

Datasheet for #sbcw19785 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 #sbcw19785 DN (please note that AlN submount numbering is A0RP2)

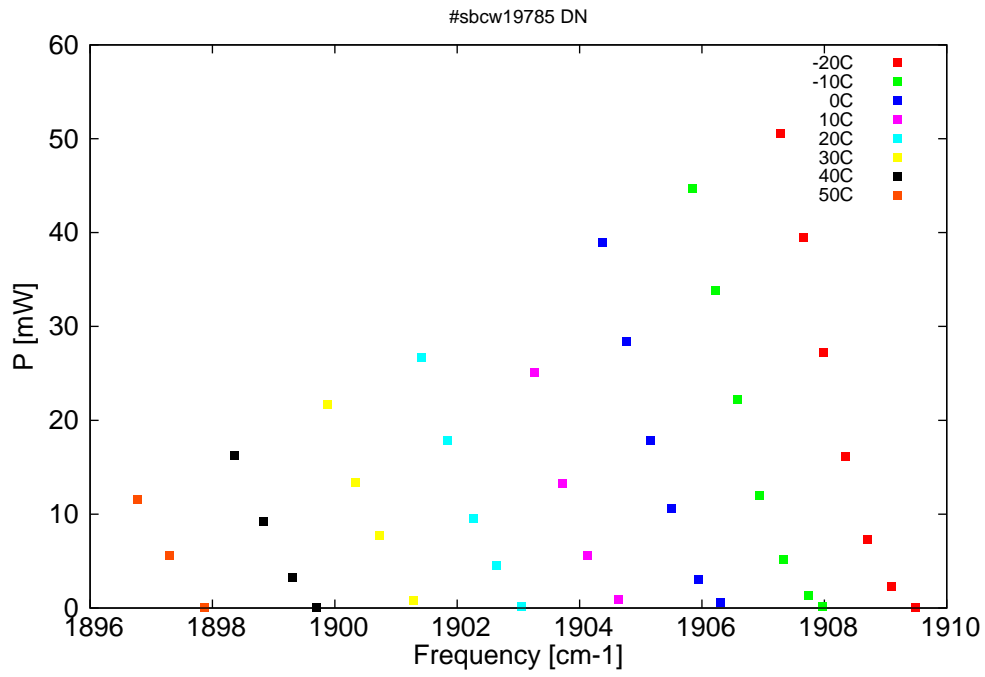


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

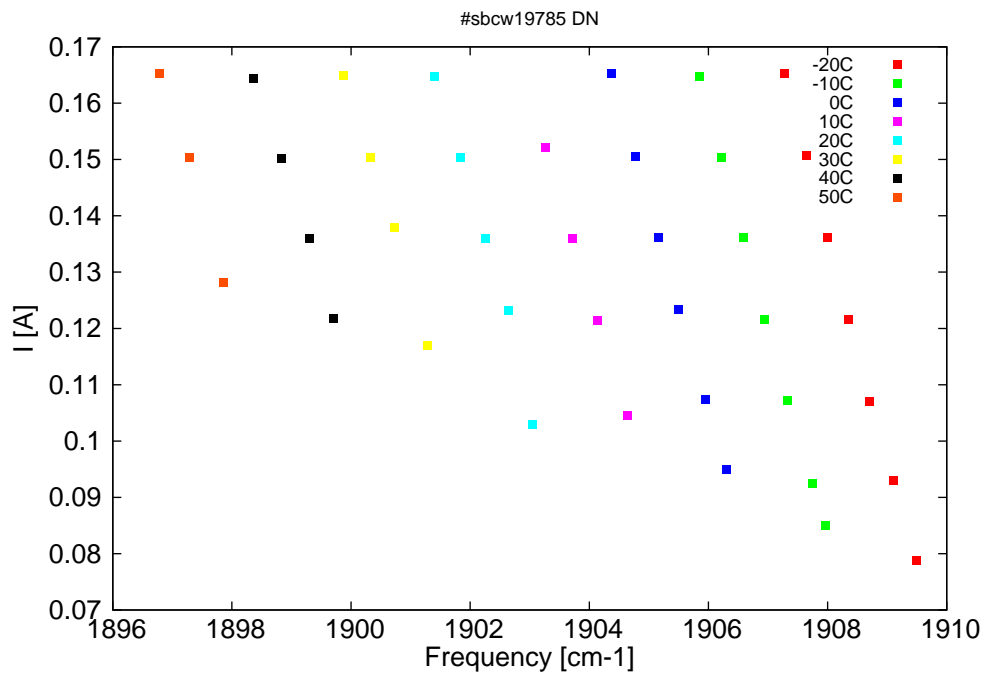


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5237	1909.5	0	-20	7.55	0.079
5238.1	1909.1	2.3	-20	7.75	0.093
5239.1	1908.7	7.3	-20	7.93	0.107
5240.1	1908.3	16.2	-20	8.12	0.122
5241.1	1908	27.2	-20	8.32	0.136
5242	1907.7	39.4	-20	8.53	0.151
5243.1	1907.3	50.5	-20	8.78	0.165
5241.2	1908	0.2	-10	7.58	0.085
5241.8	1907.7	1.3	-10	7.69	0.093
5242.9	1907.3	5.1	-10	7.89	0.107
5244	1906.9	12	-10	8.08	0.122
5245	1906.6	22.2	-10	8.28	0.136
5246	1906.2	33.8	-10	8.5	0.15
5247	1905.8	44.7	-10	8.73	0.165
5245.7	1906.3	0.6	0	7.68	0.095
5246.7	1905.9	3	0	7.86	0.107
5248	1905.5	10.6	0	8.08	0.123
5248.9	1905.2	17.9	0	8.26	0.136
