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Datasheet for #sbcw19748 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.

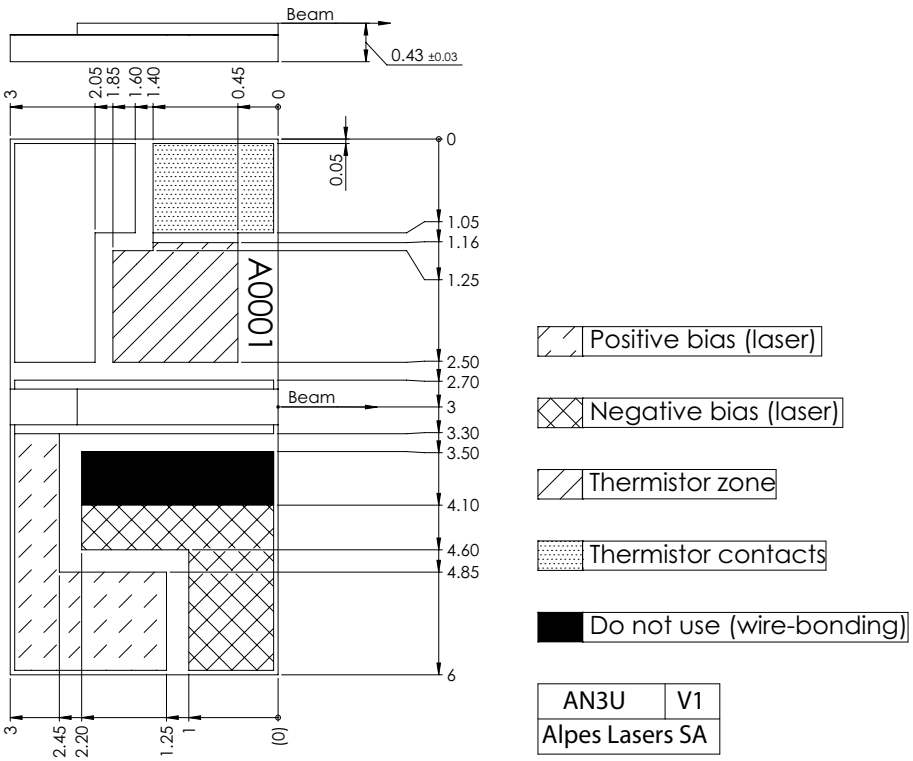


Figure 1: Mechanical and electrical interface for #sbcw19748 DN (please note that AlN submount numbering is A0RXP)

