

**Datasheet for #sbcw19782 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 #sbcw19782 DN (please note that AlN submount numbering is A0T48)

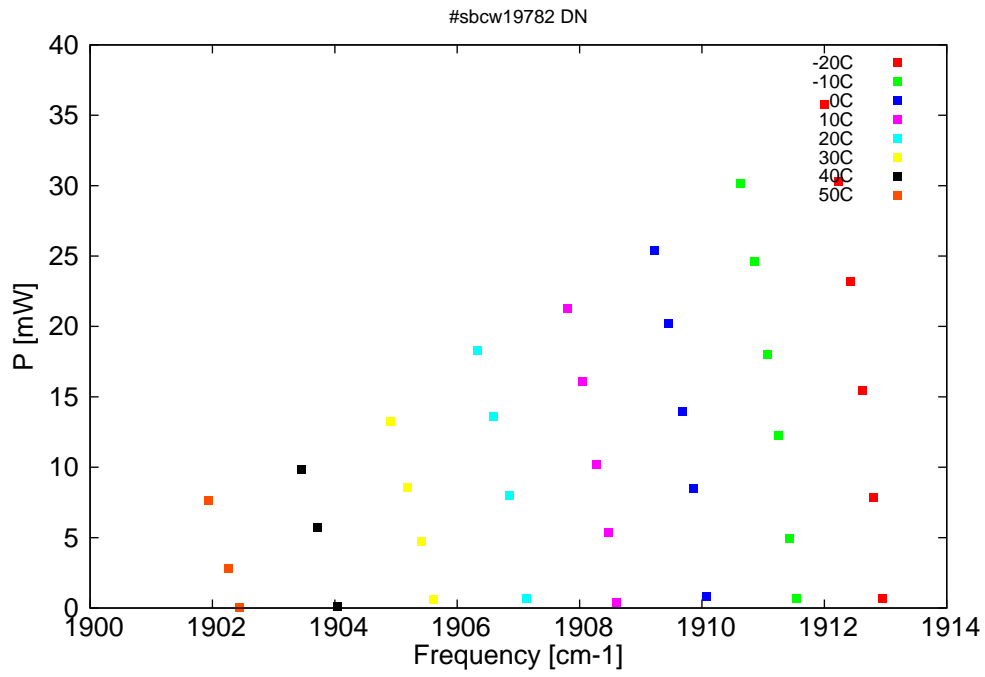


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

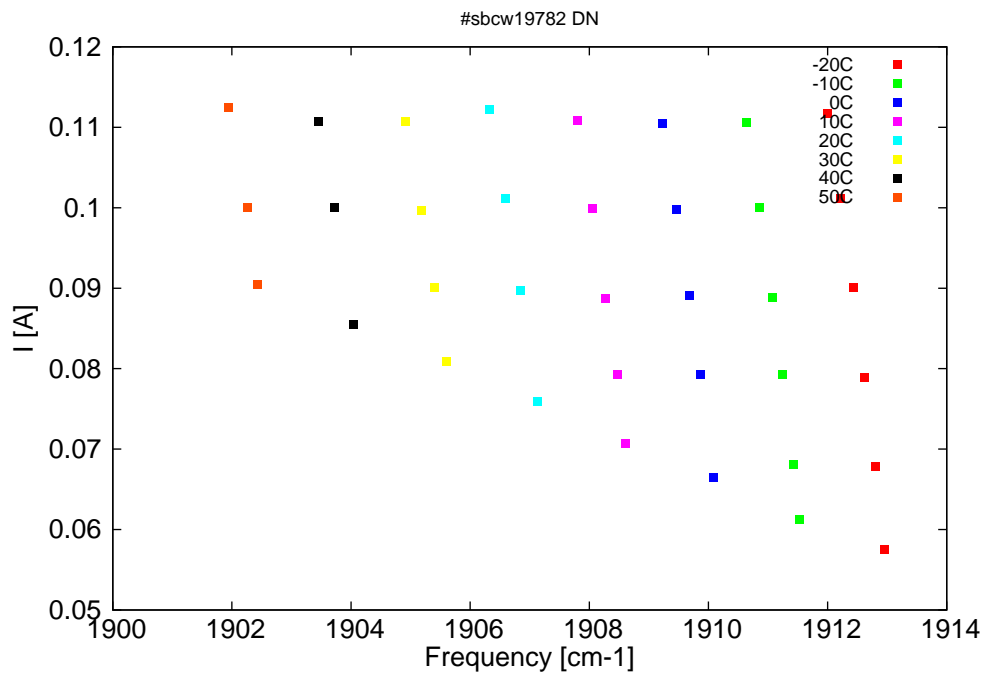


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5227.5	1913	0.7	-20	7.54	0.057
5227.9	1912.8	7.9	-20	7.73	0.068
5228.4	1912.6	15.5	-20	7.91	0.079
5228.9	1912.4	23.2	-20	8.11	0.09
5229.5	1912.2	30.3	-20	8.33	0.101
5230.1	1912	35.8	-20	8.55	0.112
5231.4	1911.5	0.7	-10	7.58	0.061
5231.7	1911.4	4.9	-10	7.7	0.068
5232.2	1911.2	12.3	-10	7.89	0.079
5232.7	1911.1	18	-10	8.07	0.089
5233.3	1910.9	24.6	-10	8.28	0.1
5233.9	1910.6	30.2	-10	8.5	0.111
5235.4	1910.1	0.8	0	7.63	0.066
5236	1909.9	8.5	0	7.86	0.079
5236.5	1909.7	14	0	8.05	0.089
5237.1	1909.5	20.2	0	8.25	0.1
5237.7	1909.2	25.4	0	8.48	0.11
