

Datasheet for #sbcw19770 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 #sbcw19770 DN (please note that AlN submount numbering is A0TM6)

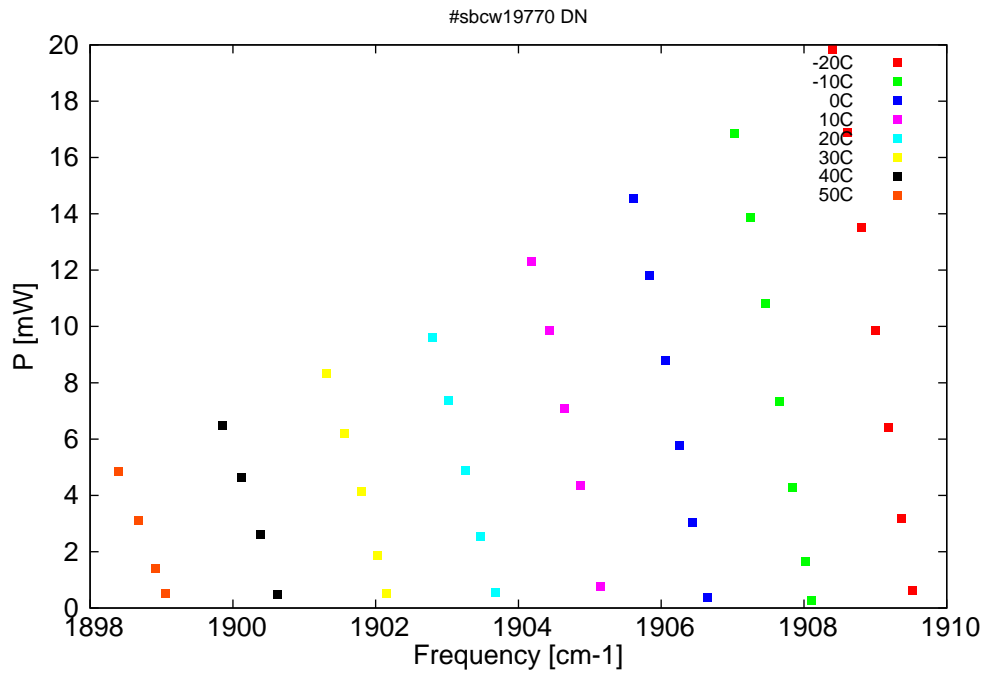


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

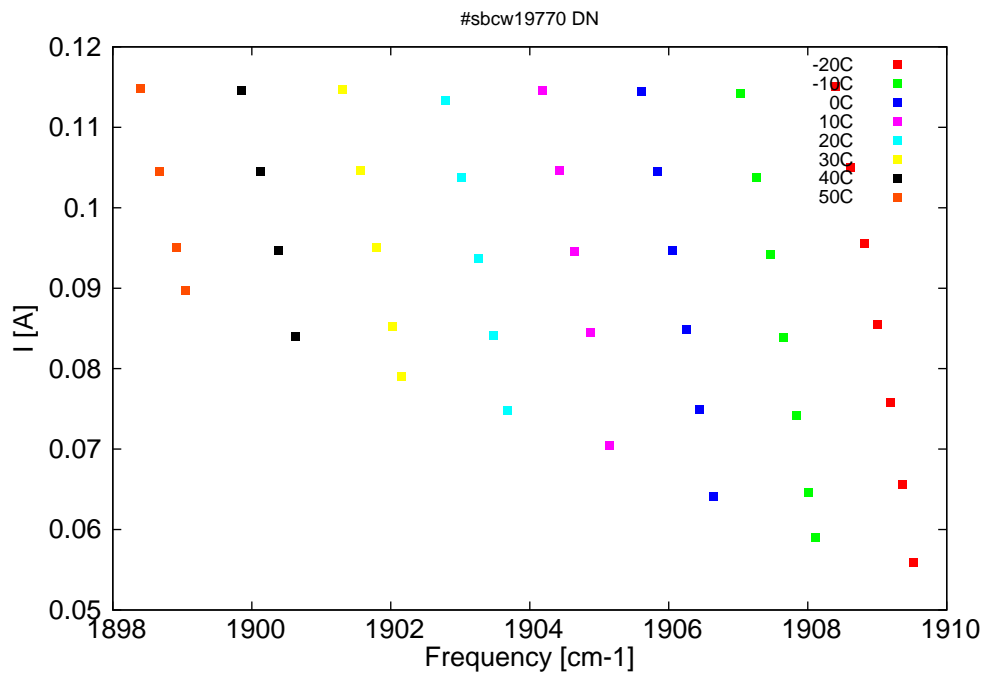


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5236.9	1909.5	0.6	-20	7.59	0.056
5237.4	1909.4	3.2	-20	7.78	0.066
5237.8	1909.2	6.4	-20	7.97	0.076
5238.3	1909	9.8	-20	8.17	0.085
5238.9	1908.8	13.5	-20	8.37	0.096
5239.4	1908.6	16.9	-20	8.58	0.105
5240	1908.4	19.8	-20	8.82	0.115
5240.8	1908.1	0.3	-10	7.6	0.059
5241	1908	1.7	-10	7.71	0.065
5241.5	1907.8	4.3	-10	7.9	0.074
5242	1907.7	7.3	-10	8.09	0.084
5242.6	1907.5	10.8	-10	8.3	0.094
5243.1	1907.3	13.9	-10	8.51	0.104
5243.8	1907	16.8	-10	8.76	0.114
5244.8	1906.6	0.4	0	7.66	0.064
5245.4	1906.4	3	0	7.88	0.075
5245.9	1906.3	5.8	0	8.07	0.085
5246.4	1906.1	8.8	0	8.28	0.095
5247	1905.8	11.8	0	8.49	0.105