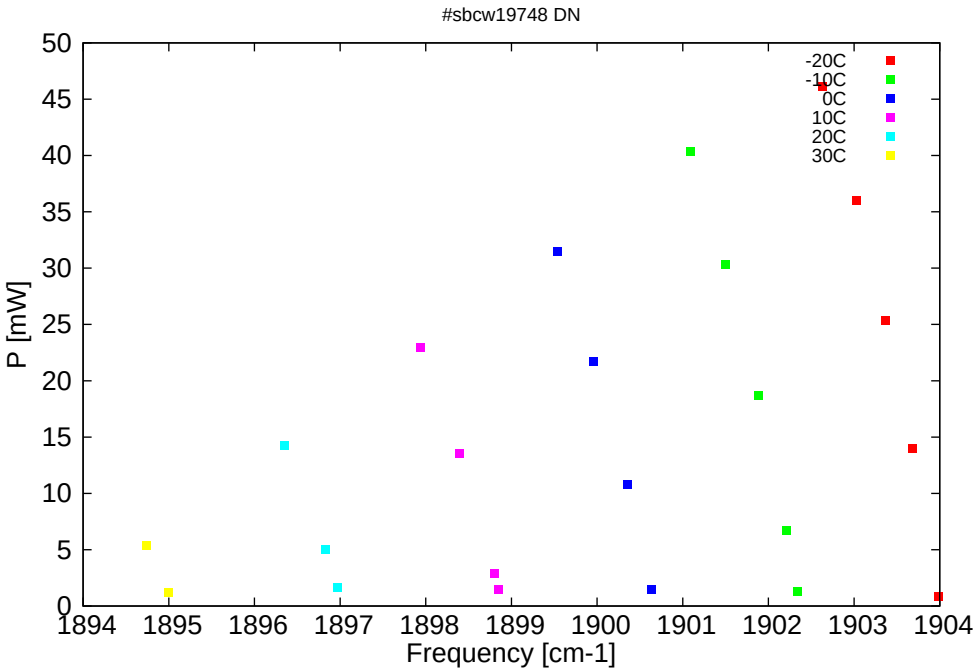


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

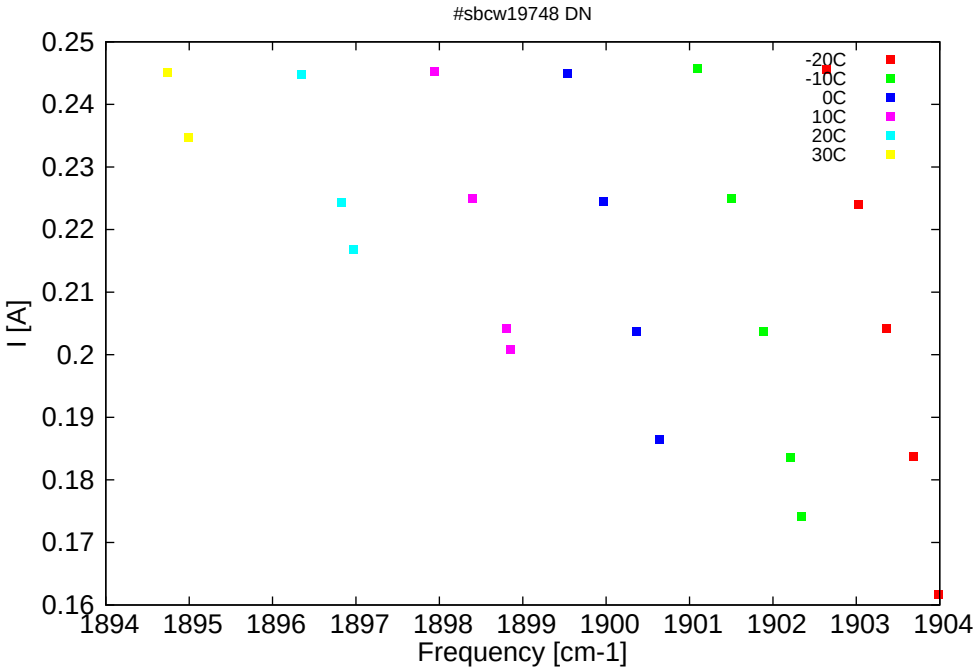


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
5252.1	1904	0.9	-20	7.9	0.162
5253	1903.7	14	-20	8.08	0.184
5253.8	1903.4	25.3	-20	8.27	0.204
5254.8	1903	36	-20	8.45	0.224
5255.9	1902.6	46.2	-20	8.67	0.246
5256.7	1902.3	1.3	-10	7.97	0.174
5257	1902.2	6.7	-10	8.05	0.184
5257.9	1901.9	18.7	-10	8.24	0.204
5259	1901.5	30.3	-10	8.44	0.225
5260.1	1901.1	40.3	-10	8.65	0.246
5261.4	1900.6	1.4	0	8.05	0.186
5262.2	1900.4	10.8	0	8.2	0.204
5263.3	1900	21.7	0	8.41	0.225
5264.4	1899.5	31.5	0	8.62	0.245
5266.3	1898.9	1.4	10	8.16	0.201
5266.5	1898.8	2.9	10	8.19	0.204
5267.6	1898.4	13.5	10	8.39	0.225
5268.9	1897.9	22.9	10	8.61	0.245
5271.5	1897	1.6	20	8.29	0.217
5272	1896.8	5	20	8.37	0.224
5273.3	1896.3	14.3	20	8.59	0.245
5277.1	1895	1.2	30	8.46	0.235
5277.8	1894.7	5.3	30	8.58	0.245

