

Datasheet for #sbcw19784 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 #sbcw19784 DN (please note that AlN submount numbering is A0TKZ)

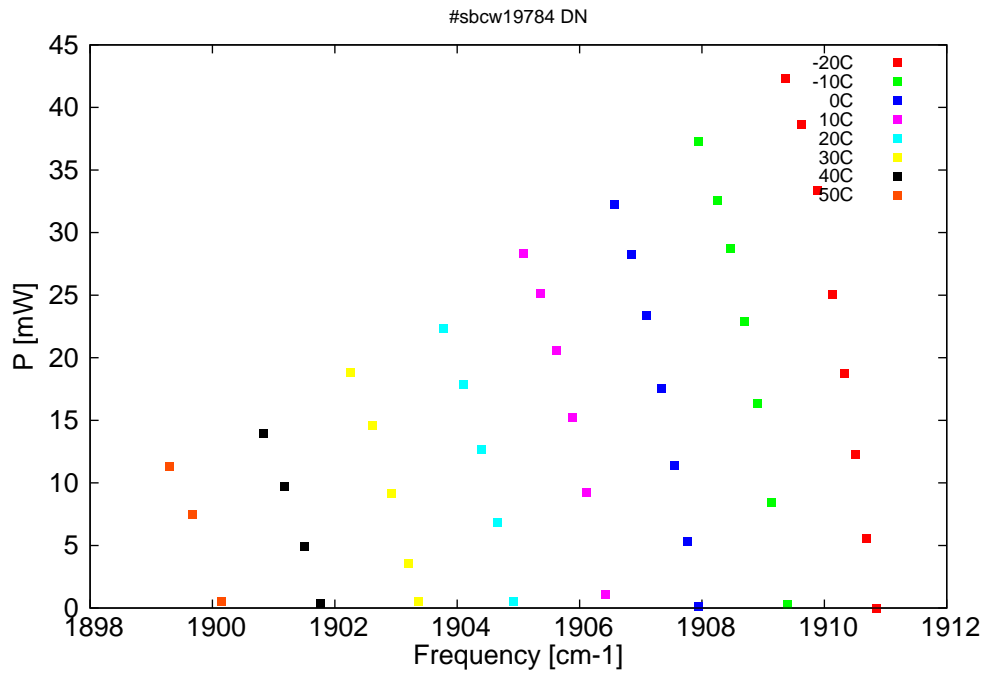


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

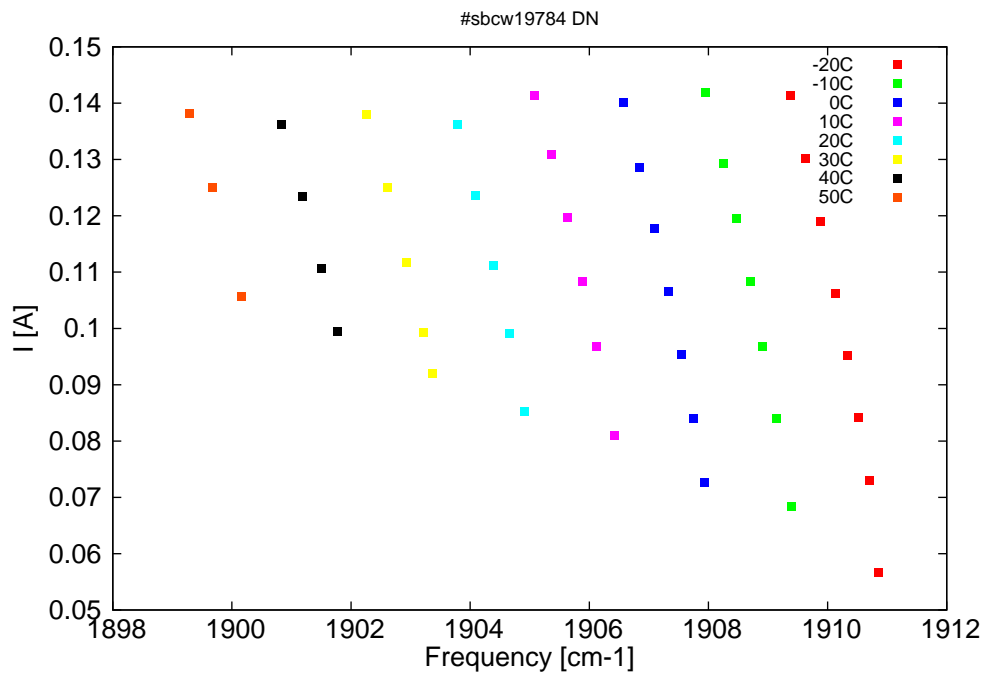


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5233.2	1910.9	0	-20	7.5	0.057
5233.7	1910.7	5.5	-20	7.67	0.073
5234.2	1910.5	12.2	-20	7.85	0.084
5234.7	1910.3	18.7	-20	8.02	0.095
5235.2	1910.1	25.1	-20	8.21	0.106
5235.9	1909.9	33.3	-20	8.43	0.119
5236.6	1909.6	38.6	-20	8.64	0.13
5237.3	1909.4	42.3	-20	8.87	0.141
5237.2	1909.4	0.3	-10	7.56	0.068
5238	1909.1	8.4	-10	7.81	0.084
5238.6	1908.9	16.4	-10	8.02	0.097
5239.2	1908.7	22.9	-10	8.22	0.108
5239.8	1908.5	28.8	-10	8.41	0.12
5240.4	1908.3	32.5	-10	8.6	0.129
5241.2	1907.9	37.3	-10	8.86	0.142
5241.3	1907.9	0.1	0	7.61	0.073
5241.8	1907.8	5.3	0	7.78	0.084
5242.3	1907.6	11.4	0	7.97	0.095
5242.9	1907.3	17.5	0	8.16	0.106
5243.6	1907.1	23.4	0	8.36	0.118
