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Datasheet for #sbcw23668 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.

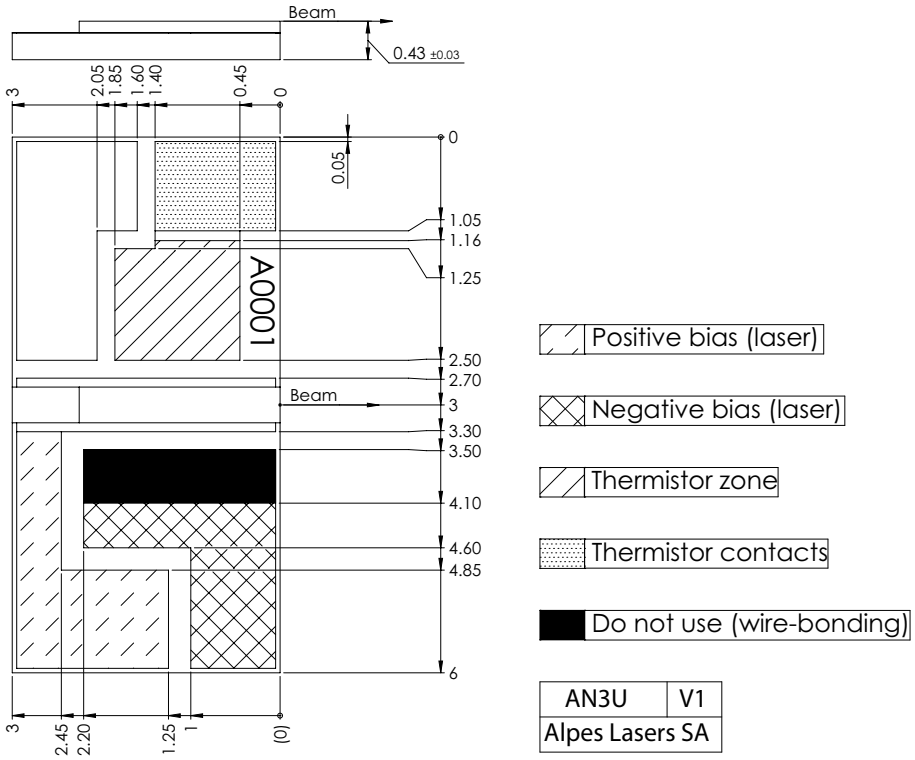

Figure 1: Mechanical and electrical interface for #sbcw23668 DN (please note that AlN submount numbering is A0Y18)

