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Datasheet for #sbcw18241 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.

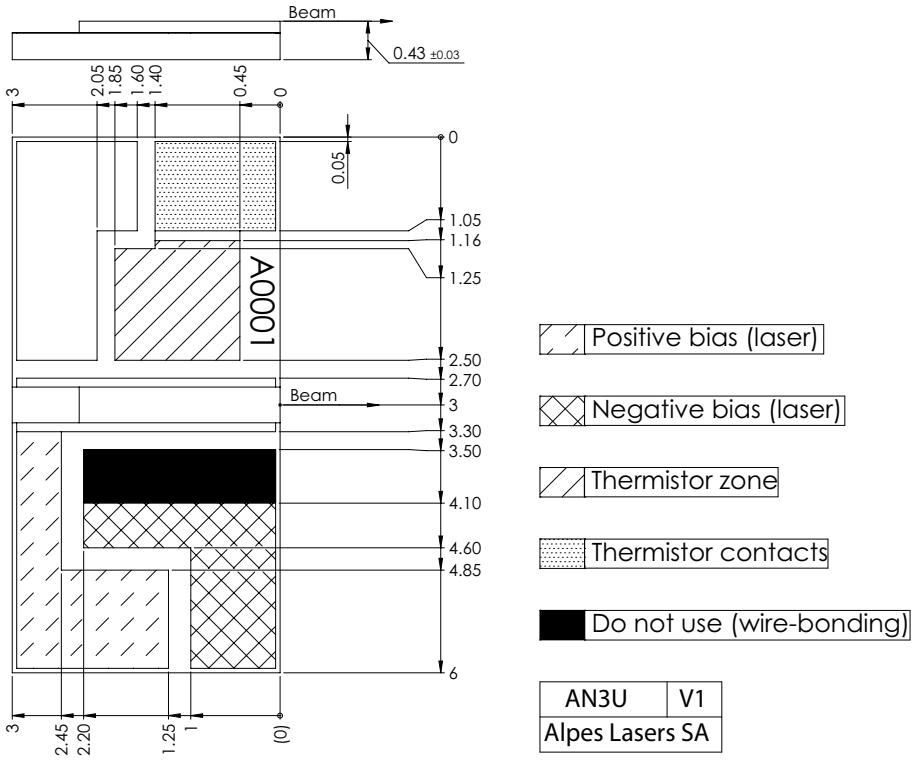

Figure 1: Mechanical and electrical interface for #sbcw18241 DN (please note that AlN submount numbering is A0LGU)

