

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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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

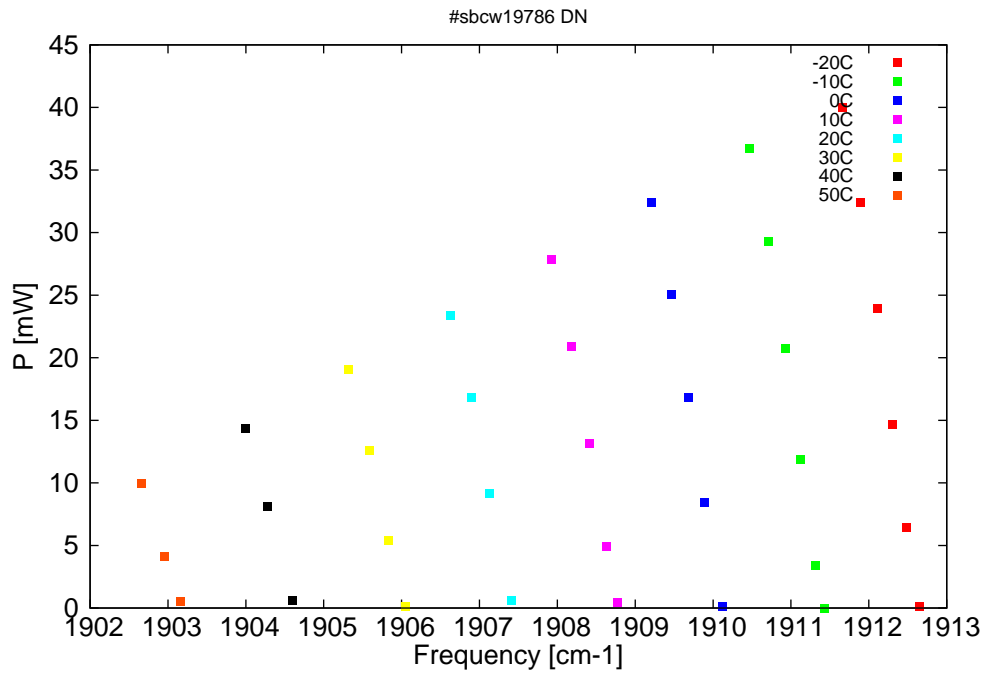


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

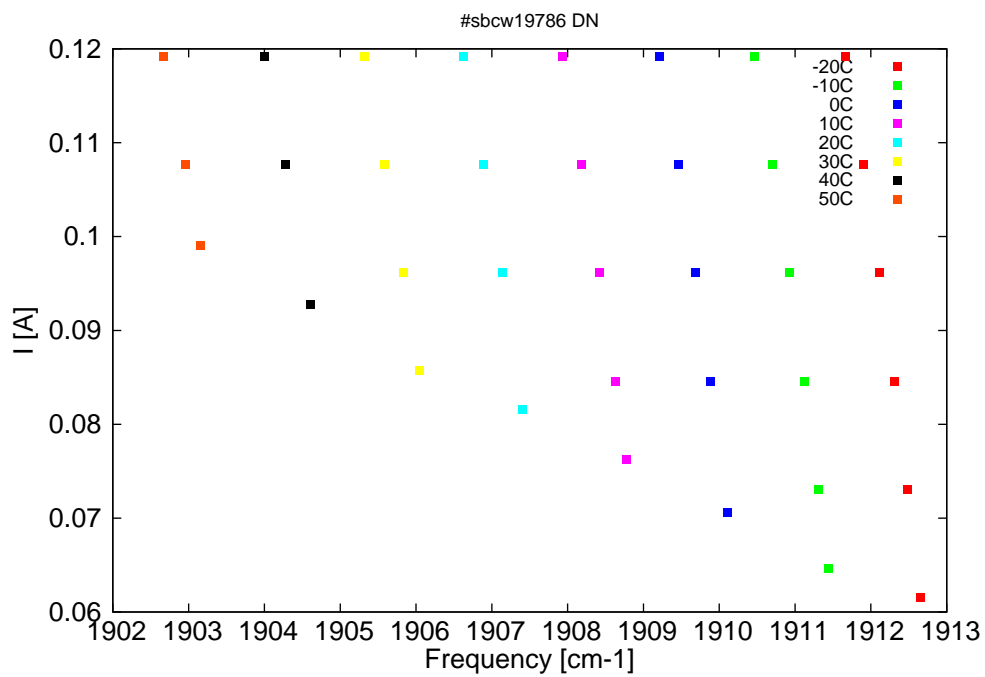


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5228.3	1912.7	0.1	-20	7.6	0.062
5228.8	1912.5	6.4	-20	7.8	0.073
5229.3	1912.3	14.7	-20	8	0.085
5229.8	1912.1	23.9	-20	8.21	0.096
5230.4	1911.9	32.4	-20	8.44	0.108
5231	1911.7	40	-20	8.69	0.119
5231.7	1911.4	0	-10	7.62	0.065
5232	1911.3	3.4	-10	7.77	0.073
5232.5	1911.1	11.8	-10	7.97	0.085
5233.1	1910.9	20.7	-10	8.19	0.096
5233.7	1910.7	29.3	-10	8.42	0.108
5234.3	1910.5	36.7	-10	8.68	0.119
5235.3	1910.1	0.1	0	7.7	0.071
5235.9	1909.9	8.5	0	7.95	0.085
5236.5	1909.7	16.8	0	8.17	0.096
5237.1	1909.5	25.1	0	8.4	0.108