5250	1904.8	28.4	0	8.48	0.151
5251.1	1904.4	39	0	8.73	0.165
5250.3	1904.6	1	10	7.79	0.104
5251.7	1904.1	5.6	10	8.04	0.121
5252.9	1903.7	13.2	10	8.24	0.136
5254.1	1903.3	25.1	10	8.5	0.152
5254.7	1903.1	0.2	20	7.85	0.103
5255.9	1902.6	4.5	20	8.05	0.123
5256.9	1902.3	9.6	20	8.23	0.136
5258.1	1901.8	17.9	20	8.45	0.15
5259.3	1901.4	26.7	20	8.7	0.165
5259.6	1901.3	0.8	30	7.96	0.117
5261.2	1900.7	7.7	30	8.24	0.138
5262.2	1900.3	13.4	30	8.44	0.15
5263.5	1899.9	21.6	30	8.68	0.165
5264	1899.7	0.1	40	8	0.122
5265.1	1899.3	3.3	40	8.19	0.136
5266.4	1898.8	9.2	40	8.42	0.15
5267.7	1898.4	16.2	40	8.67	0.164
5269.1	1897.9	0.1	50	8.12	0.128
5270.7	1897.3	5.6	50	8.39	0.15
5272.1	1896.8	11.6	50	8.65	0.165

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

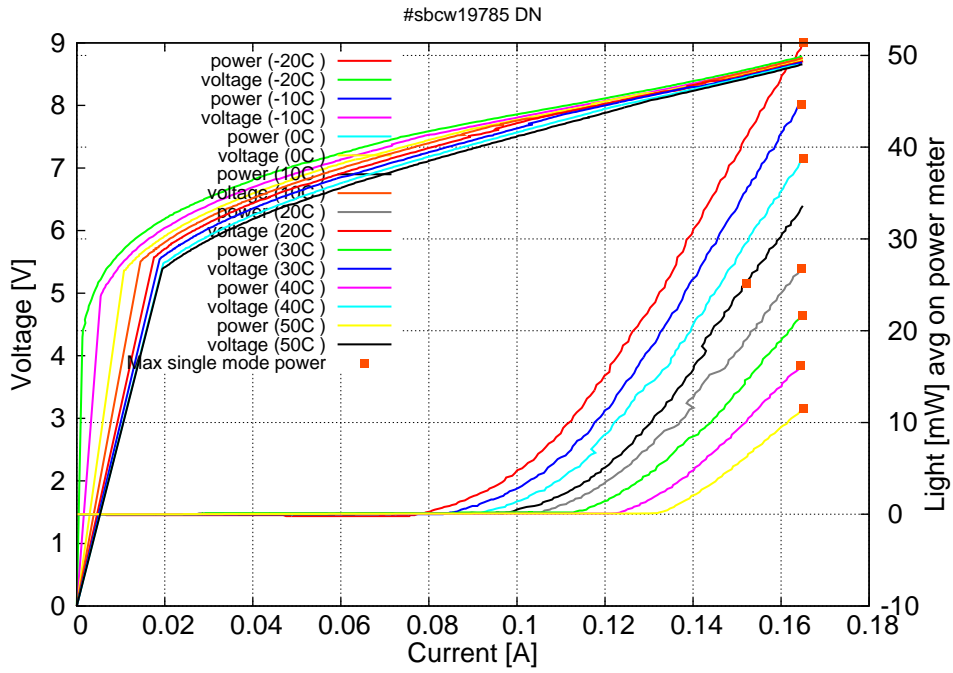


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.165A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

