

Datasheet for #sbcw19761 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 #sbcw19761 DN

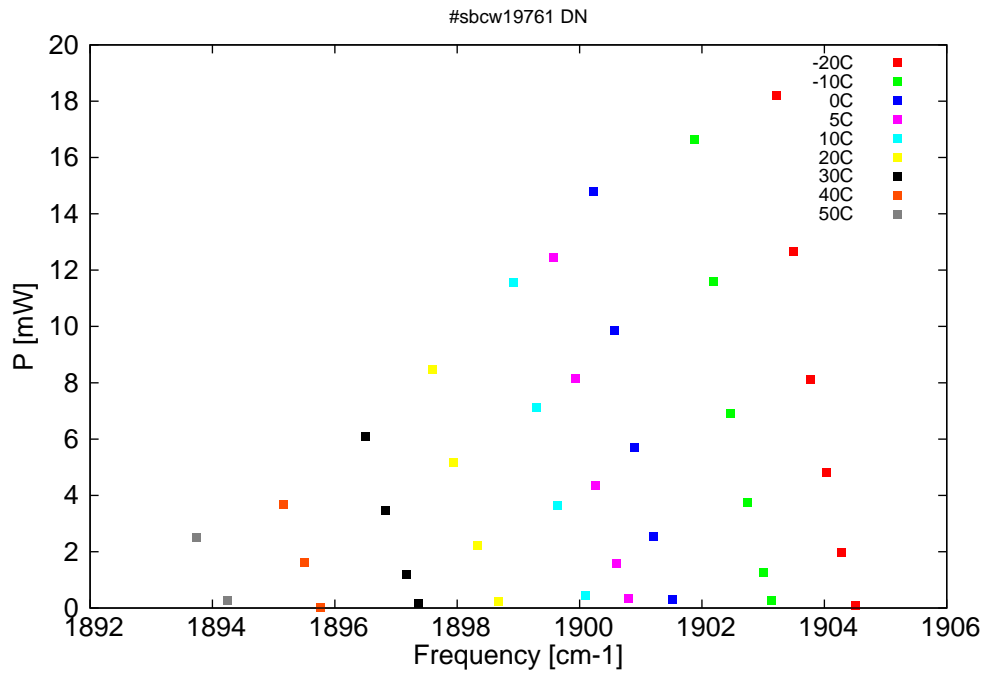


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

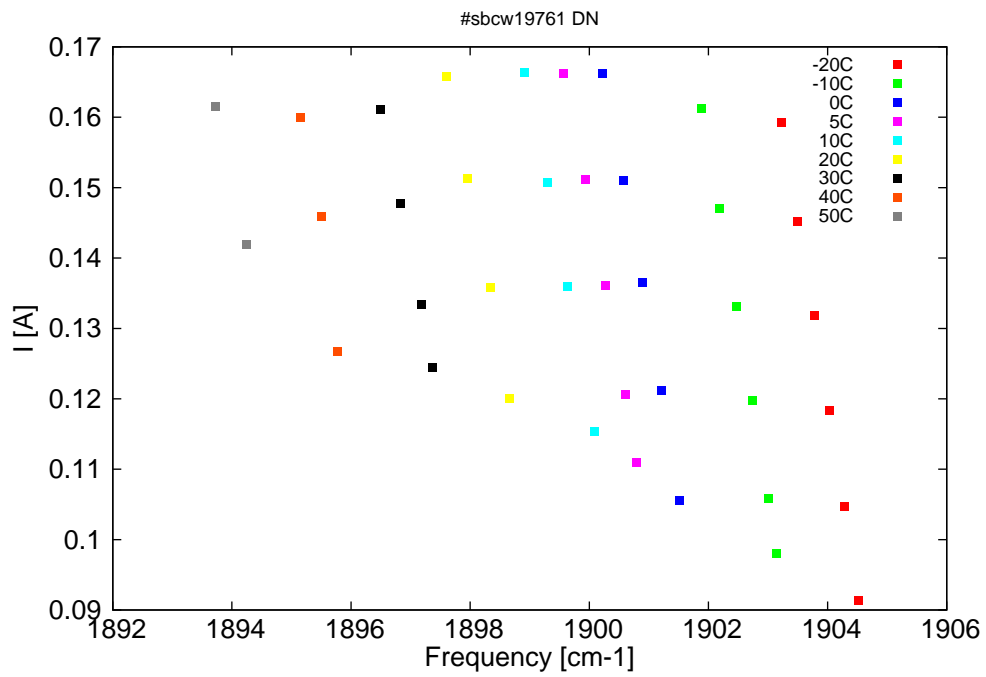


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5250.7	1904.5	0.1	-20	7.67	0.091
5251.3	1904.3	2	-20	7.84	0.105
5252	1904	4.8	-20	8.02	0.118
5252.7	1903.8	8.1	-20	8.19	0.132
5253.5	1903.5	12.6	-20	8.37	0.145
5254.3	1903.2	18.2	-20	8.57	0.159
5254.5	1903.1	0.3	-10	7.72	0.098
5254.8	1903	1.3	-10	7.82	0.106
5255.6	1902.7	3.8	-10	8.01	0.12
5256.3	1902.5	6.9	-10	8.18	0.133
5257.1	1902.2	11.6	-10	8.37	0.147
5258	1901.9	16.6	-10	8.58	0.161
5258.9	1901.5	0.3	0	7.8	0.106
5259.8	1901.2	2.5	0	8.01	0.121
5260.7	1900.9	5.7	0	8.22	0.137
5261.6	1900.6	9.8	0	8.42	0.151
5262.5	1900.2	14.8	0	8.66	0.166