5244.3	1906.8	28.2	0	8.57	0.129
5245	1906.6	32.3	0	8.8	0.14
5245.4	1906.4	1.1	10	7.69	0.081
5246.3	1906.1	9.2	10	7.96	0.097
5246.9	1905.9	15.2	10	8.16	0.108
5247.6	1905.6	20.6	10	8.37	0.12
5248.3	1905.4	25.1	10	8.59	0.131
5249.1	1905.1	28.3	10	8.81	0.141
5249.6	1904.9	0.5	20	7.75	0.085
5250.3	1904.7	6.8	20	7.97	0.099
5251	1904.4	12.6	20	8.19	0.111
5251.8	1904.1	17.8	20	8.42	0.124
5252.7	1903.8	22.3	20	8.67	0.136
5253.9	1903.4	0.5	30	7.82	0.092
5254.3	1903.2	3.6	30	7.95	0.099
5255.1	1902.9	9.1	30	8.17	0.112
5255.9	1902.6	14.6	30	8.41	0.125
5256.9	1902.3	18.8	30	8.67	0.138
5258.3	1901.8	0.4	40	7.91	0.099
5259	1901.5	4.9	40	8.12	0.111
5259.9	1901.2	9.7	40	8.36	0.123
5260.8	1900.8	13.9	40	8.61	0.136
5262.7	1900.2	0.5	50	8	0.106
5264.1	1899.7	7.5	50	8.36	0.125
5265.1	1899.3	11.3	50	8.62	0.138

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

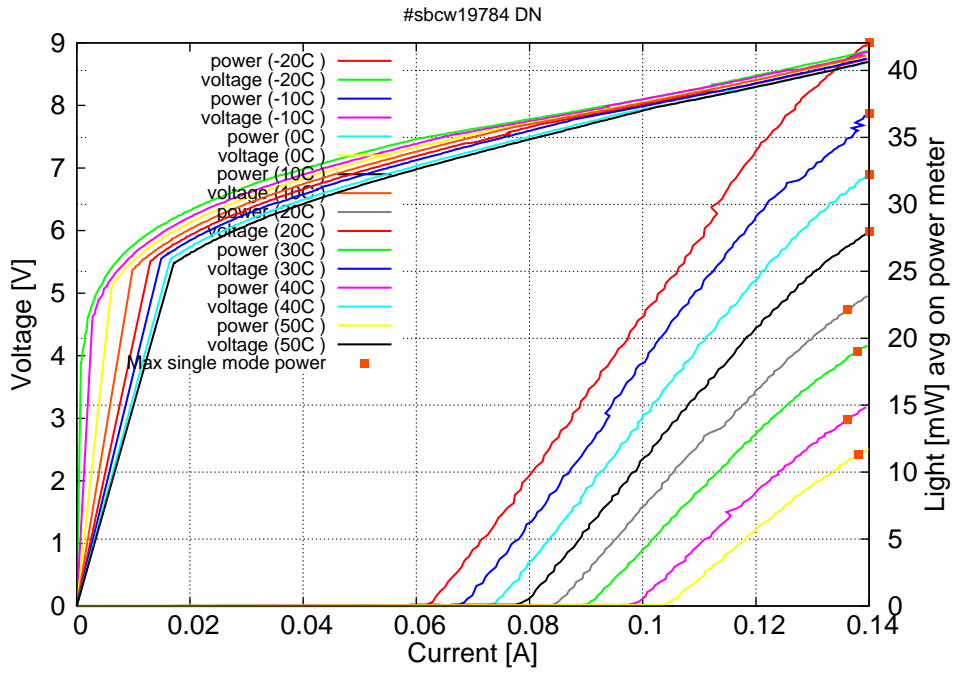


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.14A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