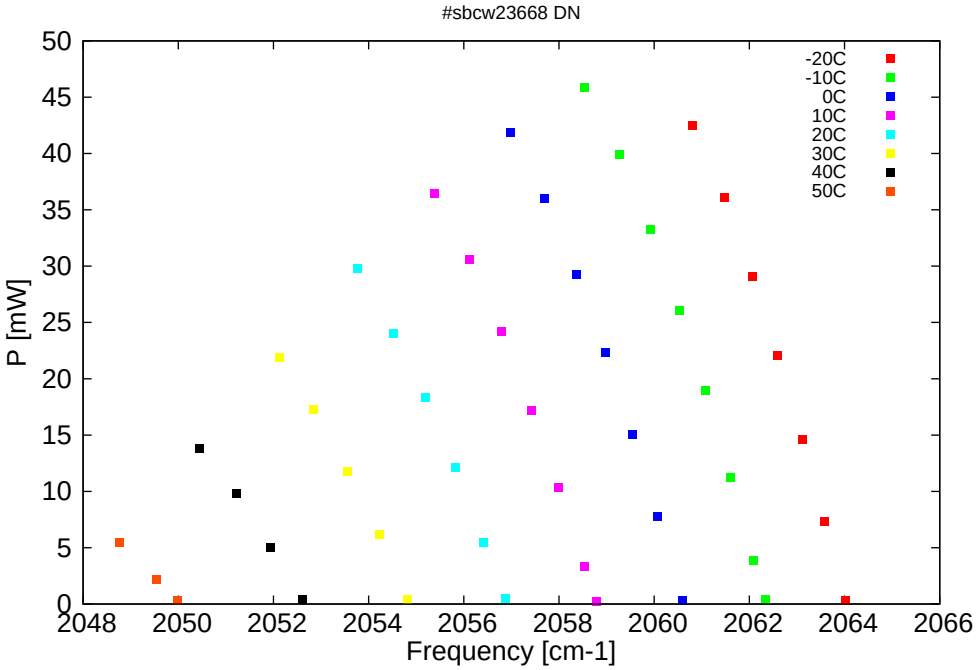

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

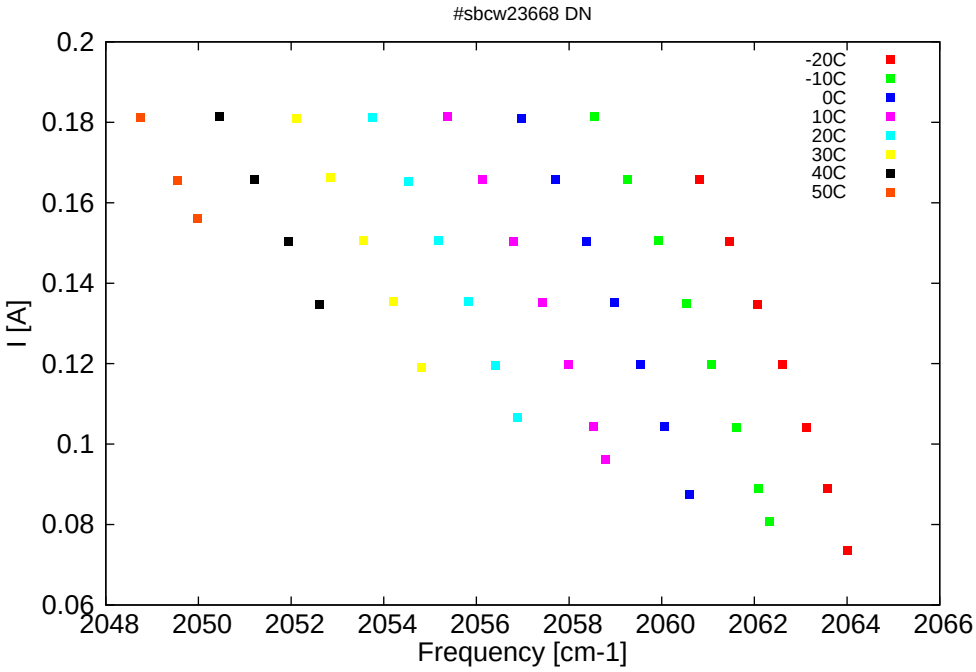

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
4844.9	2064	0.3	-20	11.54	0.074
4845.9	2063.6	7.3	-20	11.9	0.089
4847	2063.1	14.6	-20	12.25	0.104
4848.2	2062.6	22.1	-20	12.58	0.12
4849.5	2062.1	29.1	-20	12.91	0.135
4850.9	2061.5	36.1	-20	13.26	0.15
4852.5	2060.8	42.5	-20	13.64	0.166
4848.9	2062.3	0.4	-10	11.57	0.081
4849.5	2062.1	3.9	-10	11.75	0.089
4850.6	2061.6	11.2	-10	12.08	0.104
4851.8	2061.1	19	-10	12.41	0.12
4853.1	2060.5	26.1	-10	12.73	0.135
4854.5	2059.9	33.3	-10	13.06	0.151
4856.1	2059.3	39.9	-10	13.42	0.166
4857.8	2058.5	45.9	-10	13.81	0.181
4853	2060.6	0.3	0	11.6	0.088
4854.2	2060.1	7.8	0	11.95	0.104
4855.5	2059.5	15	0	12.26	0.12
4856.8	2059	22.3	0	12.58	0.135
4858.2	2058.4	29.2	0	12.89	0.15
4859.8	2057.7	36	0	13.23	0.166
4861.5	2057	41.9	0	13.59	0.181
4857.2	2058.8	0.3	10	11.67	0.096
4857.8	2058.5	3.3	10	11.82	0.104
4859.1	2058	10.4	10	12.13	0.12