5260.9	1900.8	0.3	5	7.85	0.111
5261.5	1900.6	1.6	5	7.99	0.121
5262.4	1900.3	4.4	5	8.2	0.136
5263.3	1899.9	8.2	5	8.42	0.151
5264.3	1899.6	12.4	5	8.65	0.166
5262.9	1900.1	0.5	10	7.89	0.115
5264.2	1899.6	3.7	10	8.18	0.136
5265.1	1899.3	7.1	10	8.4	0.151
5266.2	1898.9	11.5	10	8.64	0.166
5266.9	1898.7	0.2	20	7.94	0.12
5267.8	1898.3	2.2	20	8.16	0.136
5268.9	1897.9	5.2	20	8.39	0.151
5269.8	1897.6	8.5	20	8.62	0.166
5270.4	1897.4	0.2	30	7.95	0.124
5271	1897.2	1.2	30	8.09	0.133
5271.9	1896.8	3.5	30	8.3	0.148
5272.9	1896.5	6.1	30	8.51	0.161
5274.9	1895.8	0	40	8.02	0.127
5275.6	1895.5	1.6	40	8.26	0.146
5276.6	1895.2	3.7	40	8.47	0.16
5279.2	1894.2	0.3	50	8.17	0.142
5280.6	1893.7	2.5	50	8.48	0.162

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

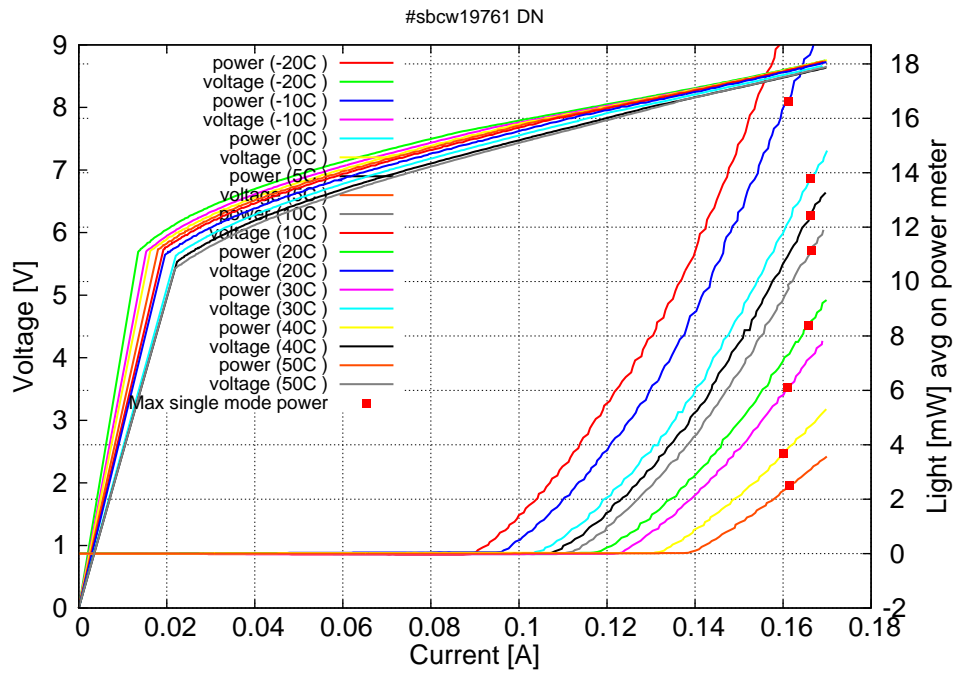


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