5247.7	1905.6	14.5	0	8.72	0.114
5248.9	1905.1	0.8	10	7.74	0.07
5249.7	1904.9	4.3	10	8.03	0.085
5250.3	1904.6	7.1	10	8.24	0.095
5250.9	1904.4	9.9	10	8.45	0.105
5251.6	1904.2	12.3	10	8.68	0.115
5253	1903.7	0.5	20	7.8	0.075
5253.5	1903.5	2.5	20	7.99	0.084
5254.2	1903.3	4.9	20	8.19	0.094
5254.8	1903	7.4	20	8.41	0.104
5255.4	1902.8	9.6	20	8.63	0.113
5257.2	1902.1	0.5	30	7.86	0.079
5257.5	1902	1.9	30	7.97	0.085
5258.2	1901.8	4.1	30	8.18	0.095
5258.8	1901.6	6.2	30	8.39	0.105
5259.5	1901.3	8.3	30	8.62	0.115
5261.4	1900.6	0.5	40	7.91	0.084
5262.1	1900.4	2.6	40	8.14	0.095
5262.8	1900.1	4.6	40	8.35	0.104
5263.5	1899.9	6.5	40	8.58	0.115
5265.8	1899.1	0.5	50	8	0.09
5266.1	1898.9	1.4	50	8.12	0.095
5266.8	1898.7	3.1	50	8.33	0.104
5267.6	1898.4	4.8	50	8.55	0.115

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

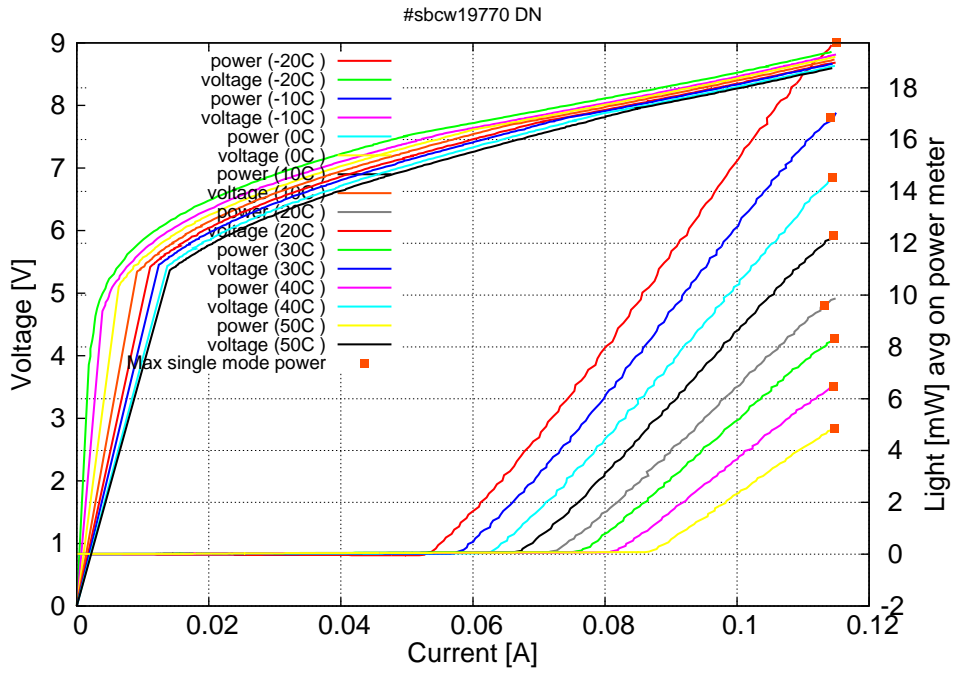


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.115A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