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

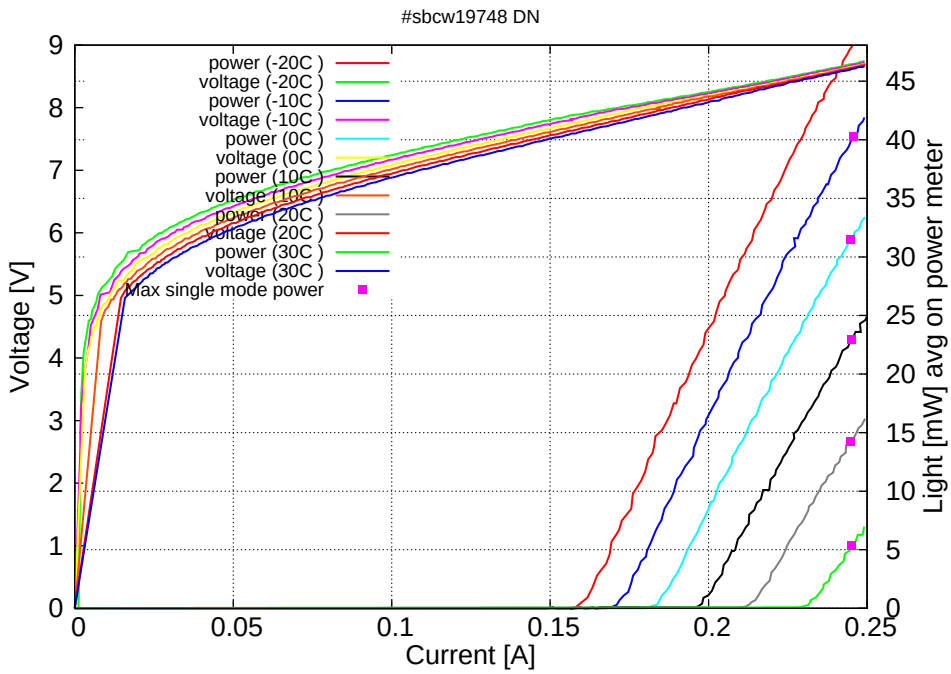
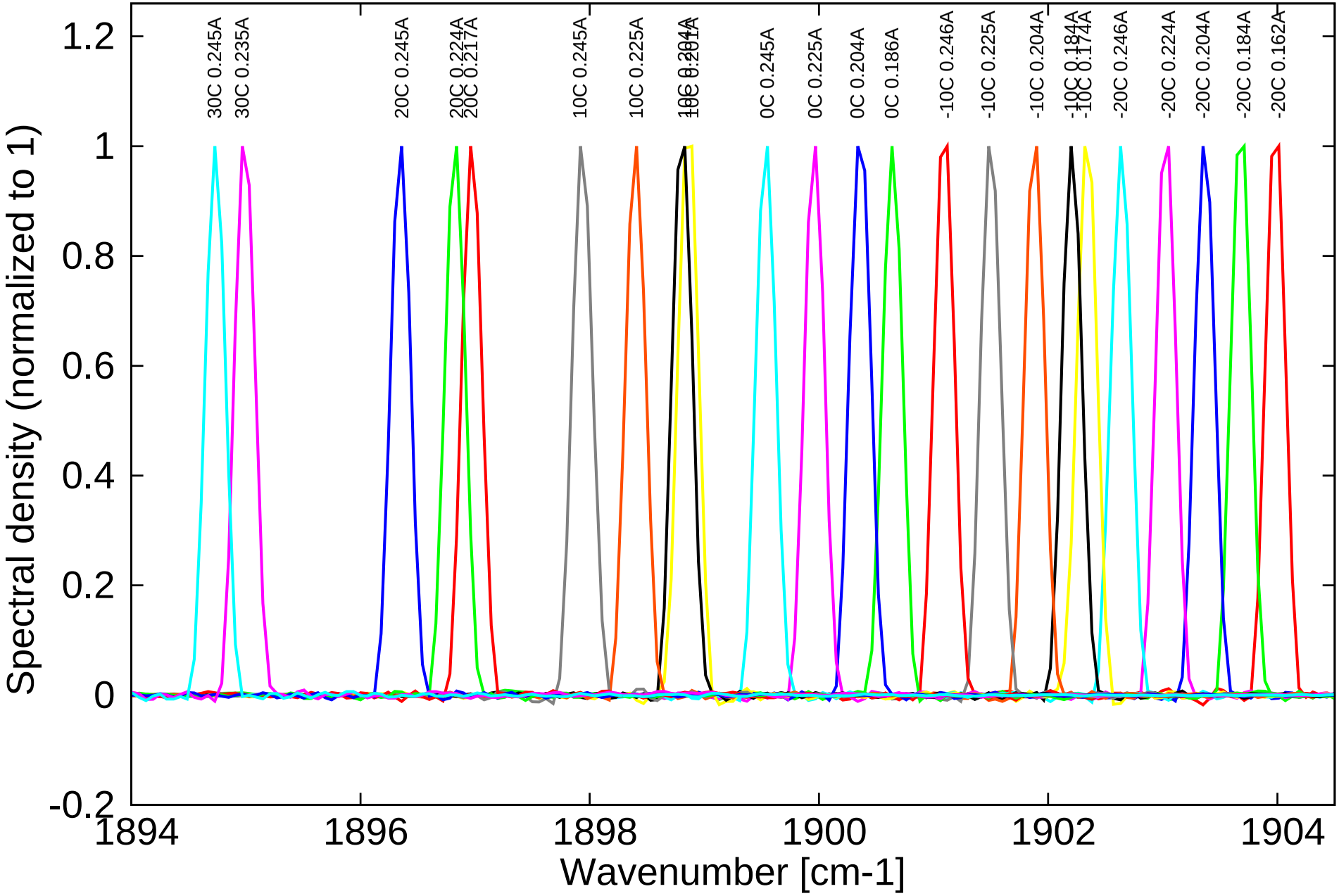


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.16A / Vth=7.9V (2-wires measurements). Maximum operation current: 0.25A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents



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