5237.8	1909.2	32.4	0	8.66	0.119
5239	1908.8	0.5	10	7.78	0.076
5239.4	1908.6	4.9	10	7.93	0.085
5239.9	1908.4	13.1	10	8.15	0.096
5240.6	1908.2	20.9	10	8.39	0.108
5241.3	1907.9	27.8	10	8.64	0.119
5242.7	1907.4	0.6	20	7.85	0.082
5243.5	1907.1	9.1	20	8.13	0.096
5244.1	1906.9	16.9	20	8.37	0.108
5244.9	1906.6	23.4	20	8.63	0.119
5246.5	1906	0.1	30	7.91	0.086
5247	1905.8	5.4	30	8.11	0.096
5247.7	1905.6	12.6	30	8.35	0.108
5248.5	1905.3	19	30	8.61	0.119
5250.4	1904.6	0.6	40	8.03	0.093
5251.3	1904.3	8.1	40	8.33	0.108
5252.1	1904	14.3	40	8.59	0.119
5254.4	1903.2	0.6	50	8.14	0.099
5255	1903	4.1	50	8.32	0.108
5255.8	1902.7	10	50	8.57	0.119

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

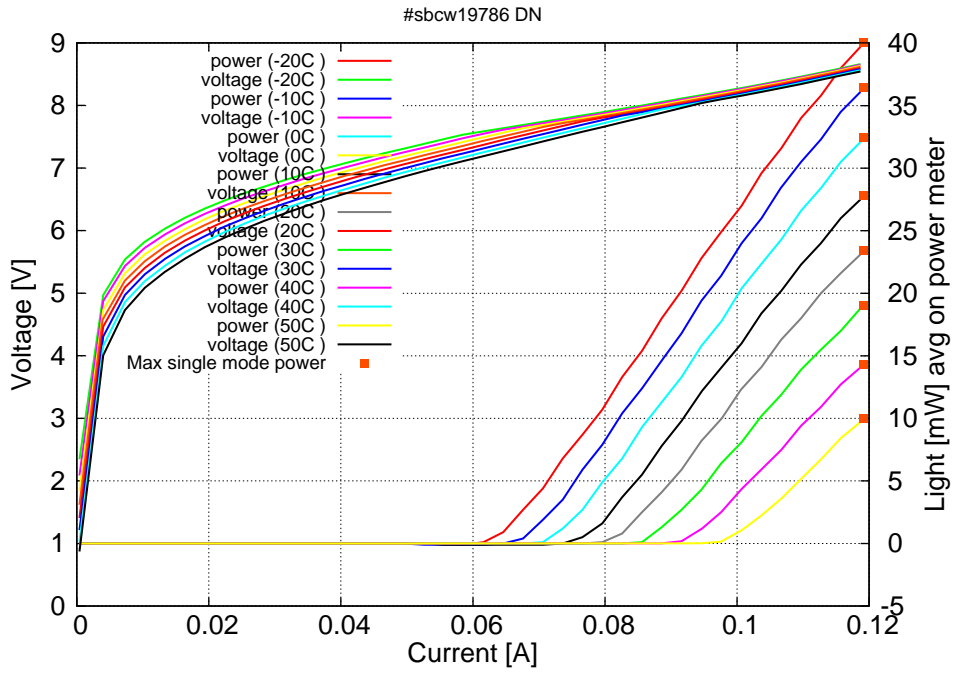


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.12A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

