

Datasheet for #sbcw19777 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 #sbcw19777 DN (please note that AlN submount numbering is A0TL2)

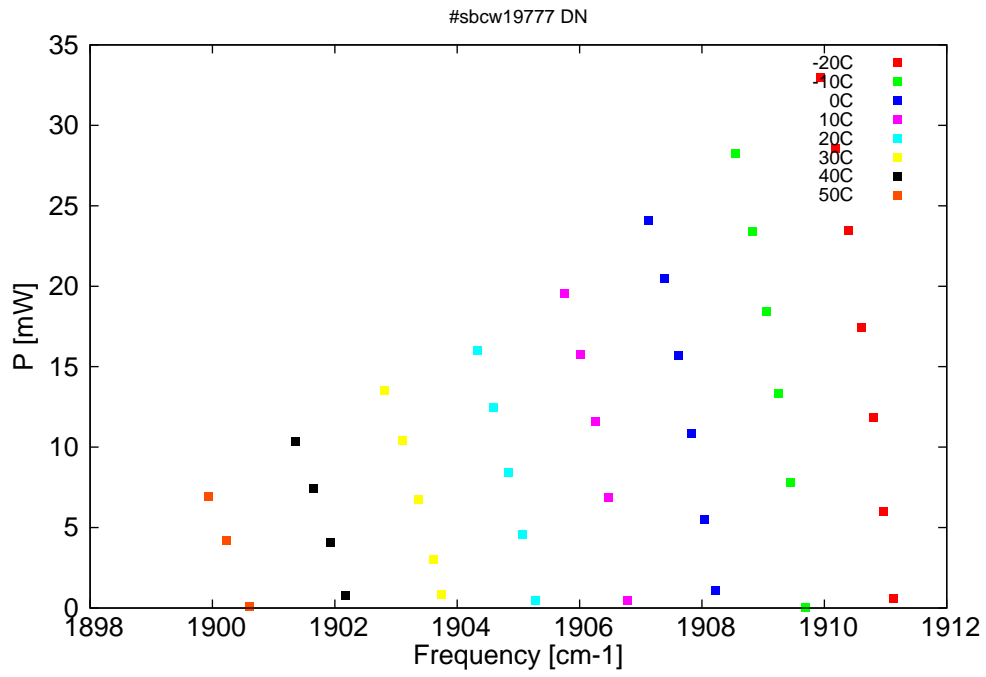


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

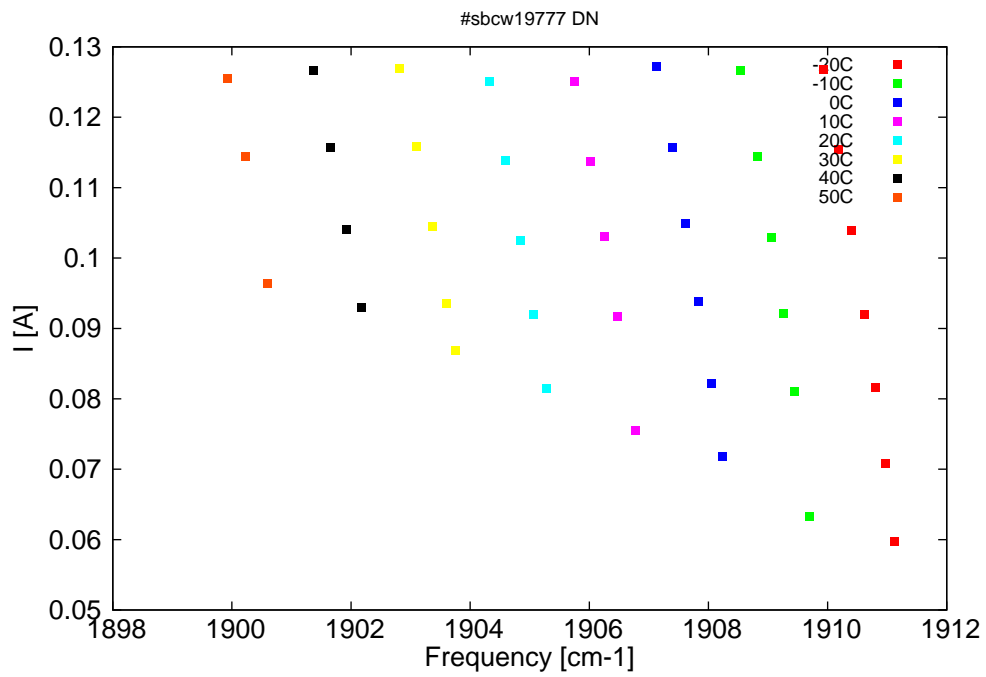


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5232.5	1911.1	0.6	-20	7.54	0.06
5233	1911	6	-20	7.73	0.071
5233.4	1910.8	11.9	-20	7.91	0.082
5233.9	1910.6	17.4	-20	8.09	0.092
5234.5	1910.4	23.5	-20	8.3	0.104
5235.1	1910.2	28.6	-20	8.51	0.115
5235.8	1909.9	32.9	-20	8.74	0.127
5236.4	1909.7	0	-10	7.6	0.063
5237.1	1909.4	7.8	-10	7.86	0.081
5237.7	1909.3	13.4	-10	8.06	0.092
5238.2	1909.1	18.4	-10	8.25	0.103
5238.8	1908.8	23.4	-10	8.46	0.114
5239.6	1908.5	28.3	-10	8.71	0.127
5240.5	1908.2	1.1	0	7.67	0.072
5241	1908	5.5	0	7.85	0.082
5241.5	1907.8	10.9	0	8.05	0.094
5242.1	1907.6	15.7	0	8.25	0.105
5242.8	1907.4	20.5	0	8.45	0.116