5239.4	1908.6	0.4	10	7.69	0.071
5239.8	1908.5	5.4	10	7.83	0.079
5240.3	1908.3	10.2	10	8.01	0.089
5240.9	1908.1	16.1	10	8.23	0.1
5241.6	1907.8	21.3	10	8.46	0.111
5243.5	1907.1	0.6	20	7.75	0.076
5244.3	1906.8	8	20	8	0.09
5244.9	1906.6	13.6	20	8.23	0.101
5245.7	1906.3	18.3	20	8.47	0.112
5247.7	1905.6	0.6	30	7.81	0.081
5248.2	1905.4	4.8	30	7.99	0.09
5248.8	1905.2	8.6	30	8.18	0.1
5249.6	1904.9	13.3	30	8.41	0.111
5252	1904	0.1	40	7.9	0.086
5252.9	1903.7	5.7	40	8.17	0.1
5253.6	1903.5	9.8	40	8.39	0.111
5256.4	1902.4	0.1	50	7.98	0.091
5256.9	1902.3	2.8	50	8.14	0.1
5257.8	1901.9	7.6	50	8.4	0.112

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

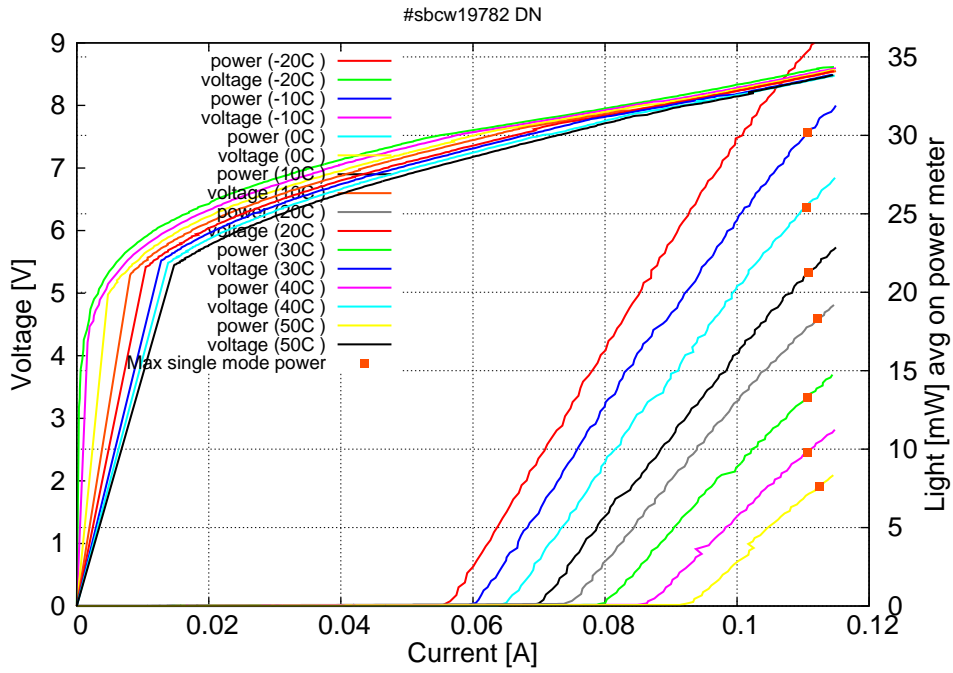


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.06A$  /  $V_{th}=7.5V$  (2-wires measurements). Maximum operation current: 0.115A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

