

Datasheet for #sbcw19786 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 #sbcw19786 DN (please note that AlN submount numbering is A0T4H)

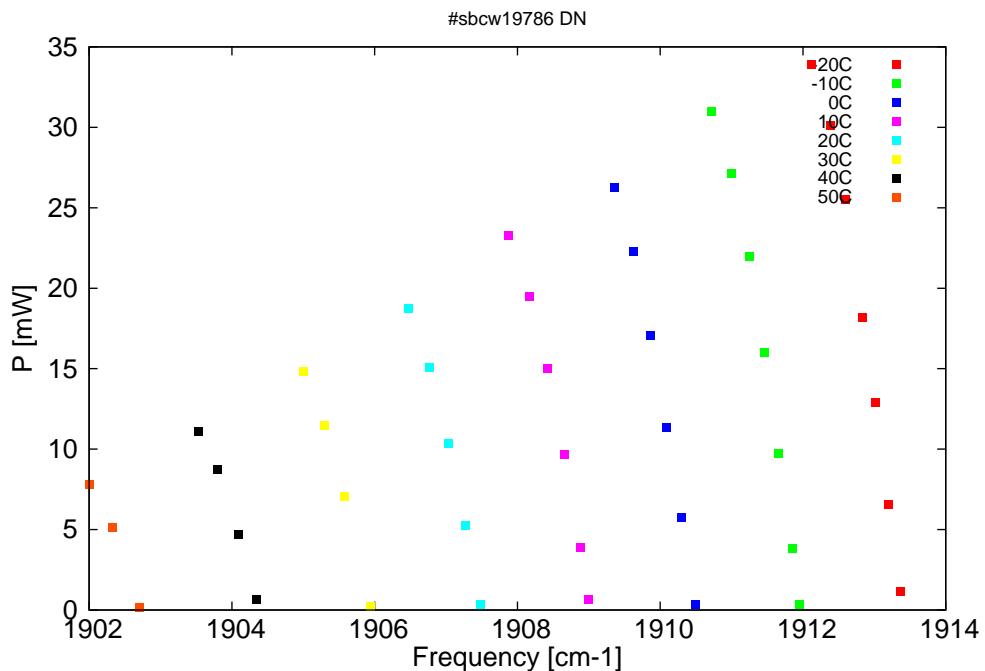


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

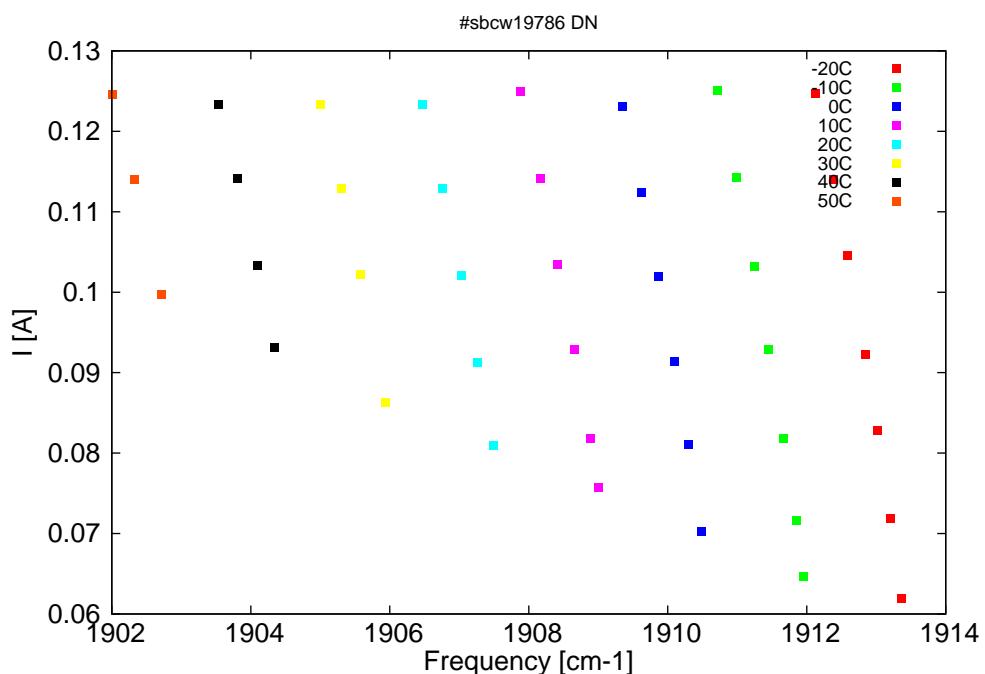


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5226.4	1913.4	1.1	-20	7.64	0.062
5226.8	1913.2	6.6	-20	7.82	0.072
5227.3	1913	12.9	-20	8.01	0.083
5227.8	1912.8	18.2	-20	8.19	0.092
5228.5	1912.6	25.5	-20	8.43	0.105
5229.1	1912.4	30.1	-20	8.64	0.114
5229.8	1912.1	33.9	-20	8.89	0.125
5230.3	1911.9	0.4	-10	7.66	0.065
5230.5	1911.8	3.8	-10	7.77	0.072
5231	1911.7	9.7	-10	7.97	0.082
5231.6	1911.5	16	-10	8.17	0.093
5232.2	1911.2	22	-10	8.38	0.103
5232.9	1911	27.1	-10	8.62	0.114
5233.6	1910.7	31	-10	8.88	0.125
5234.3	1910.5	0.4	0	7.72	0.07
5234.8	1910.3	5.8	0	7.92	0.081
5235.3	1910.1	11.4	0	8.12	0.091
5236	1909.9	17.1	0	8.33	0.102
5236.6	1909.6	22.3	0	8.56	0.112
