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Datasheet for #sbcw27913 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at
`https://www.alpeslasers.ch/resources/#faq`

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.

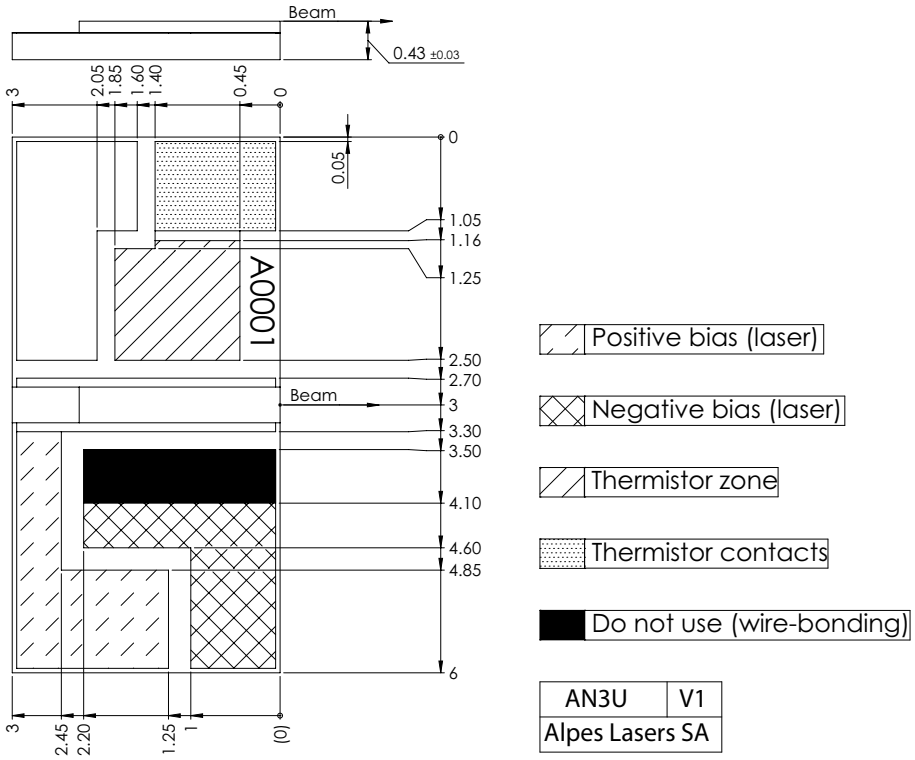

Figure 1: Mechanical and electrical interface for #sbcw27913 DN (please note that AlN submount numbering is A0V4G)

