

Datasheet for #sbcw19798 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 #sbcw19798 DN (please note that AlN submount numbering is A0PP5)

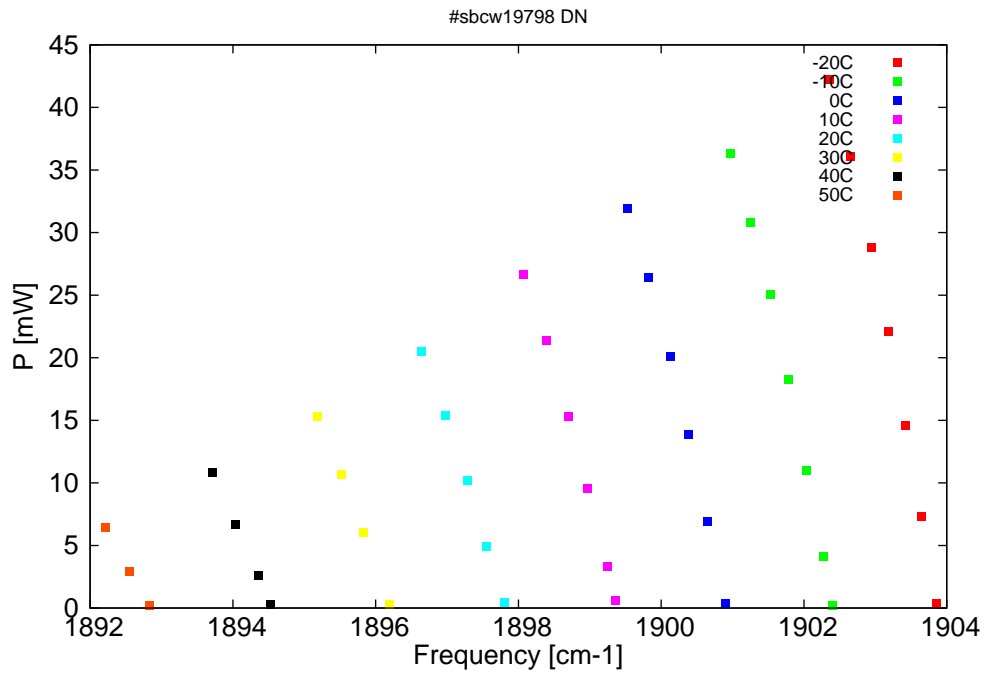


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

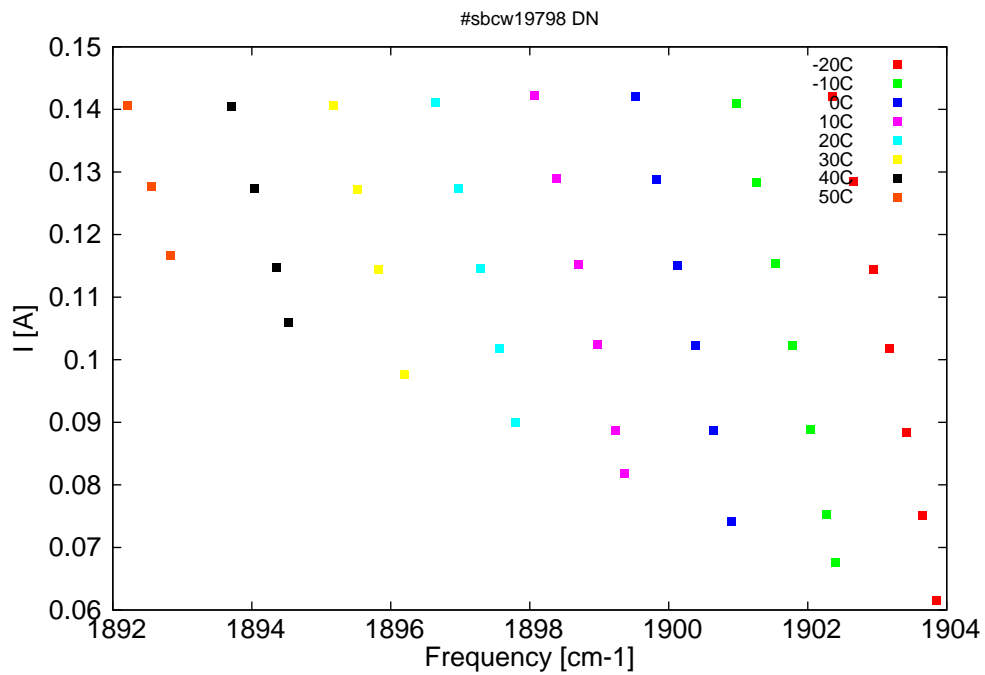


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5252.5	1903.9	0.4	-20	7.46	0.062
5253.1	1903.6	7.3	-20	7.63	0.075
5253.7	1903.4	14.6	-20	7.79	0.088
5254.4	1903.2	22.1	-20	7.96	0.102
5255	1902.9	28.8	-20	8.12	0.114
5255.8	1902.7	36.1	-20	8.3	0.128
5256.6	1902.4	42.2	-20	8.49	0.142
5256.5	1902.4	0.2	-10	7.48	0.068
5256.9	1902.3	4.1	-10	7.58	0.075
5257.5	1902	11	-10	7.75	0.089
5258.2	1901.8	18.3	-10	7.92	0.102
5258.9	1901.5	25	-10	8.08	0.115
5259.7	1901.3	30.8	-10	8.25	0.128
5260.5	1901	36.3	-10	8.42	0.141
5260.7	1900.9	0.4	0	7.52	0.074
5261.4	1900.6	6.9	0	7.69	0.089
5262.1	1900.4	13.9	0	7.86	0.102
5262.8	1900.1	20.1	0	8.03	0.115
5263.6	1899.8	26.4	0	8.2	0.129