5243.5	1907.1	24.1	0	8.68	0.127
5244.4	1906.8	0.5	10	7.69	0.076
5245.3	1906.5	6.8	10	7.98	0.092
5245.9	1906.3	11.6	10	8.18	0.103
5246.5	1906	15.7	10	8.38	0.114
5247.3	1905.8	19.6	10	8.6	0.125
5248.6	1905.3	0.5	20	7.77	0.081
5249.2	1905.1	4.6	20	7.95	0.092
5249.8	1904.8	8.4	20	8.15	0.103
5250.5	1904.6	12.5	20	8.35	0.114
5251.2	1904.3	16	20	8.57	0.125
5252.8	1903.7	0.8	30	7.83	0.087
5253.2	1903.6	3	30	7.95	0.094
5253.8	1903.4	6.8	30	8.15	0.104
5254.6	1903.1	10.4	30	8.36	0.116
5255.4	1902.8	13.5	30	8.58	0.127
5257.1	1902.2	0.8	40	7.91	0.093
5257.8	1901.9	4	40	8.12	0.104
5258.6	1901.6	7.4	40	8.33	0.116
5259.4	1901.4	10.3	40	8.55	0.127
5261.5	1900.6	0.1	50	7.98	0.096
5262.5	1900.2	4.2	50	8.26	0.114
5263.4	1899.9	7	50	8.48	0.125

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

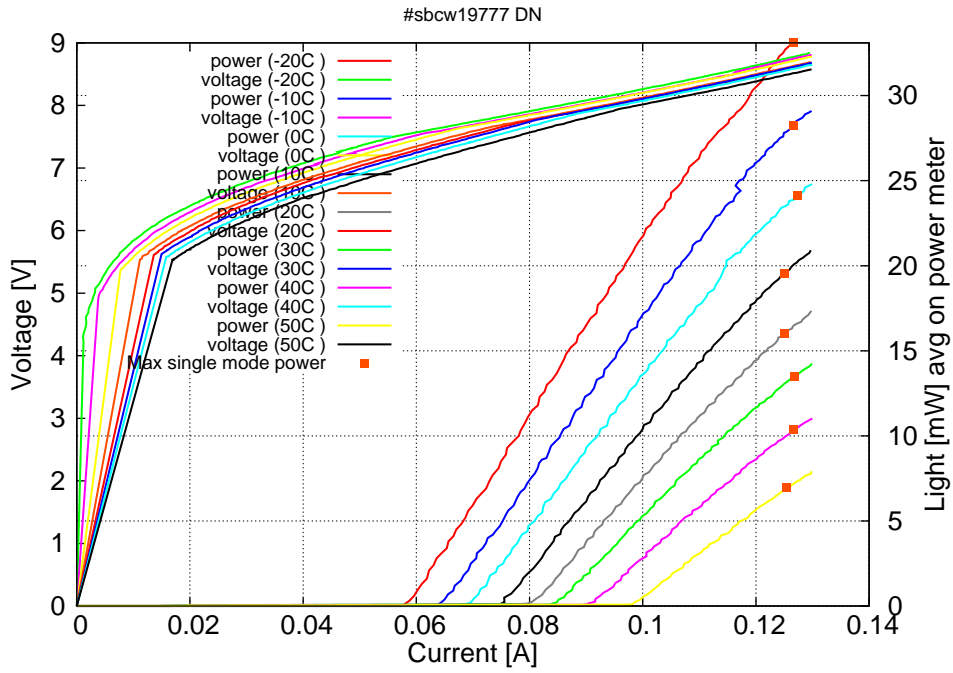


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.130A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