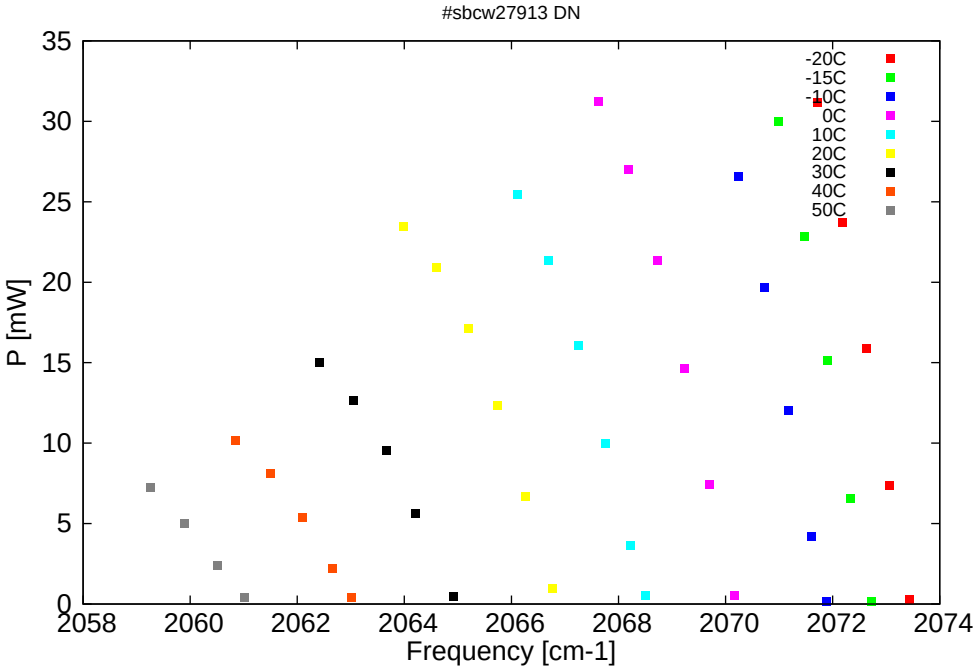

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

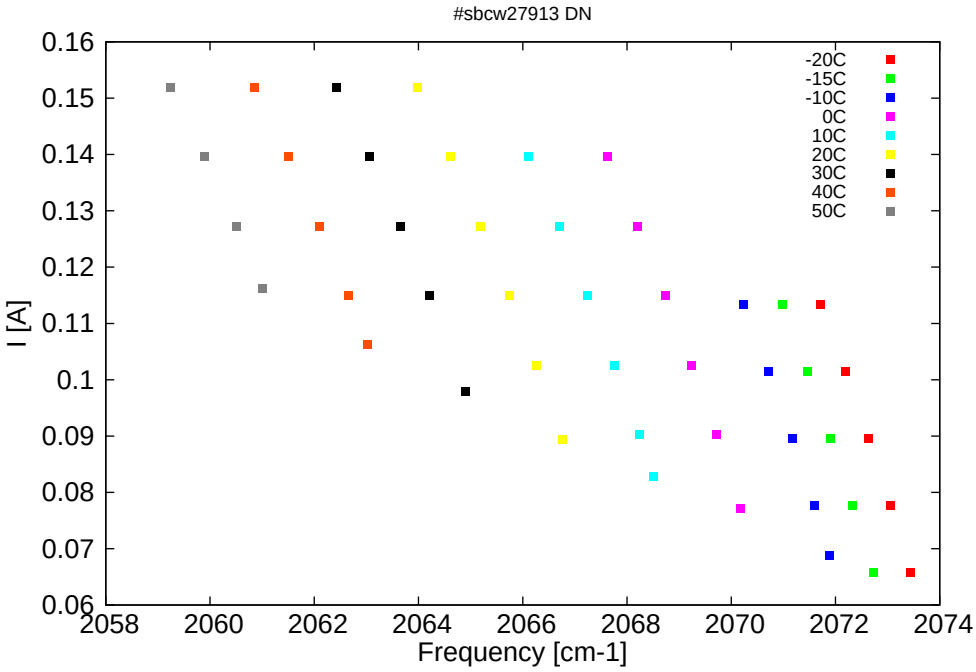

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
4822.9	2073.4	0.3	-20	12.84	0.066
4823.8	2073.1	7.4	-20	13.24	0.078
4824.8	2072.6	15.9	-20	13.63	0.09
4825.8	2072.2	23.7	-20	14.03	0.101
4826.9	2071.7	31.2	-20	14.45	0.113
4824.6	2072.7	0.2	-15	12.76	0.066
4825.5	2072.3	6.5	-15	13.13	0.078
4826.5	2071.9	15.1	-15	13.52	0.09
4827.5	2071.5	22.9	-15	13.91	0.101
4828.6	2071	30	-15	14.32	0.113
4826.5	2071.9	0.2	-10	12.76	0.069
4827.2	2071.6	4.2	-10	13.04	0.078
4828.2	2071.2	12	-10	13.41	0.09
4829.2	2070.7	19.7	-10	13.8	0.101
4830.4	2070.2	26.6	-10	14.2	0.113
4830.5	2070.2	0.5	0	12.75	0.077
4831.6	2069.7	7.5	0	13.12	0.09
4832.7	2069.2	14.6	0	13.47	0.103
4833.9	2068.7	21.4	0	13.84	0.115
4835.1	2068.2	27	0	14.22	0.127
4836.5	2067.6	31.2	0	14.62	0.14
4834.4	2068.5	0.5	10	12.76	0.083
4835	2068.2	3.6	10	12.96	0.09
4836.2	2067.8	10	10	13.3	0.103
4837.3	2067.2	16.1	10	13.65	0.115
4838.6	2066.7	21.4	10	14	0.127