5264.5	1899.5	31.9	0	8.38	0.142
5264.9	1899.4	0.6	10	7.56	0.082
5265.3	1899.2	3.3	10	7.64	0.089
5266	1899	9.5	10	7.81	0.102
5266.8	1898.7	15.3	10	7.97	0.115
5267.6	1898.4	21.4	10	8.15	0.129
5268.5	1898.1	26.6	10	8.33	0.142
5269.3	1897.8	0.4	20	7.61	0.09
5269.9	1897.6	4.9	20	7.75	0.102
5270.7	1897.3	10.2	20	7.91	0.115
5271.5	1897	15.4	20	8.08	0.127
5272.5	1896.6	20.5	20	8.25	0.141
5273.7	1896.2	0.3	30	7.65	0.098
5274.7	1895.8	6.1	30	7.85	0.114
5275.6	1895.5	10.7	30	8.01	0.127
5276.5	1895.2	15.3	30	8.18	0.141
5278.4	1894.5	0.2	40	7.71	0.106
5278.8	1894.4	2.6	40	7.8	0.115
5279.7	1894	6.7	40	7.95	0.127
5280.6	1893.7	10.8	40	8.11	0.14
5283.1	1892.8	0.2	50	7.78	0.117
5283.9	1892.6	2.9	50	7.9	0.128
5284.8	1892.2	6.5	50	8.06	0.141

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

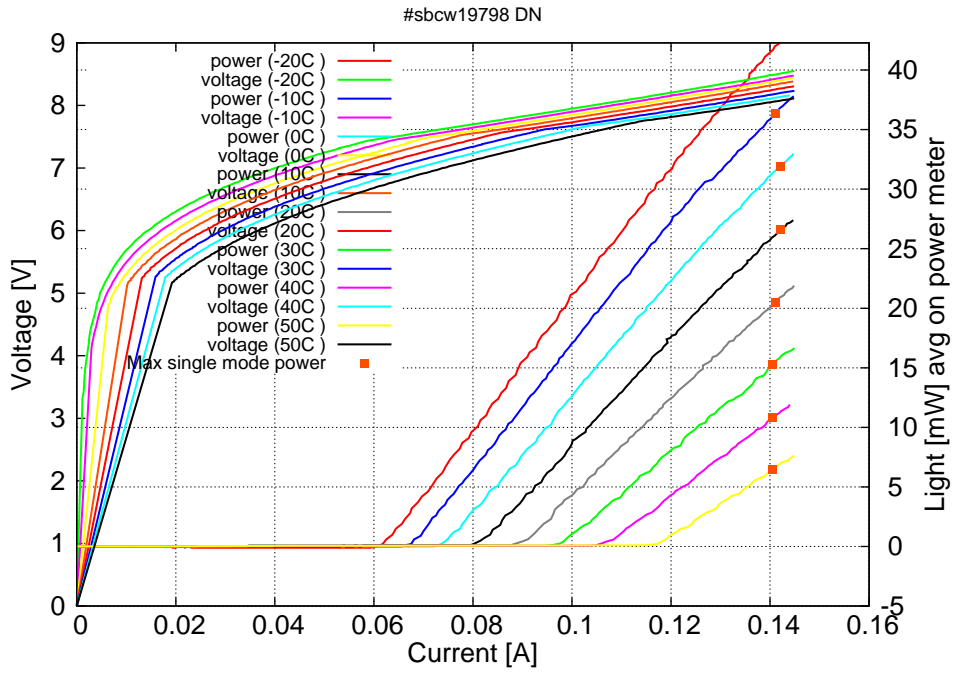


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.145A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

