

**Datasheet for #sbcw19768 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 #sbcw19768 DN (please note that AlN submount numbering is A0TMF)

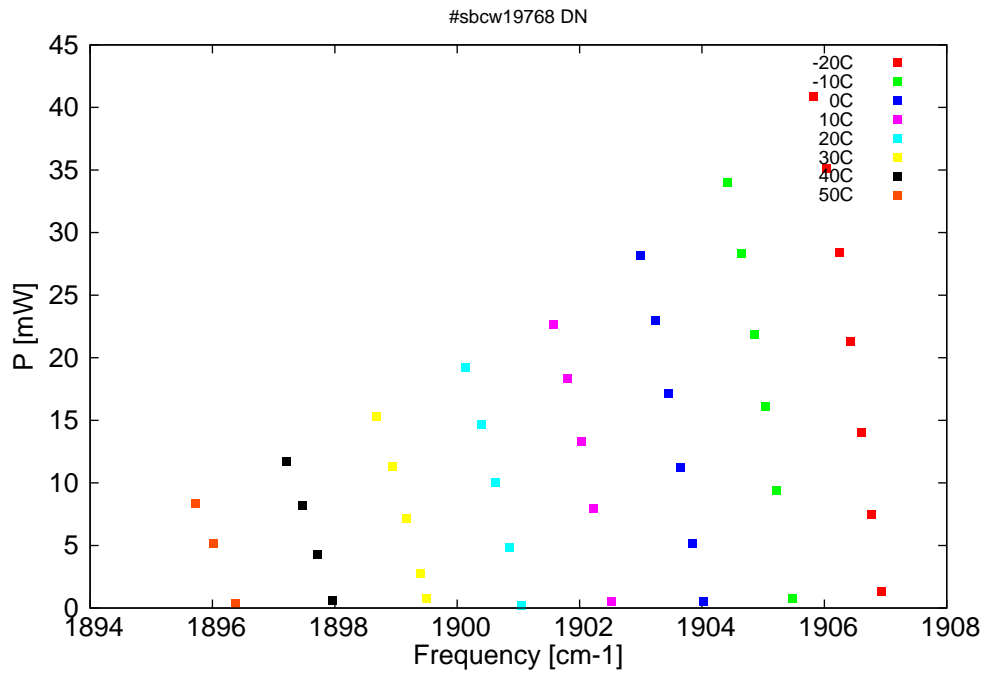


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

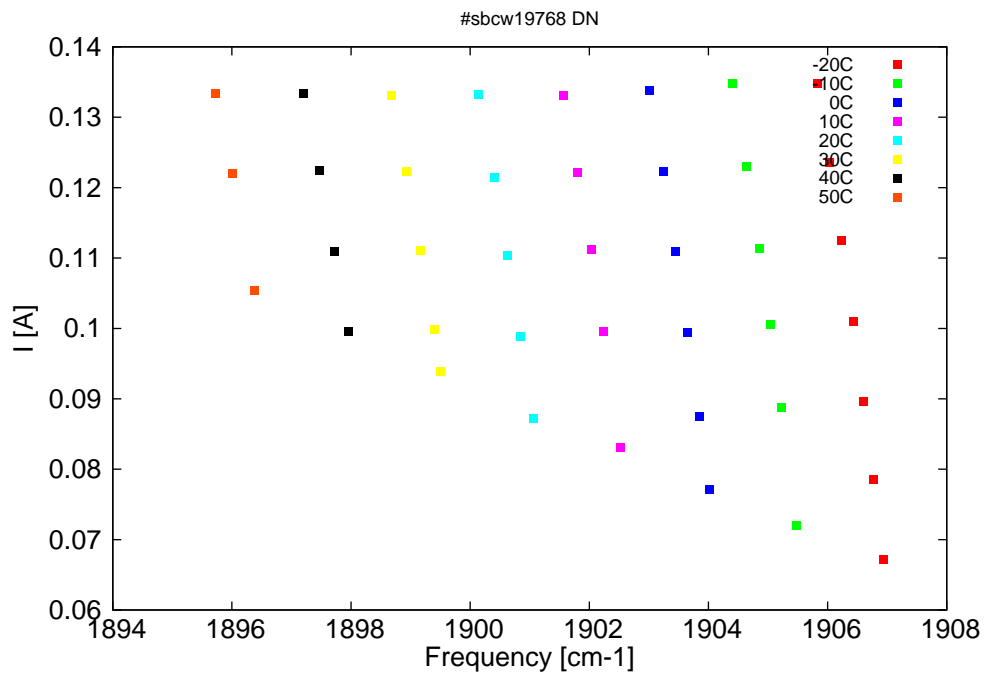


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5244	1906.9	1.4	-20	7.53	0.067
5244.5	1906.8	7.5	-20	7.71	0.079
5244.9	1906.6	14.1	-20	7.87	0.09
5245.4	1906.4	21.3	-20	8.05	0.101
5245.9	1906.2	28.4	-20	8.23	0.113
5246.5	1906	35.1	-20	8.41	0.124
5247.1	1905.8	40.9	-20	8.62	0.135
5248	1905.5	0.8	-10	7.56	0.072
5248.7	1905.2	9.4	-10	7.82	0.089
5249.2	1905	16.1	-10	8	0.101
5249.8	1904.9	21.9	-10	8.18	0.111
5250.3	1904.6	28.4	-10	8.37	0.123
5251	1904.4	34	-10	8.58	0.135
5252	1904	0.5	0	7.6	0.077
5252.5	1903.8	5.1	0	7.77	0.087
5253.1	1903.7	11.2	0	7.95	0.099
5253.6	1903.4	17.1	0	8.14	0.111
5254.2	1903.2	22.9	0	8.33	0.122
5254.9	1903	28.2	0	8.54	0.134
5256.2	1902.5	0.6	10	7.66	0.083
