

Datasheet for #sbcw19764 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 #sbcw19764 DN (please note that AlN submount numbering is A0PXA)

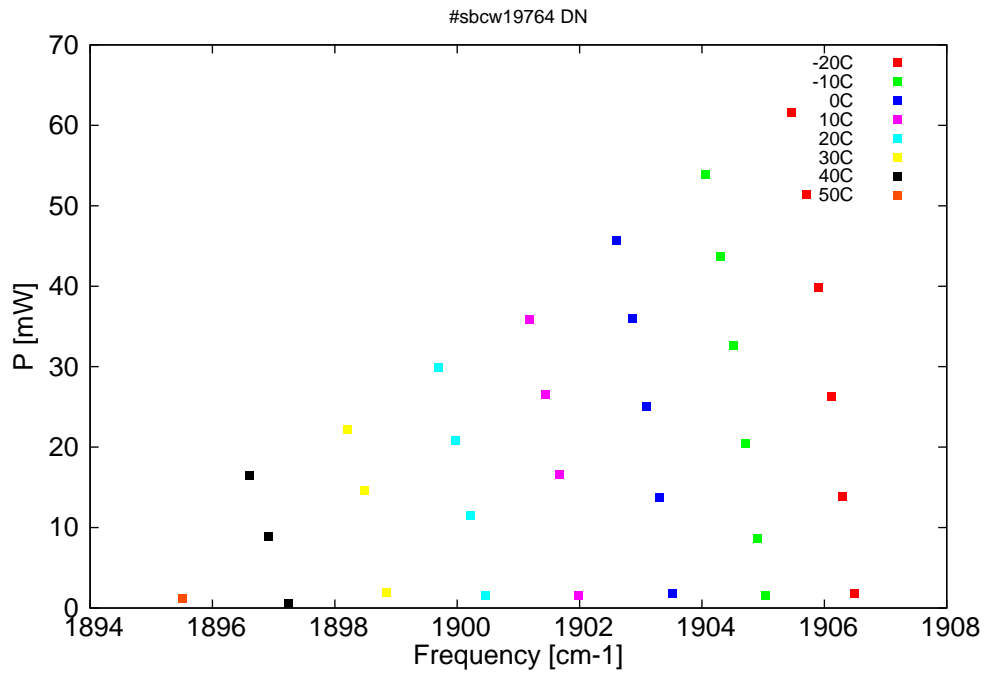


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

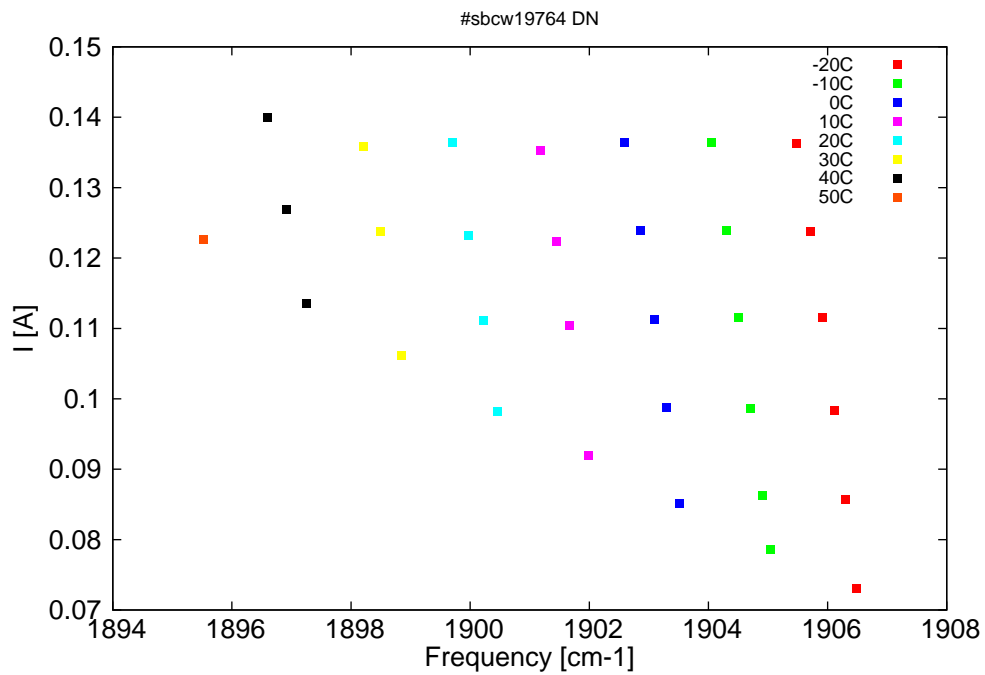


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5245.3	1906.5	1.8	-20	7.65	0.073
5245.8	1906.3	13.8	-20	7.85	0.086
5246.3	1906.1	26.4	-20	8.04	0.098
5246.8	1905.9	39.8	-20	8.25	0.112
5247.4	1905.7	51.4	-20	8.45	0.124
5248	1905.5	61.6	-20	8.68	0.136
5249.2	1905	1.5	-10	7.7	0.079
5249.6	1904.9	8.6	-10	7.81	0.086
5250.1	1904.7	20.5	-10	8.01	0.099
5250.7	1904.5	32.6	-10	8.22	0.112
5251.3	1904.3	43.7	-10	8.43	0.124
5252	1904	53.9	-10	8.66	0.136
5253.4	1903.5	1.8	0	7.77	0.085
5254	1903.3	13.8	0	7.98	0.099
