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Datasheet for #sbcw24779 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.

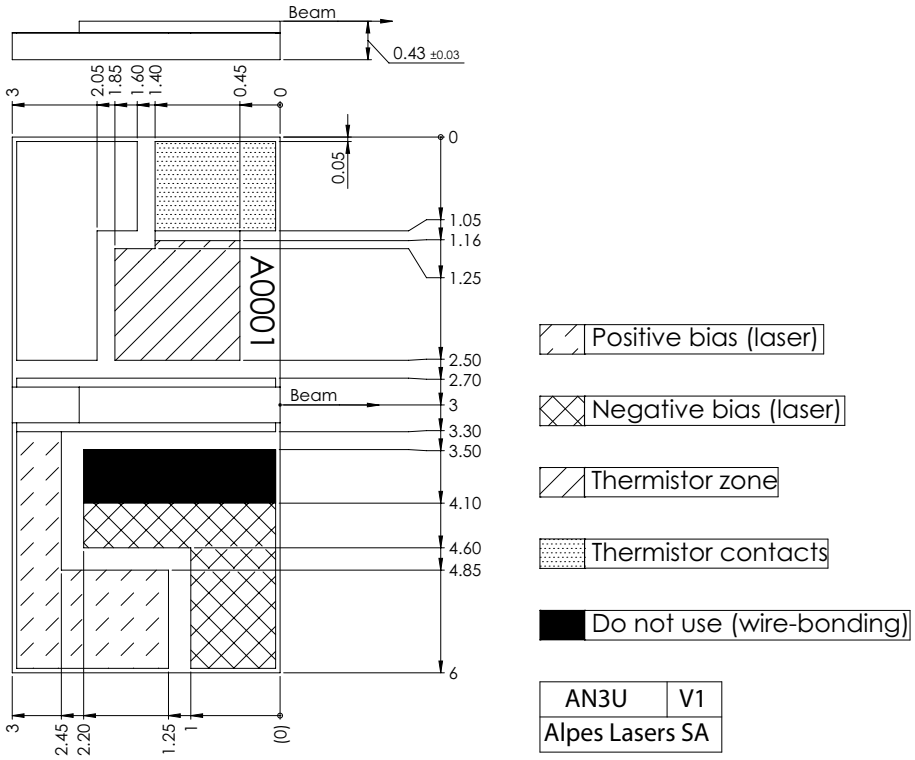

Figure 1: Mechanical and electrical interface for #sbcw24779 DN (please note that AlN submount numbering is A11VJ)

