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Datasheet for #sbcw24670 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.

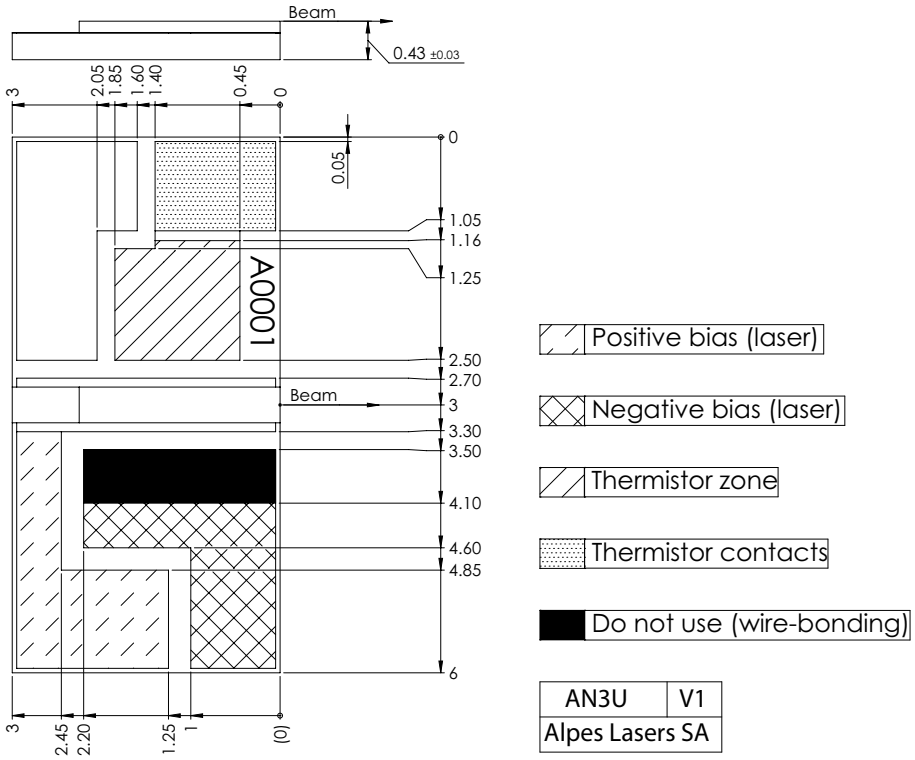

Figure 1: Mechanical and electrical interface for #sbcw24670 DN (please note that AlN submount numbering is A11VT)