5237.4	1909.4	26.3	0	8.81	0.123
5238.3	1909	0.7	10	7.78	0.076
5238.7	1908.9	3.9	10	7.9	0.082
5239.3	1908.7	9.6	10	8.12	0.093
5239.9	1908.4	15	10	8.34	0.103
5240.6	1908.2	19.5	10	8.57	0.114
5241.4	1907.9	23.3	10	8.83	0.125
5242.5	1907.5	0.4	20	7.86	0.081
5243.1	1907.3	5.2	20	8.07	0.091
5243.8	1907	10.3	20	8.28	0.102
5244.5	1906.8	15.1	20	8.52	0.113
5245.3	1906.5	18.8	20	8.77	0.123
5246.7	1905.9	0.2	30	7.94	0.086
5247.8	1905.6	7.1	30	8.27	0.102
5248.5	1905.3	11.5	30	8.51	0.113
5249.3	1905	14.8	30	8.75	0.123
5251.2	1904.3	0.7	40	8.04	0.093
5251.8	1904.1	4.7	40	8.28	0.103
5252.6	1903.8	8.7	40	8.52	0.114
5253.4	1903.5	11.1	40	8.74	0.123
5255.7	1902.7	0.2	50	8.19	0.1
5256.7	1902.3	5.1	50	8.5	0.114
5257.6	1902	7.8	50	8.75	0.125

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

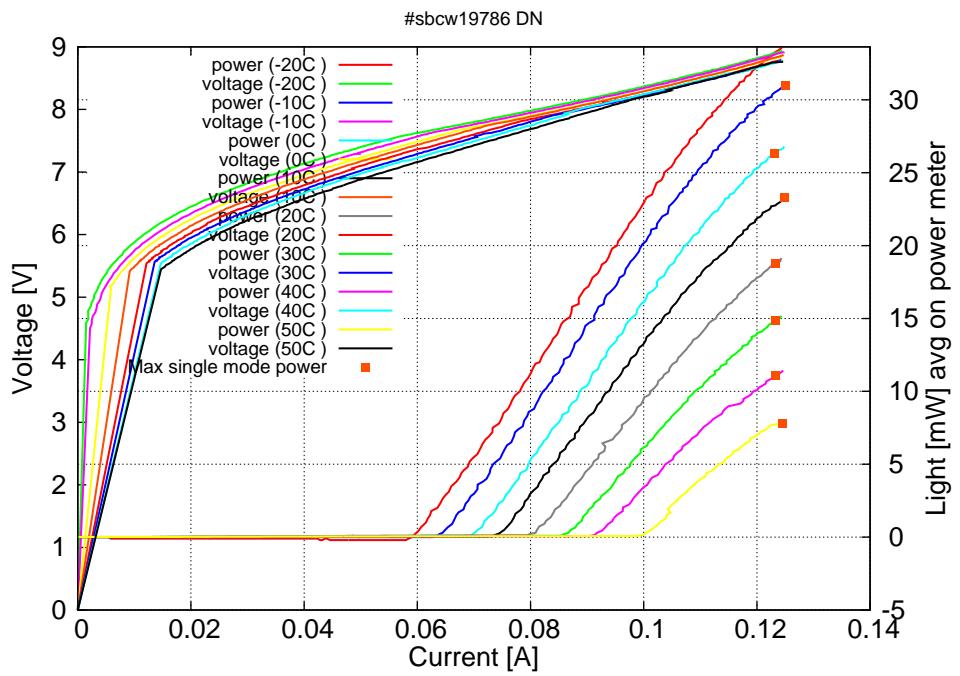


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.125A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