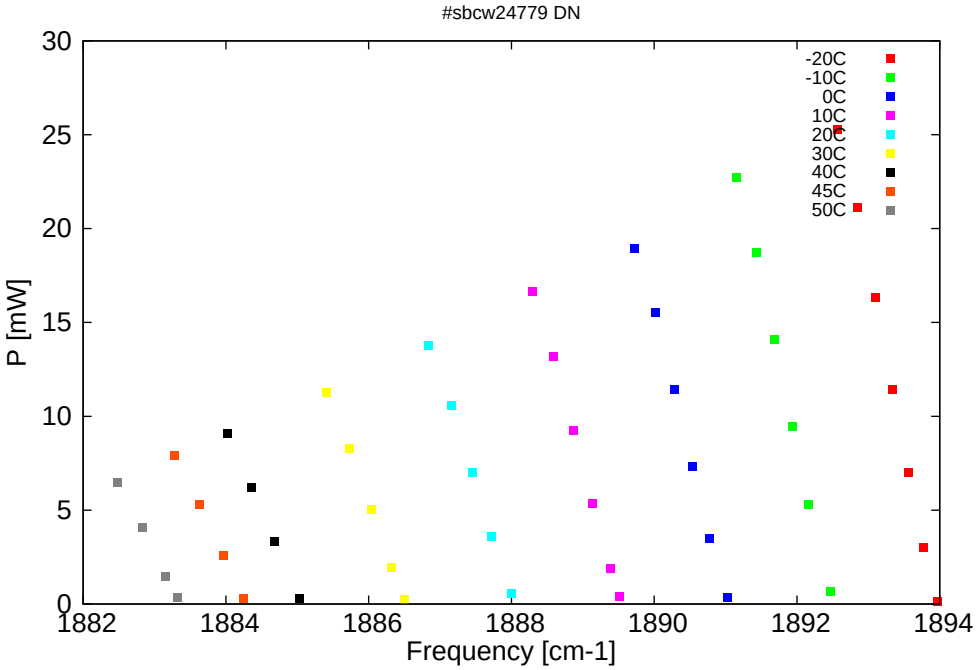

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

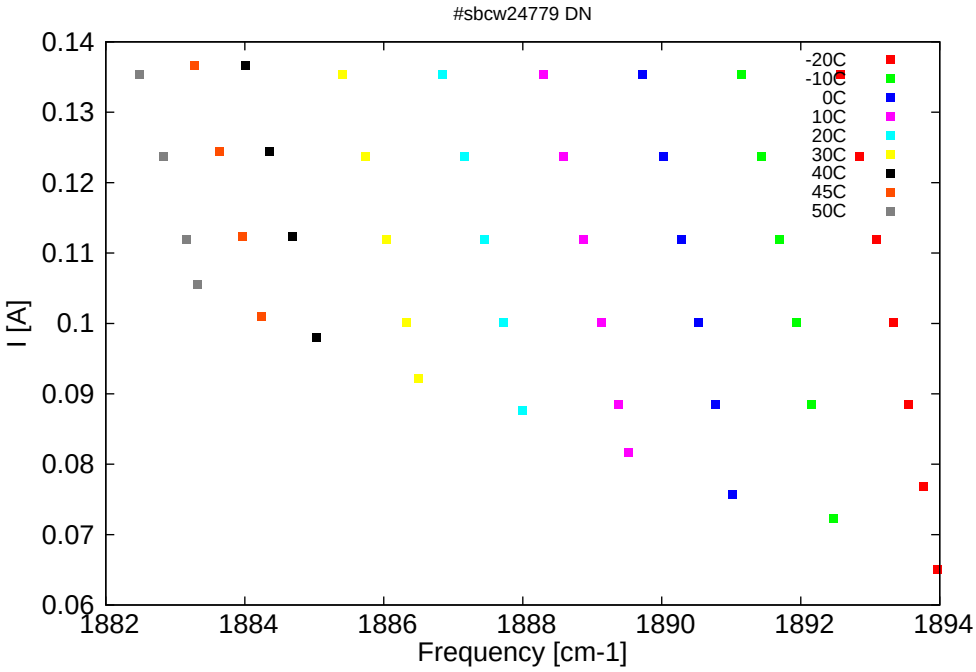

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
5279.9	1894	0.1	-20	7.49	0.065
5280.5	1893.8	3	-20	7.67	0.077
5281.1	1893.6	7	-20	7.85	0.089
5281.7	1893.3	11.5	-20	8.03	0.1
5282.4	1893.1	16.3	-20	8.22	0.112
5283.1	1892.8	21.1	-20	8.42	0.124
5283.8	1892.6	25.3	-20	8.66	0.135
5284.1	1892.5	0.6	-10	7.56	0.072
5285	1892.2	5.3	-10	7.82	0.089
5285.6	1891.9	9.5	-10	8	0.1
5286.3	1891.7	14.1	-10	8.2	0.112
5287	1891.4	18.7	-10	8.4	0.124
5287.8	1891.1	22.7	-10	8.63	0.135
5288.1	1891	0.3	0	7.58	0.076
5288.8	1890.8	3.5	0	7.78	0.089
5289.5	1890.5	7.3	0	7.97	0.1
5290.2	1890.3	11.4	0	8.17	0.112
5291	1890	15.5	0	8.38	0.124
5291.8	1889.7	18.9	0	8.61	0.135
5292.4	1889.5	0.4	10	7.65	0.082
5292.7	1889.4	1.9	10	7.75	0.089
5293.4	1889.1	5.3	10	7.95	0.1
5294.2	1888.9	9.2	10	8.15	0.112
5294.9	1888.6	13.2	10	8.36	0.124
5295.8	1888.3	16.7	10	8.59	0.135