4860.5	2057.4	17.2	10	12.44	0.135
4861.9	2056.8	24.2	10	12.74	0.151
4863.5	2056.1	30.6	10	13.07	0.166
4865.3	2055.4	36.5	10	13.41	0.181
4861.7	2056.9	0.5	20	11.78	0.107
4862.8	2056.4	5.5	20	12.02	0.12
4864.2	2055.8	12.1	20	12.32	0.135
4865.7	2055.2	18.3	20	12.62	0.151
4867.3	2054.5	24	20	12.92	0.165
4869.1	2053.8	29.8	20	13.26	0.181
4866.6	2054.8	0.4	30	11.93	0.119
4868	2054.2	6.2	30	12.22	0.135
4869.6	2053.6	11.8	30	12.51	0.151
4871.3	2052.8	17.3	30	12.82	0.166
4873	2052.1	21.9	30	13.12	0.181
4871.9	2052.6	0.4	40	12.13	0.135
4873.4	2051.9	5	40	12.41	0.15
4875.1	2051.2	9.8	40	12.7	0.166
4877	2050.4	13.8	40	13	0.181
4878.1	2050	0.3	50	12.44	0.156
4879.1	2049.5	2.2	50	12.61	0.165
4881	2048.8	5.4	50	12.9	0.181

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#sbcw23668 DN

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.

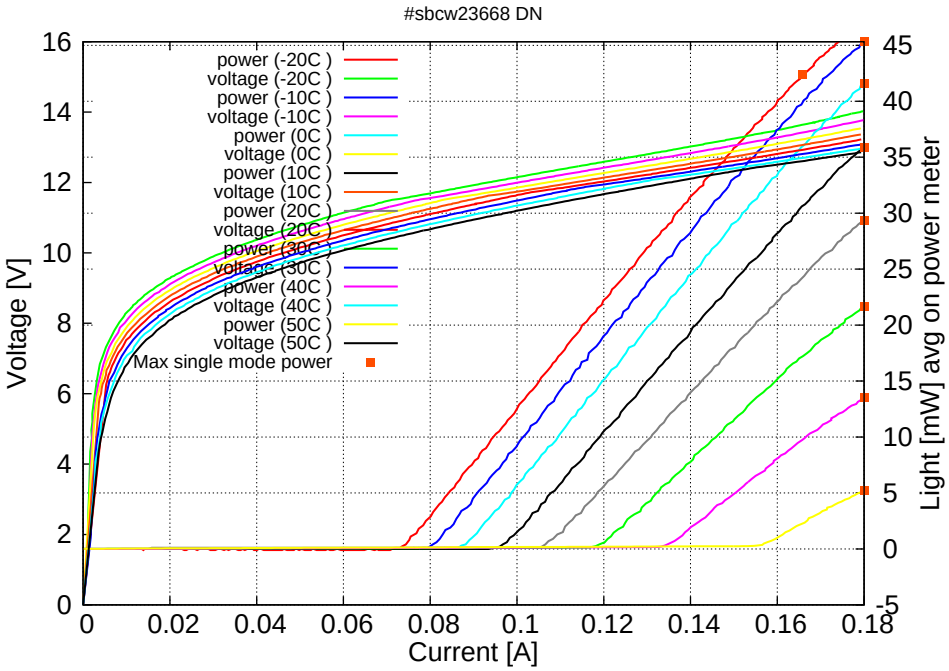

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.07A / Vth=11.5V (2-wires measurements). Maximum operation current: 0.17A at -20C, 0.18A between -10C and 50C.