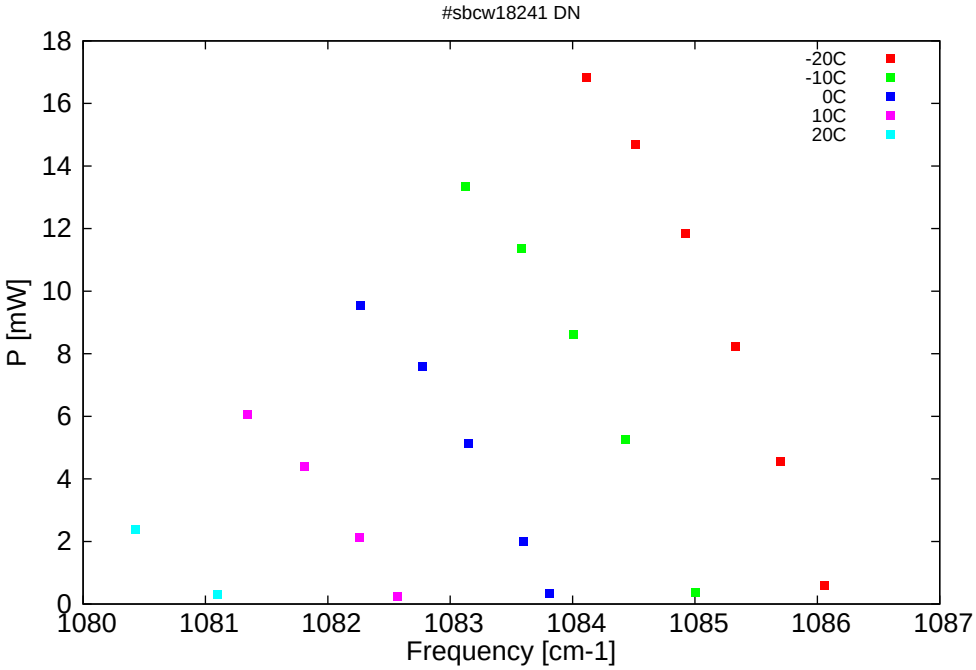

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

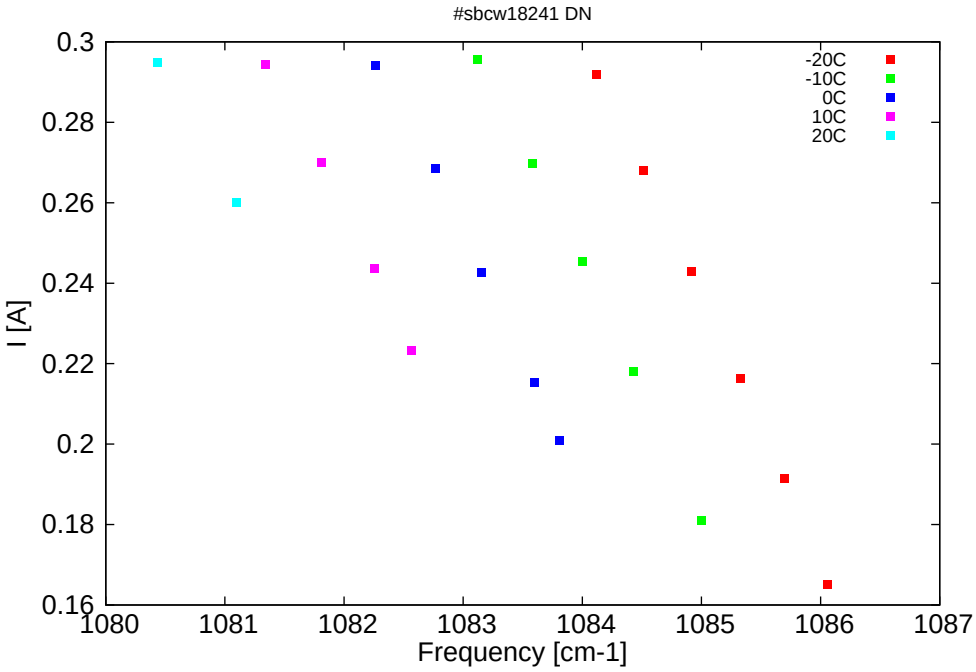

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
9207.6	1086.1	0.6	-20	10.94	0.165
9210.7	1085.7	4.5	-20	11.39	0.191
9213.8	1085.3	8.2	-20	11.78	0.216
9217.3	1084.9	11.8	-20	12.18	0.243
9220.7	1084.5	14.7	-20	12.55	0.268
9224.1	1084.1	16.8	-20	12.9	0.292
9216.6	1085	0.4	-10	11.1	0.181
9221.4	1084.4	5.3	-10	11.69	0.218
9225.1	1084	8.6	-10	12.1	0.245
9228.7	1083.6	11.4	-10	12.45	0.27
9232.6	1083.1	13.3	-10	12.82	0.296
9226.7	1083.8	0.3	0	11.31	0.201
9228.5	1083.6	2	0	11.55	0.215
9232.3	1083.2	5.1	0	11.95	0.243
9235.6	1082.8	7.6	0	12.32	0.269
9239.9	1082.3	9.5	0	12.67	0.294
9237.3	1082.6	0.2	10	11.51	0.223
9240	1082.3	2.1	10	11.77	0.244
9243.8	1081.8	4.4	10	12.14	0.27
9247.8	1081.3	6	10	12.47	0.294
9249.8	1081.1	0.3	20	11.87	0.26
9255.6	1080.4	2.4	20	12.34	0.295

