

Datasheet for #sbcw19799 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 #sbcw19799 DN (please note that AlN submount numbering is A0PLV)

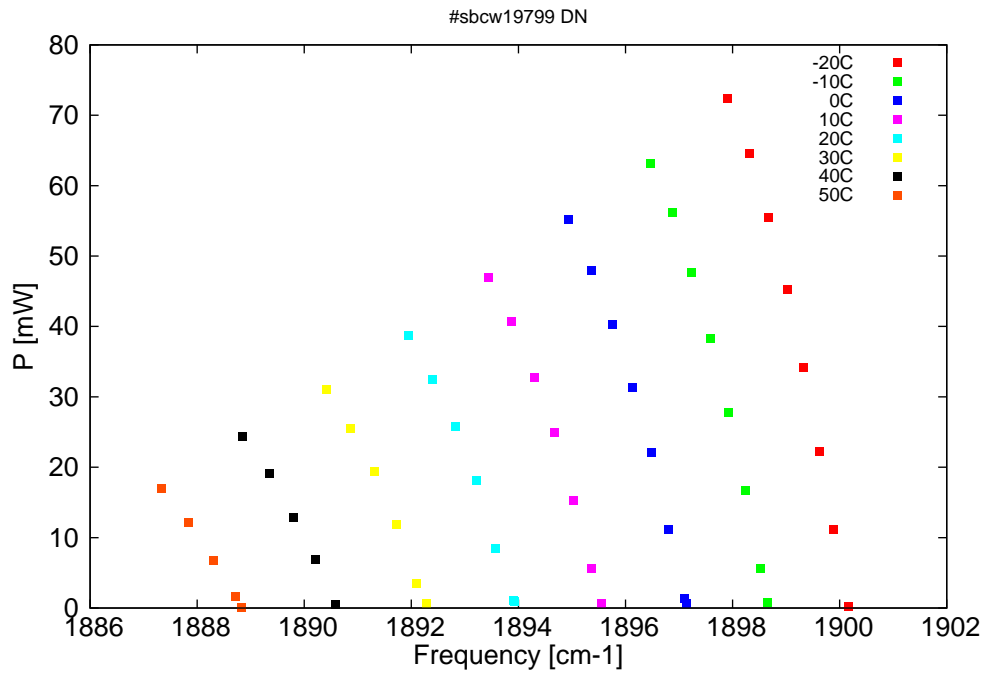


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

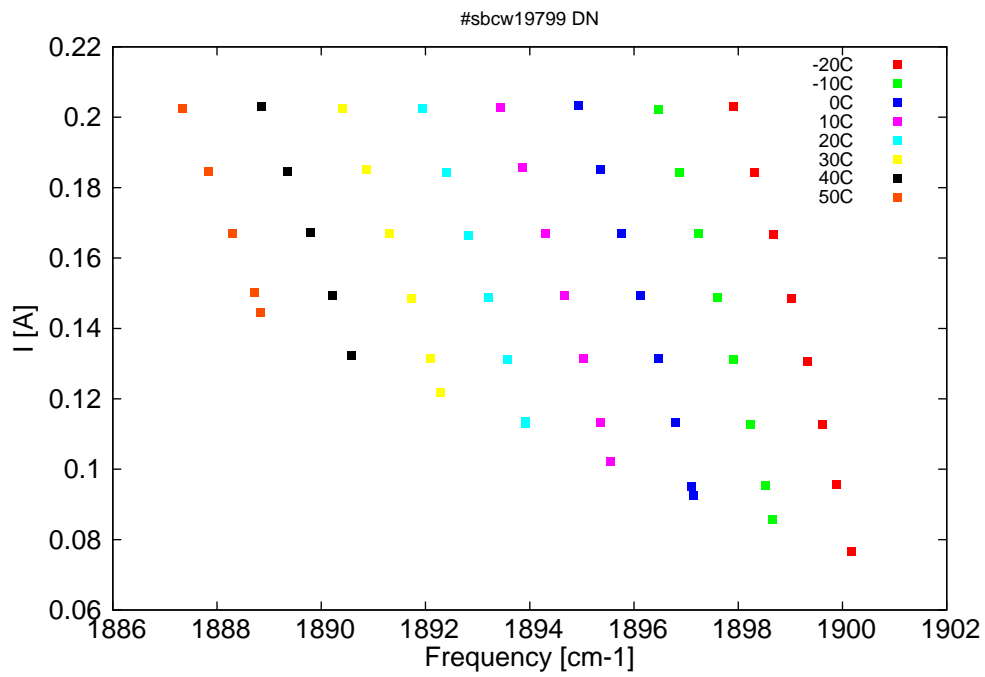


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5262.7	1900.2	0.3	-20	7.37	0.077
5263.5	1899.9	11.1	-20	7.55	0.096
5264.2	1899.6	22.2	-20	7.7	0.113
5265	1899.3	34.2	-20	7.86	0.131
5265.9	1899	45.3	-20	8.03	0.148
5266.8	1898.7	55.5	-20	8.19	0.167
5267.8	1898.3	64.6	-20	8.36	0.184
5268.9	1897.9	72.4	-20	8.56	0.203
5266.9	1898.7	0.8	-10	7.4	0.086
5267.3	1898.5	5.6	-10	7.49	0.095
5268	1898.2	16.7	-10	7.65	0.113
5268.9	1897.9	27.8	-10	7.82	0.131
5269.8	1897.6	38.3	-10	7.98	0.149
5270.8	1897.2	47.7	-10	8.15	0.167
5271.8	1896.9	56.1	-10	8.32	0.184
5273	1896.5	63.1	-10	8.51	0.202
5271.1	1897.1	0.6	0	7.42	0.093
5271.2	1897.1	1.4	0	7.44	0.095
5272	1896.8	11.2	0	7.61	0.113
5272.9	1896.5	22.1	0	7.78	0.131
5273.9	1896.1	31.3	0	7.95	0.149
5274.9	1895.8	40.2	0	8.12	0.167
5276	1895.4	48	0	8.3	0.185
5277.2	1894.9	55.2	0	8.48	0.203
5275.5	1895.6	0.7	10	7.47	0.102
