

Datasheet for #sbcw19774 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 #sbcw19774 DN (please note that AlN submount numbering is A0RLR)

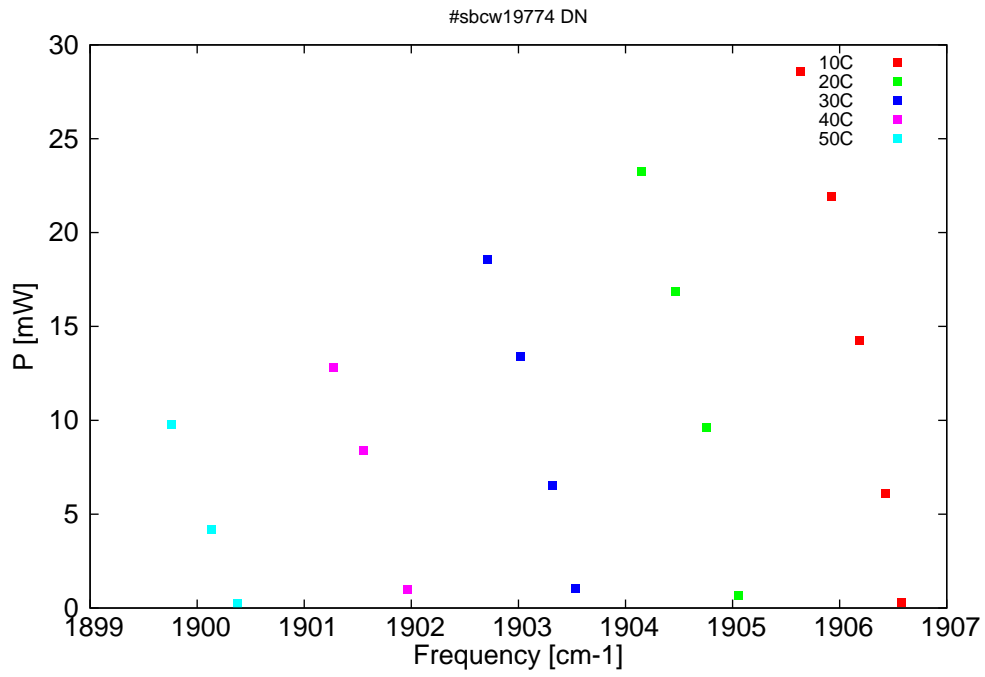


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

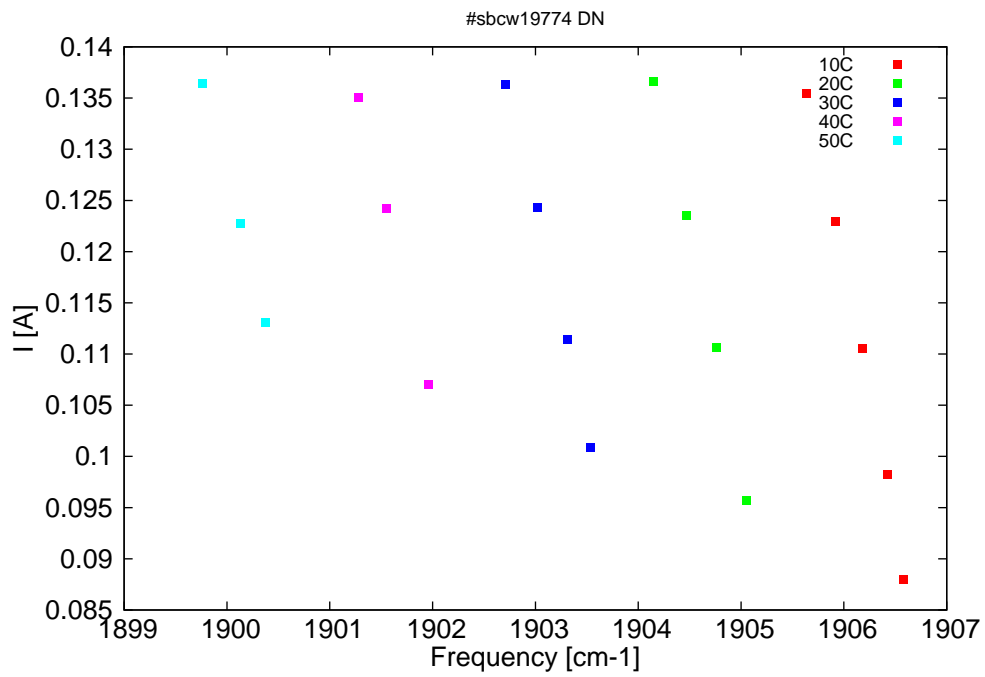


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
5245	1906.6	0.3	10	7.89	0.088
5245.4	1906.4	6.1	10	8.03	0.098
5246.1	1906.2	14.2	10	8.24	0.111
5246.8	1905.9	21.9	10	8.47	0.123
5247.6	1905.6	28.6	10	8.7	0.135
5249.2	1905.1	0.7	20	7.95	0.096
5250	1904.8	9.6	20	8.21	0.111
5250.8	1904.5	16.9	20	8.45	0.124
5251.7	1904.1	23.2	20	8.71	0.137