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

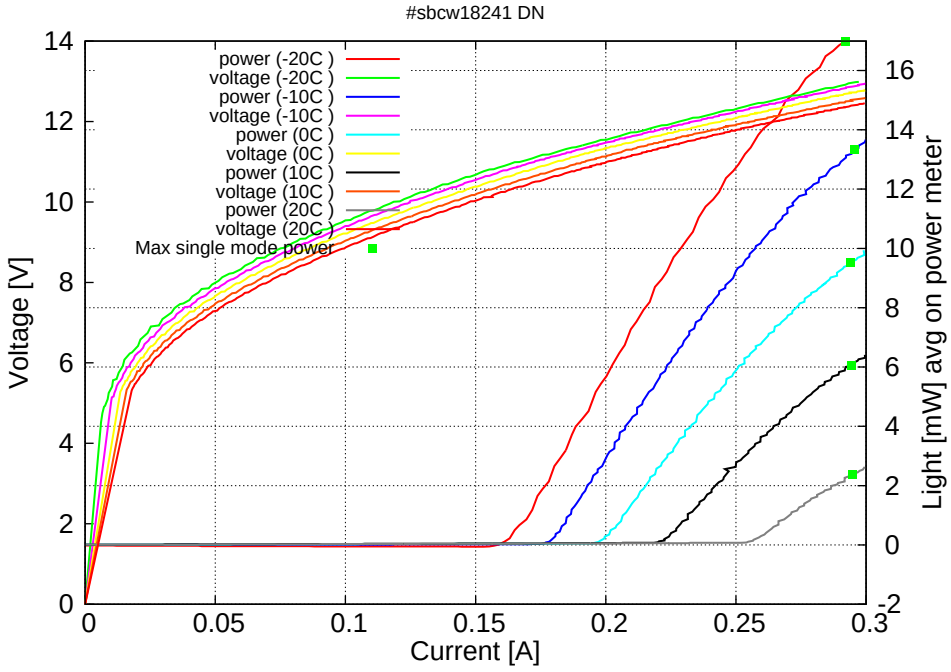

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.16A / Vth=10.8V (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

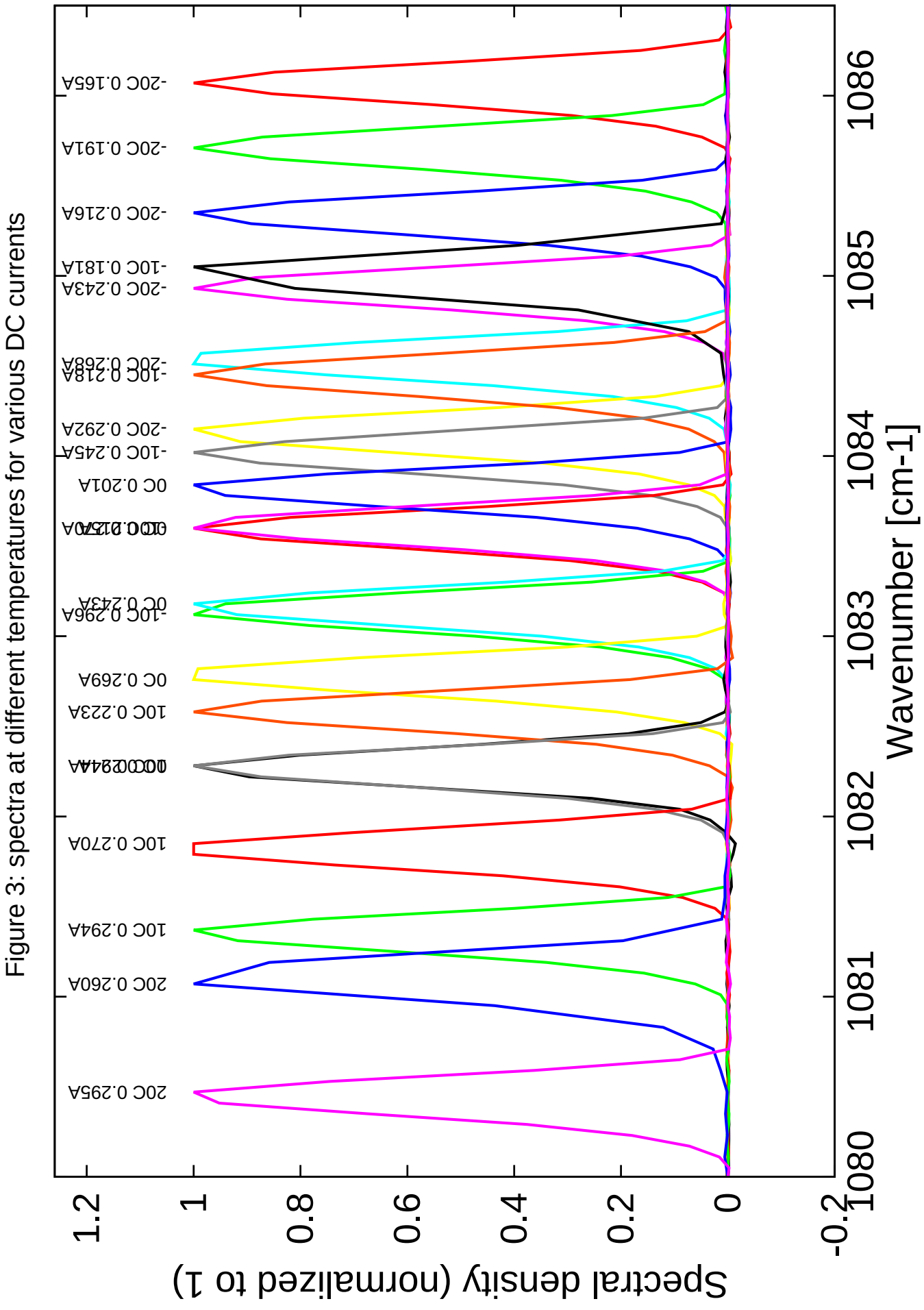

Figure 3: spectra at different temperatures for various DC currents