5254.6	1903.1	25	0	8.18	0.111
5255.2	1902.9	36	0	8.4	0.124
5256	1902.6	45.6	0	8.63	0.136
5257.7	1902	1.6	10	7.85	0.092
5258.5	1901.7	16.6	10	8.14	0.11
5259.2	1901.4	26.5	10	8.34	0.122
5259.9	1901.2	35.9	10	8.58	0.135
5261.9	1900.5	1.6	20	7.9	0.098
5262.6	1900.2	11.5	20	8.12	0.111
5263.2	1900	20.8	20	8.33	0.123
5264	1899.7	29.8	20	8.56	0.136
5266.4	1898.8	1.9	30	8.01	0.106
5267.3	1898.5	14.6	30	8.31	0.124
5268.1	1898.2	22.1	30	8.54	0.136
5270.8	1897.2	0.6	40	8.11	0.114
5271.7	1896.9	8.9	40	8.35	0.127
5272.6	1896.6	16.4	40	8.6	0.14
5275.6	1895.5	1.2	50	8.26	0.123

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

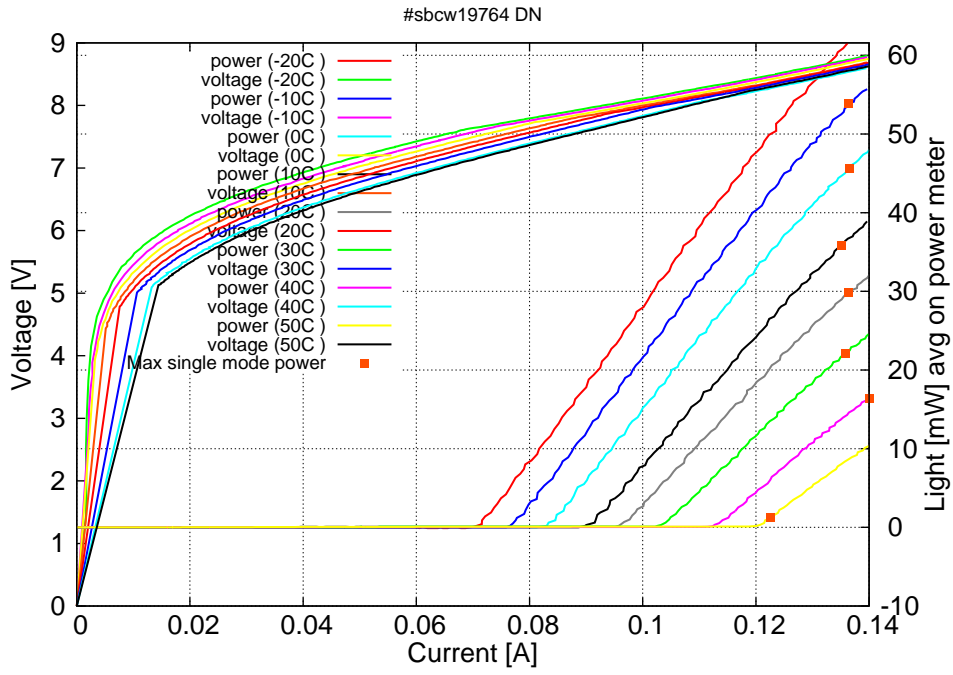


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.14A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