4840	2066.1	25.5	10	14.38	0.14
4838.5	2066.8	1	20	12.8	0.089
4839.7	2066.3	6.7	20	13.14	0.103
4840.9	2065.8	12.3	20	13.48	0.115
4842.1	2065.2	17.1	20	13.82	0.127
4843.5	2064.6	20.9	20	14.19	0.14
4845	2064	23.5	20	14.57	0.152
4842.8	2064.9	0.5	30	12.91	0.098
4844.5	2064.2	5.7	30	13.33	0.115
4845.8	2063.7	9.6	30	13.66	0.127
4847.2	2063.1	12.6	30	14	0.14
4848.7	2062.4	15	30	14.37	0.152
4847.3	2063	0.4	40	13.01	0.106
4848.1	2062.7	2.2	40	13.21	0.115
4849.4	2062.1	5.4	40	13.52	0.127
4850.8	2061.5	8.1	40	13.85	0.14
4852.4	2060.8	10.1	40	14.2	0.152
4852	2061	0.4	50	13.15	0.116
4853.2	2060.5	2.4	50	13.4	0.127
4854.6	2059.9	5	50	13.71	0.14
4856.1	2059.3	7.2	50	14.03	0.152

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#sbcw27913 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.

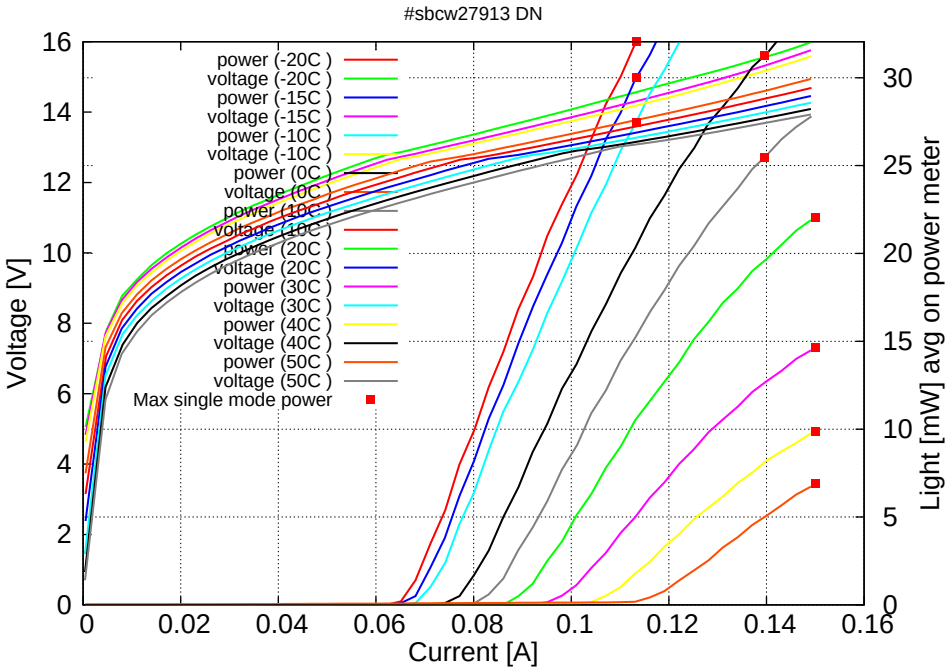

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.07A / Vth=12.9V (2-wires measurements). Maximum operation current: 0.115A between -20C and -10C, 0.14A between 0C and 10C, 0.15A between 20C and 50C.