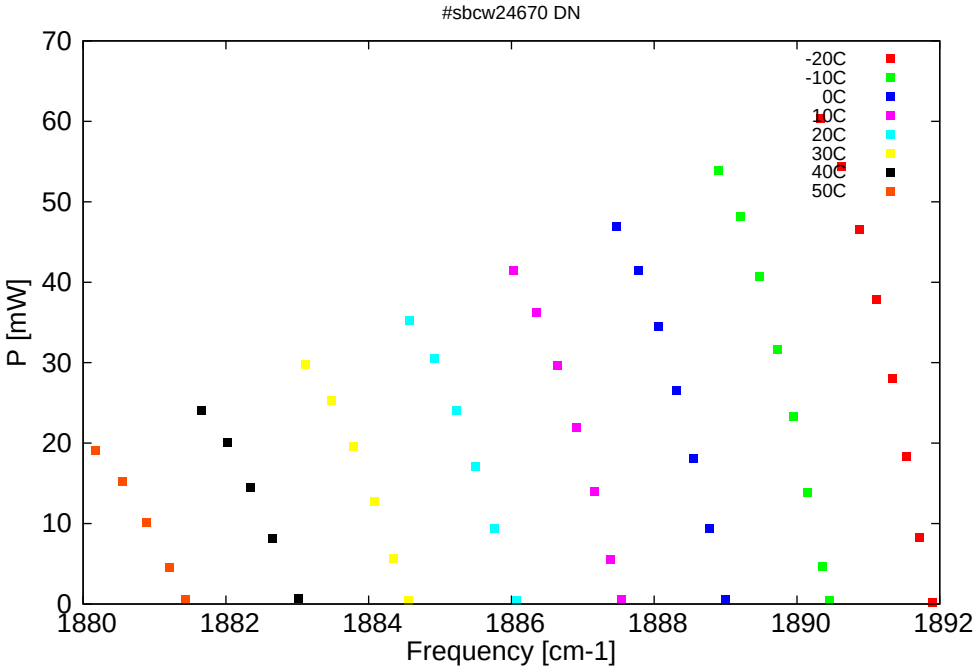

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

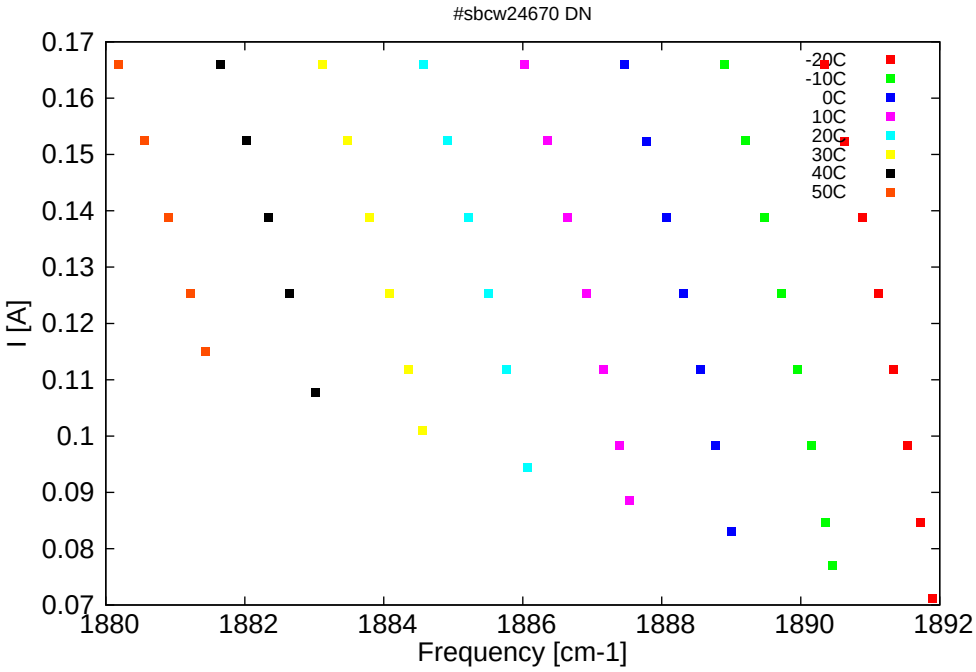

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
5285.7	1891.9	0.3	-20	7.52	0.071
5286.2	1891.7	8.3	-20	7.71	0.085
5286.7	1891.5	18.3	-20	7.9	0.098
5287.3	1891.3	28.1	-20	8.09	0.112
5287.9	1891.1	37.8	-20	8.29	0.125
5288.5	1890.9	46.6	-20	8.51	0.139
5289.3	1890.6	54.4	-20	8.75	0.152
5290.1	1890.3	60.4	-20	9.01	0.166
5289.7	1890.5	0.5	-10	7.55	0.077
5290	1890.4	4.7	-10	7.66	0.085
5290.6	1890.2	13.8	-10	7.85	0.098
5291.2	1889.9	23.3	-10	8.05	0.112
5291.8	1889.7	31.6	-10	8.25	0.125
5292.5	1889.5	40.8	-10	8.47	0.139
5293.2	1889.2	48.2	-10	8.71	0.152
5294.1	1888.9	53.9	-10	8.97	0.166
5293.8	1889	0.5	0	7.61	0.083
5294.4	1888.8	9.3	0	7.83	0.098
5295.1	1888.6	18.1	0	8.03	0.112
5295.7	1888.3	26.5	0	8.24	0.125
5296.4	1888.1	34.5	0	8.45	0.139
5297.2	1887.8	41.5	0	8.7	0.152
5298.1	1887.5	46.9	0	8.96	0.166
5297.9	1887.5	0.5	10	7.67	0.089
5298.3	1887.4	5.6	10	7.81	0.098
5299	1887.2	14	10	8.01	0.112
5299.7	1886.9	21.9	10	8.23	0.125
5300.4	1886.6	29.7	10	8.45	0.139