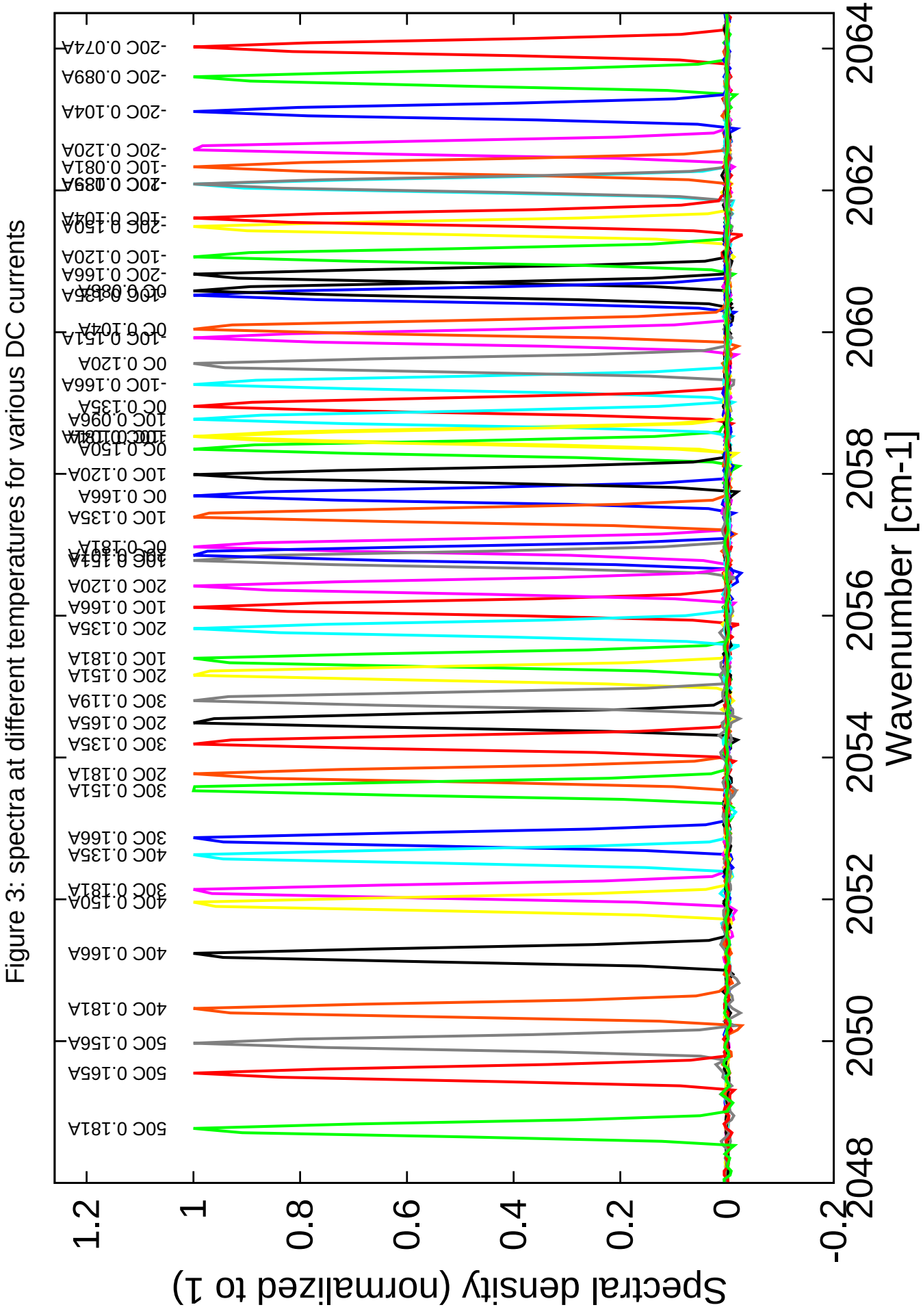

Figure 3: spectra at different temperatures for various DC currents