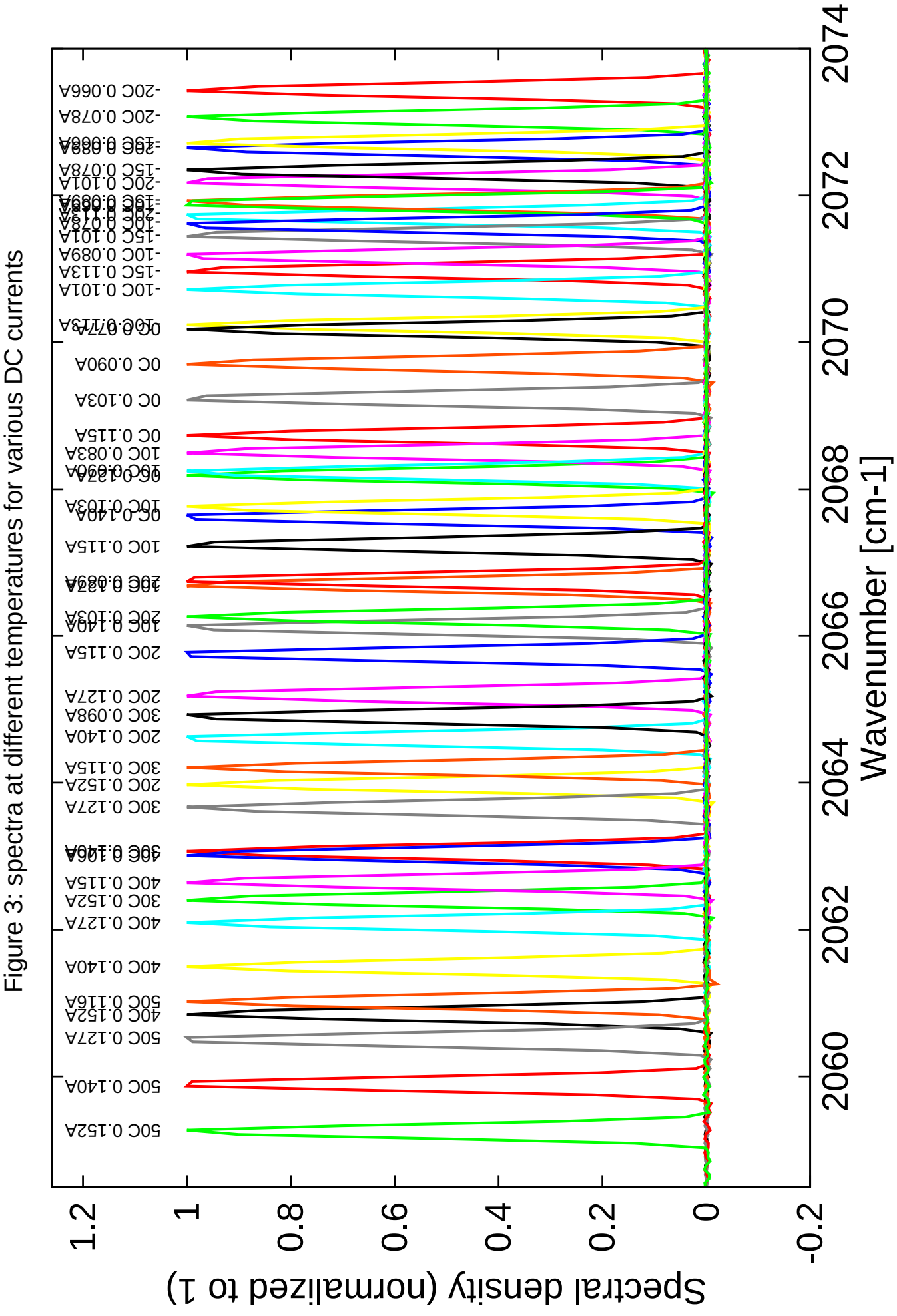

Figure 3: spectra at different temperatures for various DC currents