5276	1895.4	5.7	10	7.57	0.113
5277	1895	15.2	10	7.74	0.131
5278	1894.7	24.9	10	7.91	0.149
5279	1894.3	32.8	10	8.08	0.167
5280.2	1893.9	40.8	10	8.26	0.186
5281.4	1893.4	46.9	10	8.44	0.203
5280	1893.9	1	20	7.52	0.113
5280.1	1893.9	1	20	7.52	0.114
5281	1893.6	8.4	20	7.69	0.131
5282	1893.2	18.1	20	7.86	0.149
5283.1	1892.8	25.7	20	8.02	0.166
5284.3	1892.4	32.4	20	8.2	0.184
5285.6	1891.9	38.7	20	8.39	0.202
5284.6	1892.3	0.6	30	7.56	0.122
5285.1	1892.1	3.5	30	7.65	0.131
5286.2	1891.7	11.8	30	7.81	0.149
5287.3	1891.3	19.4	30	7.99	0.167
5288.6	1890.9	25.6	30	8.17	0.185
5289.9	1890.4	31	30	8.34	0.203
5289.4	1890.6	0.5	40	7.61	0.132
5290.4	1890.2	7	40	7.77	0.149
5291.6	1889.8	12.9	40	7.94	0.167
5292.8	1889.4	19	40	8.11	0.185
5294.2	1888.9	24.3	40	8.3	0.203

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5294.3	1888.8	0.1	50	7.68	0.144
5294.6	1888.7	1.6	50	7.73	0.15
5295.8	1888.3	6.8	50	7.89	0.167
5297.1	1887.8	12.1	50	8.06	0.185
5298.5	1887.3	17	50	8.24	0.203

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

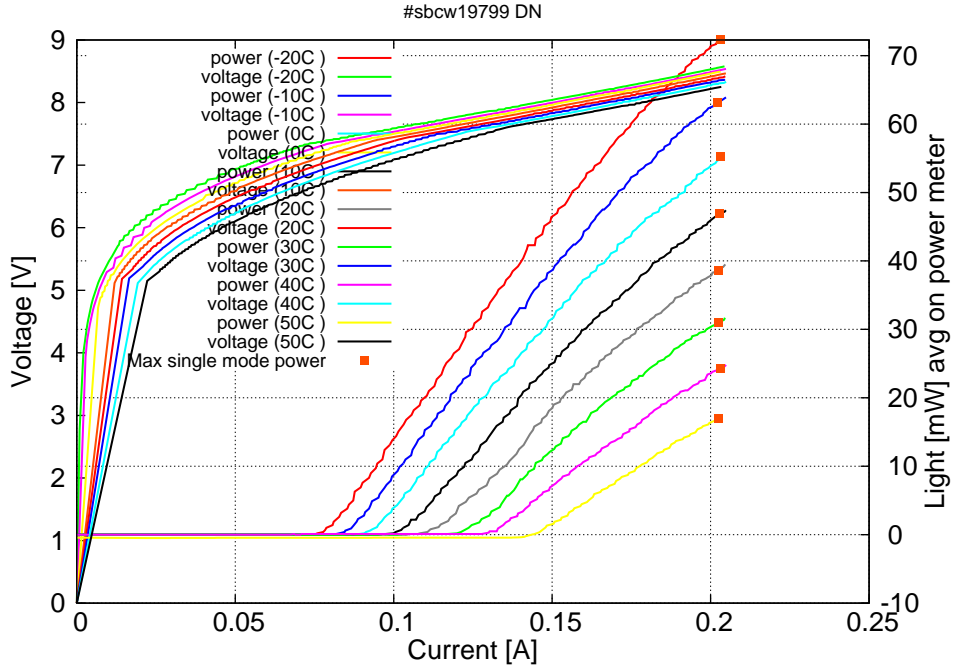


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.205A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