5296.6	1888	0.6	20	7.71	0.088
5297.4	1887.7	3.6	20	7.92	0.1
5298.1	1887.5	7	20	8.13	0.112
5299	1887.2	10.6	20	8.34	0.124
5299.8	1886.8	13.8	20	8.57	0.135
5300.8	1886.5	0.2	30	7.76	0.092
5301.3	1886.3	2	30	7.9	0.1
5302.1	1886	5	30	8.11	0.112
5303	1885.7	8.3	30	8.32	0.124
5303.9	1885.4	11.3	30	8.55	0.135
5305	1885	0.3	40	7.87	0.098
5305.9	1884.7	3.3	40	8.13	0.112
5306.8	1884.4	6.2	40	8.36	0.124
5307.8	1884	9.1	40	8.61	0.137
5307.2	1884.2	0.3	45	7.91	0.101
5308	1884	2.6	45	8.12	0.112
5308.9	1883.6	5.3	45	8.35	0.124
5309.9	1883.3	7.9	45	8.6	0.137
5309.8	1883.3	0.4	50	7.94	0.106
5310.2	1883.2	1.5	50	8.06	0.112
5311.1	1882.8	4.1	50	8.28	0.124
5312.1	1882.5	6.5	50	8.51	0.135

continued on next page

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]

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

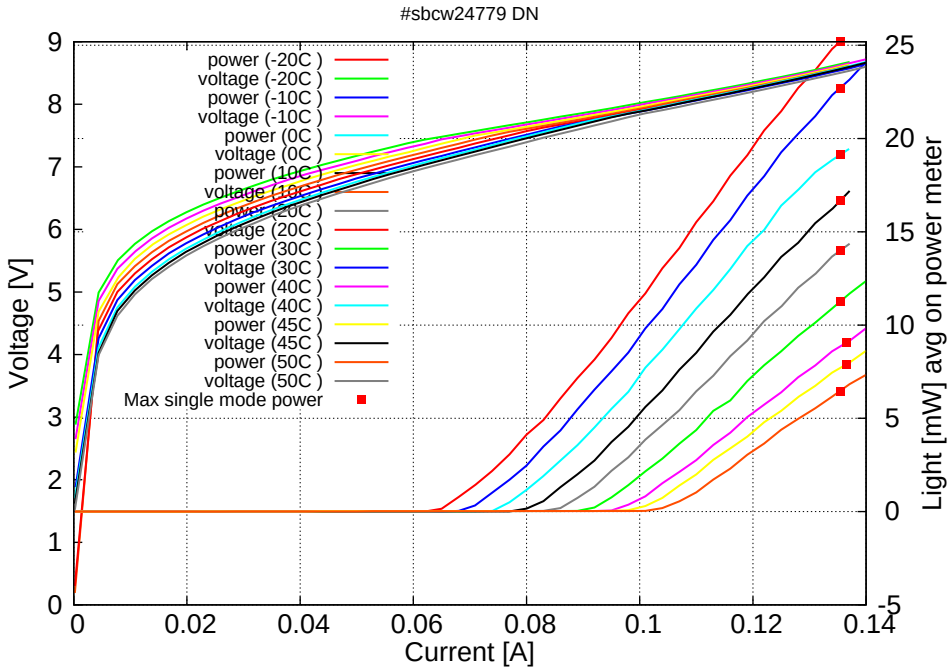

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.06A / Vth=7.4V (2-wires measurements). Maximum operation current: 0.140A for all temperatures.