5253.4	1903.5	1	30	8.01	0.101
5254	1903.3	6.5	30	8.19	0.111
5254.8	1903	13.4	30	8.42	0.124
5255.7	1902.7	18.6	30	8.66	0.136
5257.7	1902	1	40	8.08	0.107
5258.9	1901.6	8.4	40	8.39	0.124
5259.6	1901.3	12.8	40	8.6	0.135
5262.1	1900.4	0.2	50	8.14	0.113
5262.8	1900.1	4.2	50	8.32	0.123
5263.8	1899.8	9.8	50	8.58	0.136

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

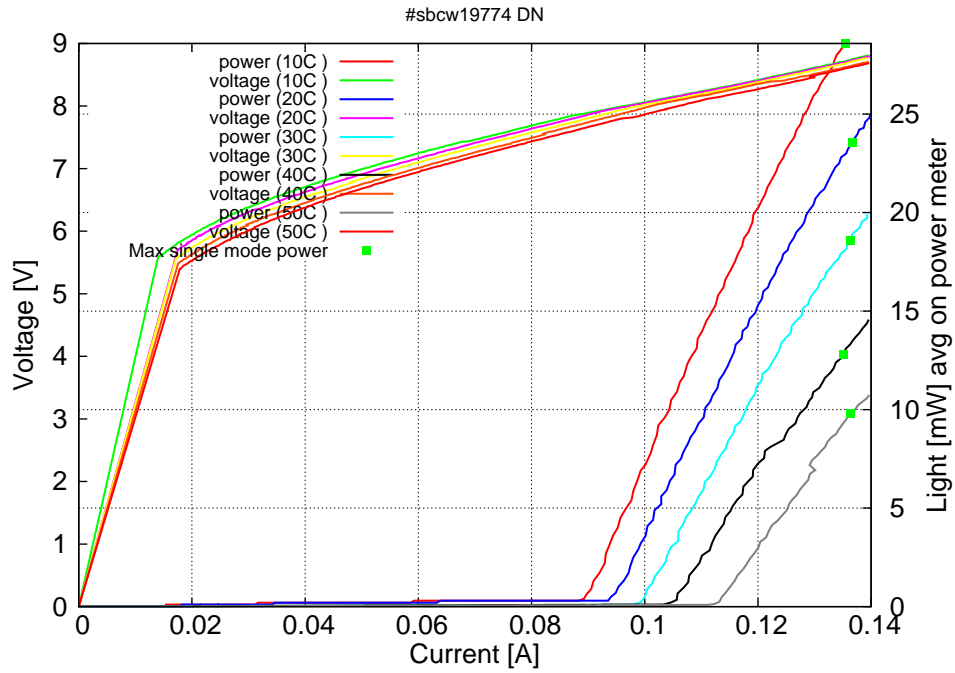


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 10C: $I_{th}=0.088\text{A}$ / $V_{th}=7.89\text{V}$ (2-wires measurements). Maximum operation current: 0.140A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