5301.2	1886.4	36.2	10	8.71	0.152
5302.1	1886	41.4	10	8.98	0.166
5302	1886.1	0.4	20	7.73	0.095
5302.9	1885.8	9.4	20	7.99	0.112
5303.6	1885.5	17.2	20	8.21	0.125
5304.4	1885.2	24	20	8.43	0.139
5305.3	1884.9	30.5	20	8.69	0.152
5306.2	1884.6	35.2	20	8.95	0.166
5306.3	1884.6	0.5	30	7.81	0.101
5306.9	1884.4	5.6	30	7.97	0.112
5307.6	1884.1	12.8	30	8.19	0.125
5308.4	1883.8	19.6	30	8.41	0.139
5309.3	1883.5	25.2	30	8.65	0.152
5310.3	1883.1	29.7	30	8.91	0.166
5310.6	1883	0.6	40	7.89	0.108
5311.7	1882.6	8.2	40	8.17	0.125
5312.5	1882.3	14.5	40	8.39	0.139
5313.4	1882	20	40	8.63	0.152
5314.5	1881.7	24	40	8.89	0.166
5315.1	1881.4	0.6	50	8.01	0.115
5315.7	1881.2	4.5	50	8.18	0.125

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λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
5316.6	1880.9	10.2	50	8.41	0.139
5317.6	1880.6	15.2	50	8.65	0.152
5318.6	1880.2	19.1	50	8.89	0.166

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

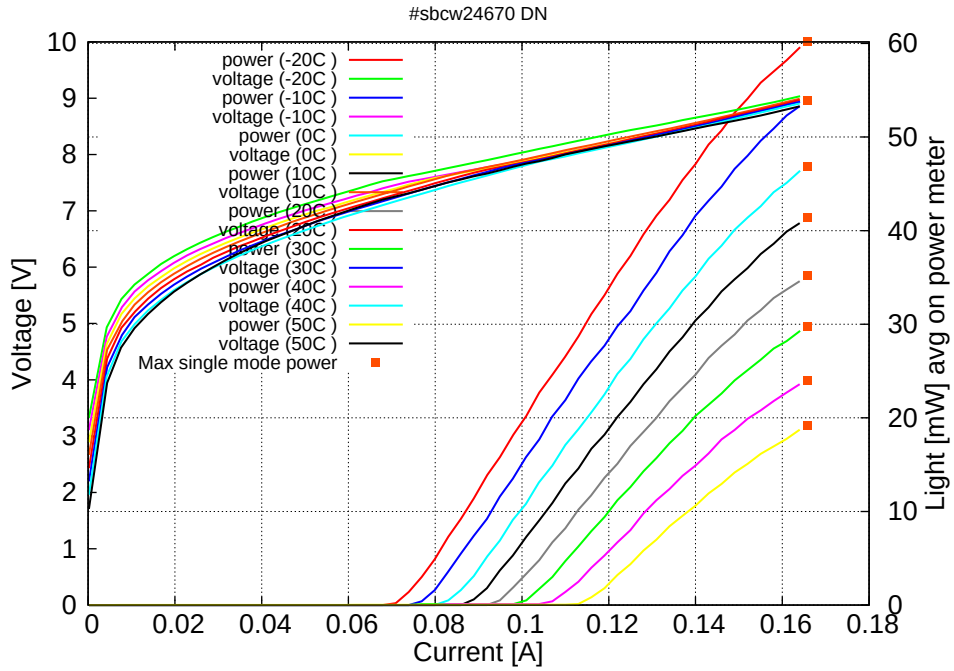

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.07A / Vth=7.6V (2-wires measurements). Maximum operation current: 0.166A for all temperatures.

