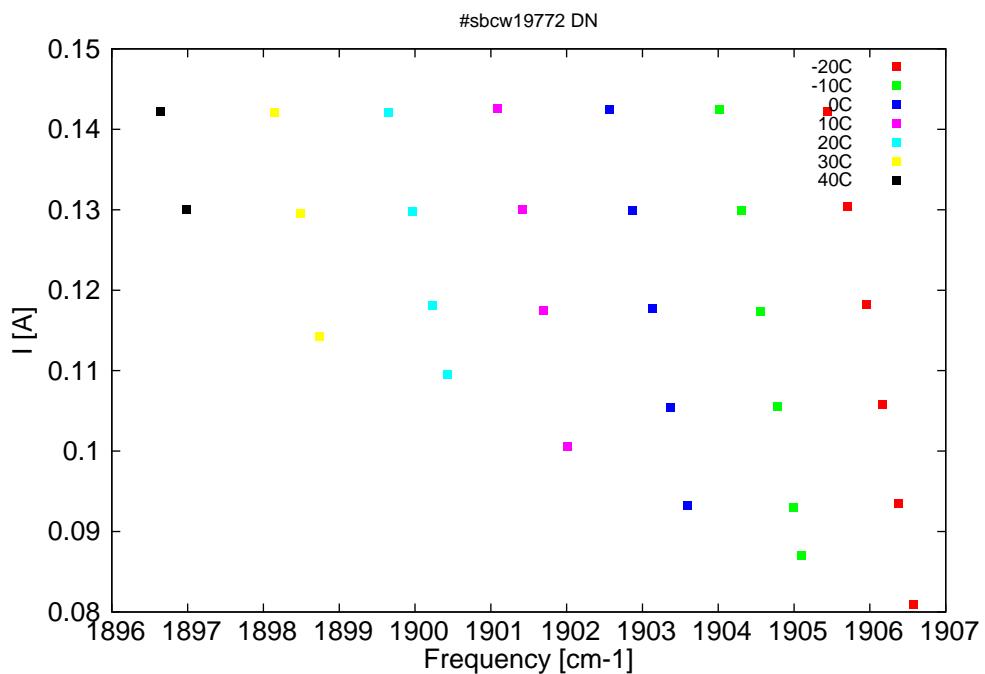


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5245	1906.6	0.4	-20	7.84	0.081
5245.6	1906.4	5.3	-20	8.04	0.093
5246.1	1906.2	10.1	-20	8.24	0.106
5246.7	1905.9	14.5	-20	8.45	0.118
5247.4	1905.7	18.1	-20	8.69	0.13
5248.1	1905.4	20.4	-20	8.93	0.142
5249.1	1905.1	0.5	-10	7.9	0.087
5249.4	1905	2.5	-10	7.99	0.093
5249.9	1904.8	7	-10	8.21	0.106
5250.6	1904.6	10.6	-10	8.42	0.117
5251.3	1904.3	14.1	-10	8.66	0.13
5252.1	1904	16.4	-10	8.92	0.142
5253.2	1903.6	0.3	0	7.97	0.093
5253.8	1903.4	4	0	8.18	0.105
5254.5	1903.1	7.5	0	8.39	0.118
5255.2	1902.9	10.6	0	8.63	0.13
5256.1	1902.6	12.8	0	8.9	0.142
5257.6	1902	0.2	10	8.08	0.101
5258.5	1901.7	4.6	10	8.37	0.117
5259.2	1901.4	7.6	10	8.61	0.13
5260.1	1901.1	9.8	10	8.88	0.143
5262	1900.4	0.4	20	8.21	0.11
5262.5	1900.2	2.4	20	8.36	0.118
5263.3	1900	5	20	8.6	0.13
5264.1	1899.6	7	20	8.85	0.142
5266.6	1898.7	0.1	30	8.34	0.114
5267.4	1898.5	2.4	30	8.57	0.13
5268.3	1898.1	4.3	30	8.84	0.142
5271.5	1897	0.2	40	8.54	0.13
5272.5	1896.6	2	40	8.78	0.142

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

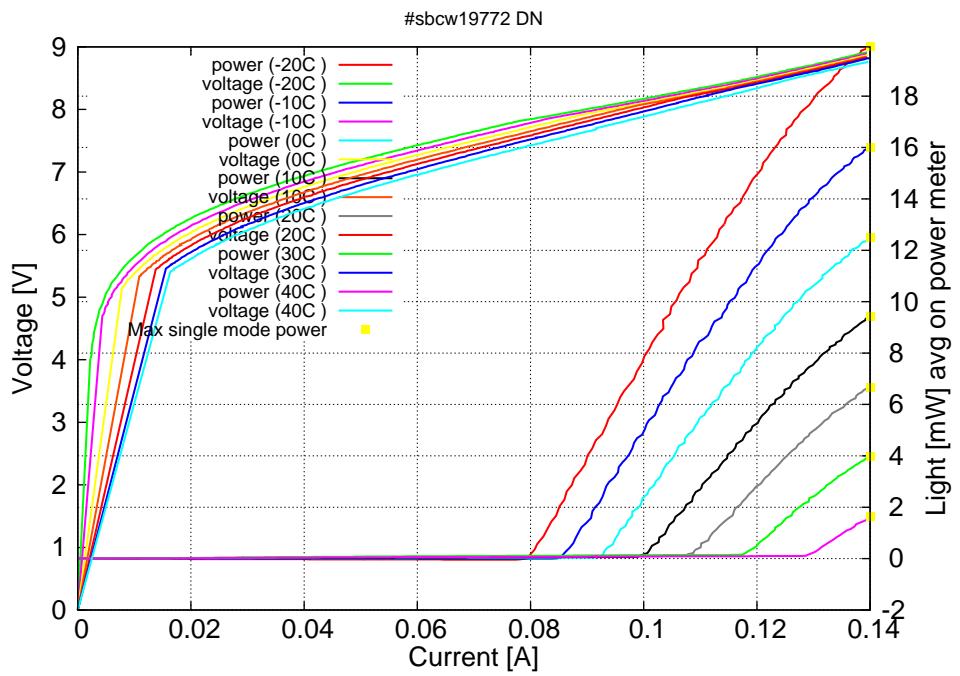


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.8V$ (2-wires measurements). Maximum operation current: 0.14A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

