

Datasheet for #sbcw19780 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 #sbcw19780 DN (please note that AlN submount numbering is A0RVZ)

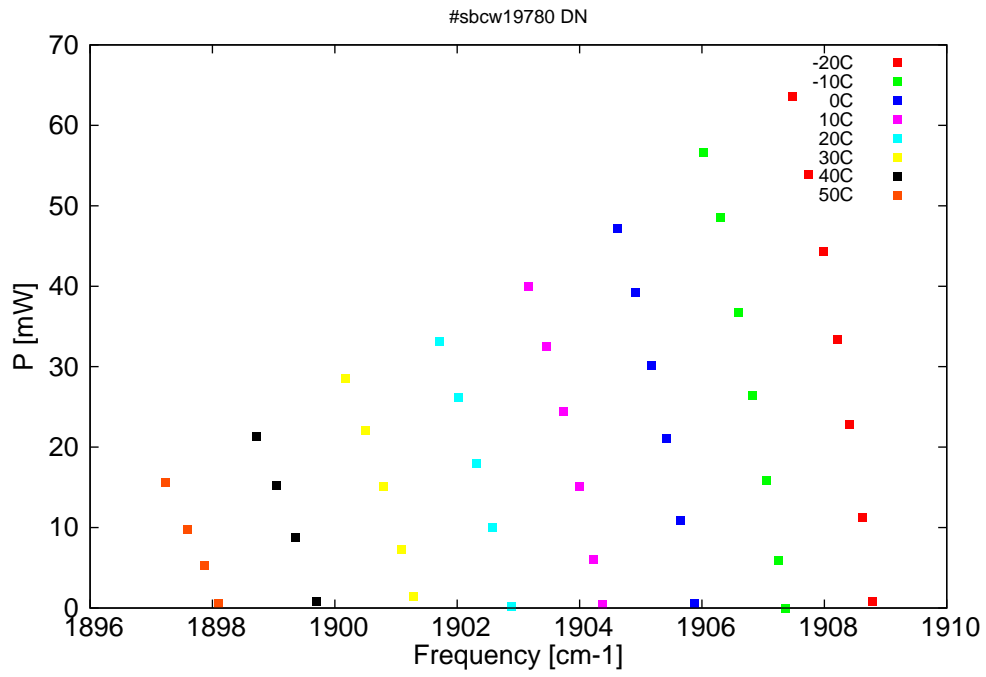


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

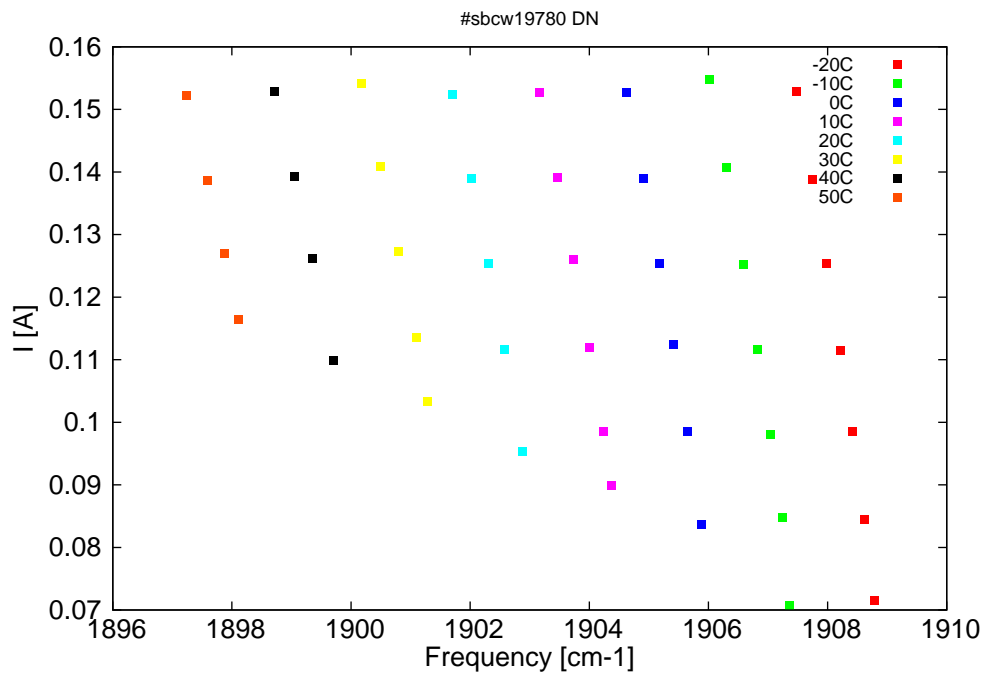


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5238.9	1908.8	0.8	-20	7.4	0.071
5239.4	1908.6	11.2	-20	7.57	0.084
5239.9	1908.4	22.8	-20	7.74	0.099
5240.5	1908.2	33.4	-20	7.9	0.111
5241.1	1908	44.3	-20	8.07	0.125
5241.8	1907.7	53.9	-20	8.25	0.139
5242.5	1907.5	63.6	-20	8.45	0.153
5242.8	1907.4	0	-10	7.44	0.071
5243.2	1907.2	6	-10	7.54	0.085
5243.7	1907	15.8	-10	7.7	0.098
5244.3	1906.8	26.4	-10	7.87	0.112
5245	1906.6	36.7	-10	8.04	0.125
5245.7	1906.3	48.5	-10	8.25	0.141
5246.5	1906	56.6	-10	8.45	0.155
5246.9	1905.9	0.6	0	7.49	0.084
5247.6	1905.6	10.8	0	7.67	0.099
5248.2	1905.4	21.1	0	7.85	0.112
5248.8	1905.2	30.1	0	8.02	0.125
5249.6	1904.9	39.2	0	8.21	0.139
5250.4	1904.6	47.2	0	8.41	0.153