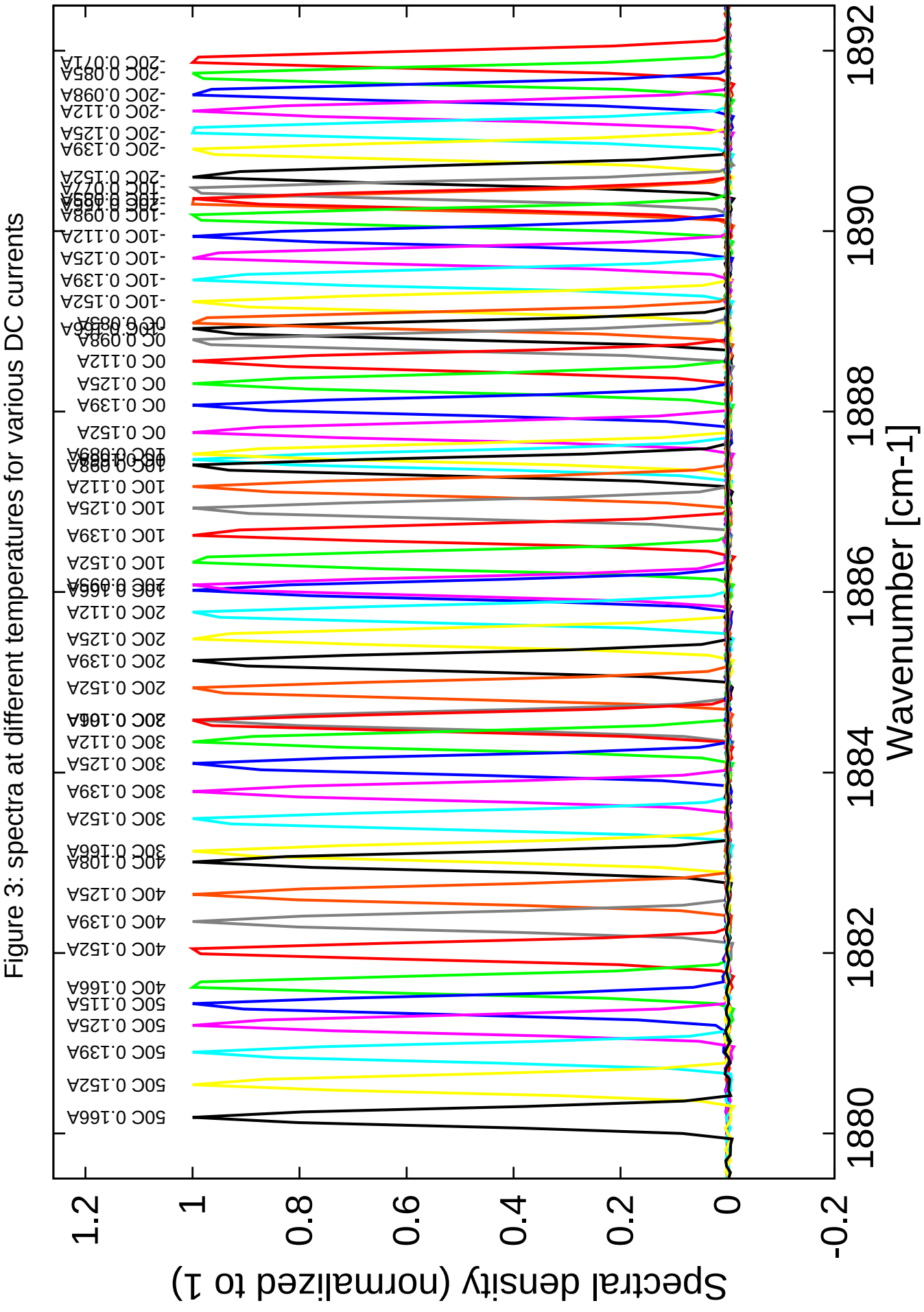

Figure 3: spectra at different temperatures for various DC currents