5257	1902.2	7.9	10	7.93	0.1
5257.5	1902	13.3	10	8.12	0.111
5258.2	1901.8	18.3	10	8.31	0.122
5258.8	1901.6	22.7	10	8.51	0.133
5260.2	1901.1	0.2	20	7.69	0.087
5260.8	1900.9	4.9	20	7.88	0.099
5261.4	1900.6	10	20	8.07	0.11
5262.1	1900.4	14.7	20	8.26	0.121
5262.8	1900.1	19.2	20	8.48	0.133
5264.5	1899.5	0.7	30	7.78	0.094
5264.8	1899.4	2.8	30	7.88	0.1
5265.5	1899.2	7.1	30	8.06	0.111
5266.1	1898.9	11.3	30	8.26	0.122
5266.8	1898.7	15.3	30	8.46	0.133
5268.8	1898	0.6	40	7.84	0.1
5269.5	1897.7	4.3	40	8.04	0.111
5270.2	1897.5	8.2	40	8.23	0.122
5270.9	1897.2	11.7	40	8.44	0.133
5273.2	1896.4	0.4	50	7.91	0.105
5274.2	1896	5.2	50	8.2	0.122
5275	1895.7	8.4	50	8.41	0.133

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

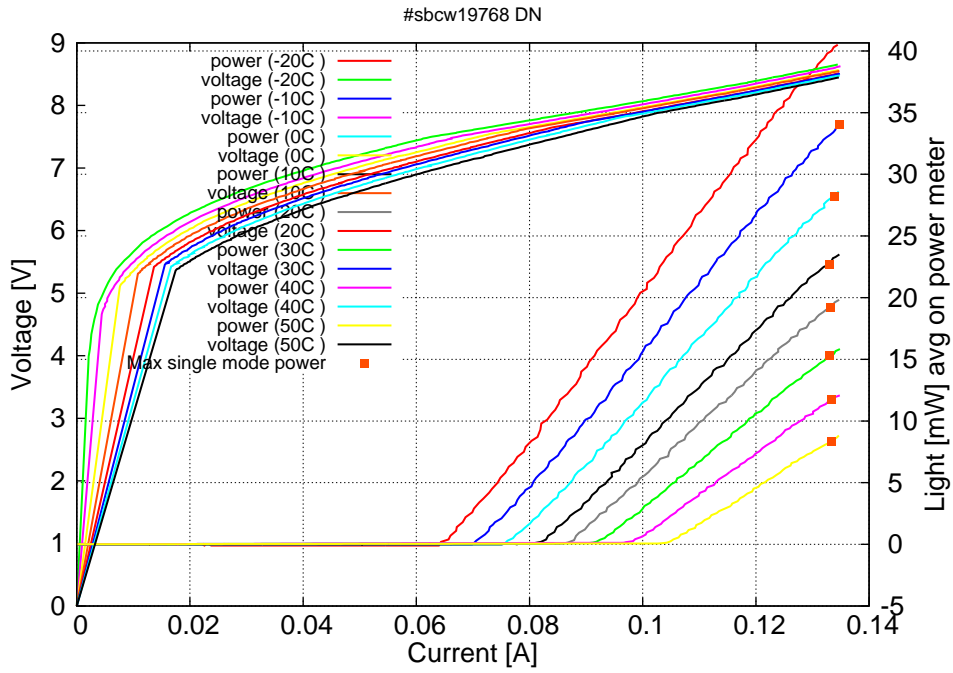


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.06A$  /  $V_{th}=7.5V$  (2-wires measurements). Maximum operation current: 0.135A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