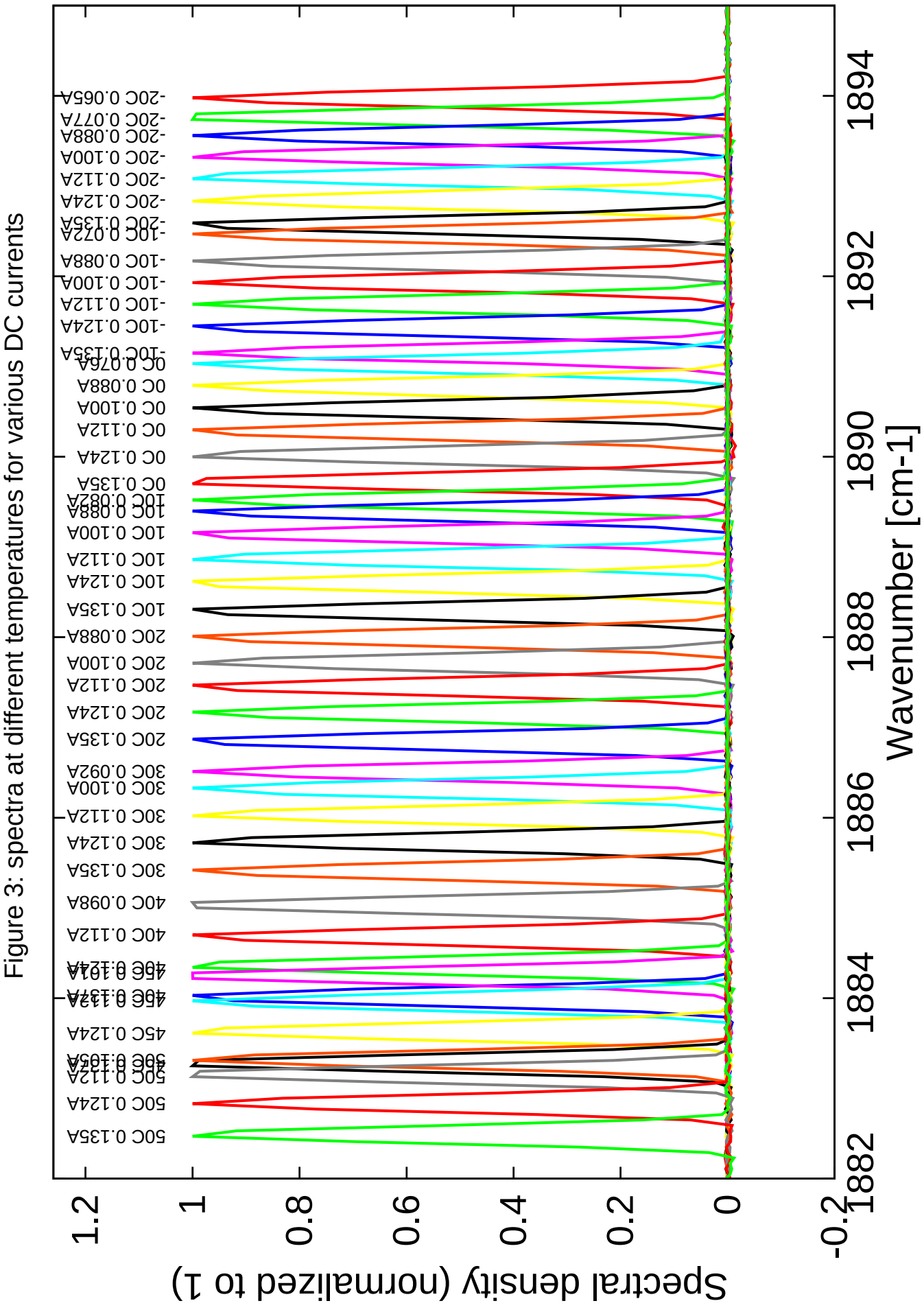

Figure 3: spectra at different temperatures for various DC currents