5251.1	1904.4	0.5	10	7.54	0.09
5251.5	1904.2	6	10	7.65	0.099
5252.1	1904	15.2	10	7.82	0.112
5252.8	1903.7	24.4	10	8.01	0.126
5253.6	1903.5	32.5	10	8.19	0.139
5254.4	1903.2	39.9	10	8.39	0.153
5255.2	1902.9	0.2	20	7.58	0.095
5256	1902.6	10	20	7.8	0.112
5256.8	1902.3	18	20	7.98	0.125
5257.6	1902	26.2	20	8.18	0.139
5258.4	1901.7	33.1	20	8.38	0.152
5259.6	1901.3	1.4	30	7.68	0.103
5260.1	1901.1	7.2	30	7.81	0.114
5260.9	1900.8	15.1	30	8.01	0.127
5261.8	1900.5	22.1	30	8.2	0.141
5262.7	1900.2	28.5	30	8.41	0.154
5264	1899.7	0.8	40	7.74	0.11
5264.9	1899.4	8.8	40	7.96	0.126
5265.8	1899.1	15.2	40	8.16	0.139
5266.7	1898.7	21.4	40	8.36	0.153
5268.4	1898.1	0.6	50	7.82	0.117
5269.1	1897.9	5.3	50	7.97	0.127
5269.8	1897.6	9.8	50	8.14	0.139
5270.8	1897.2	15.6	50	8.35	0.152

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

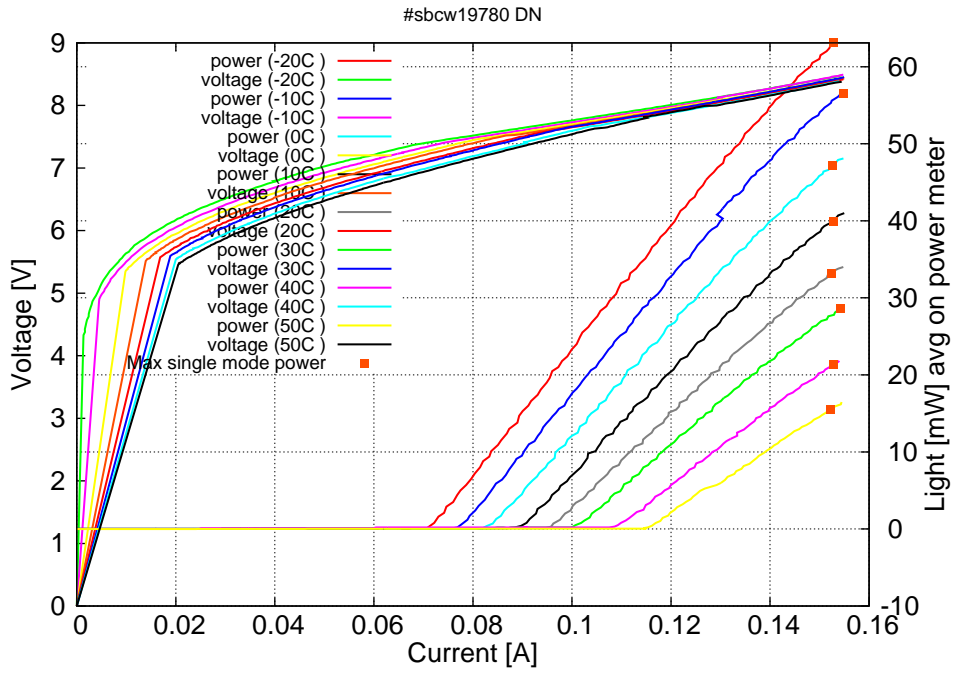


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.155A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

