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Datasheet for #sbcw18323 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.

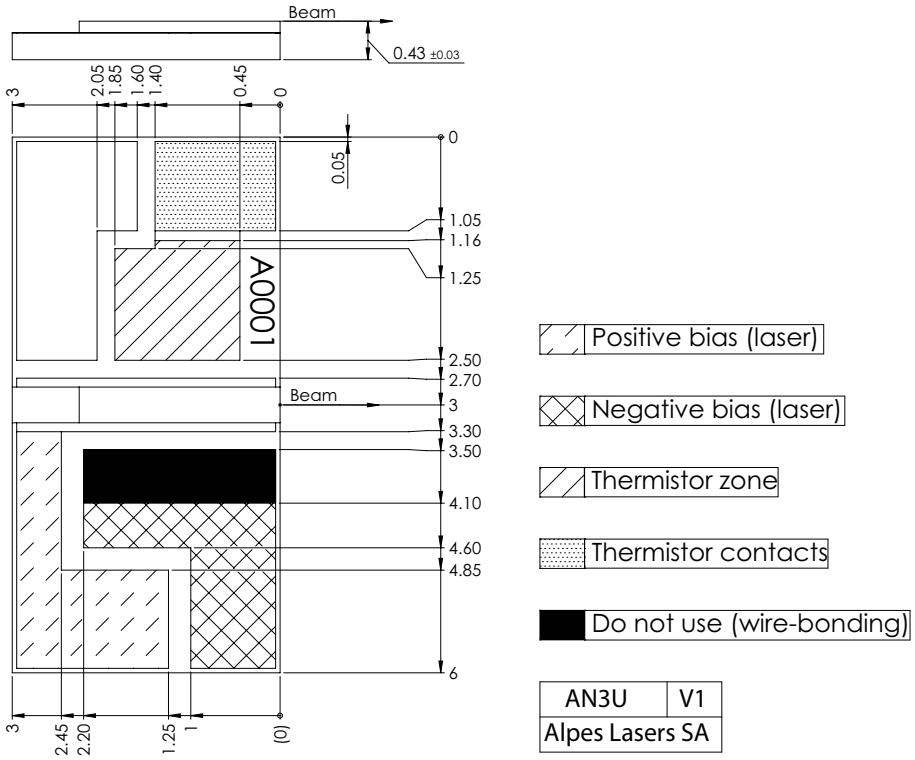

Figure 1: Mechanical and electrical interface for #sbcw18323 DN (please note that AlN submount numbering is A0K5J)

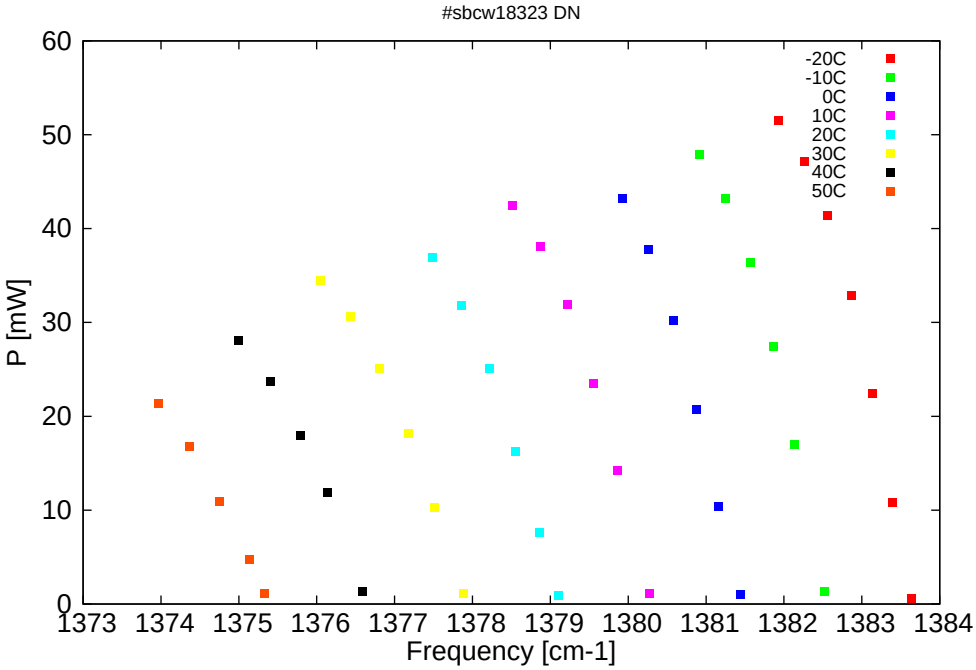

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

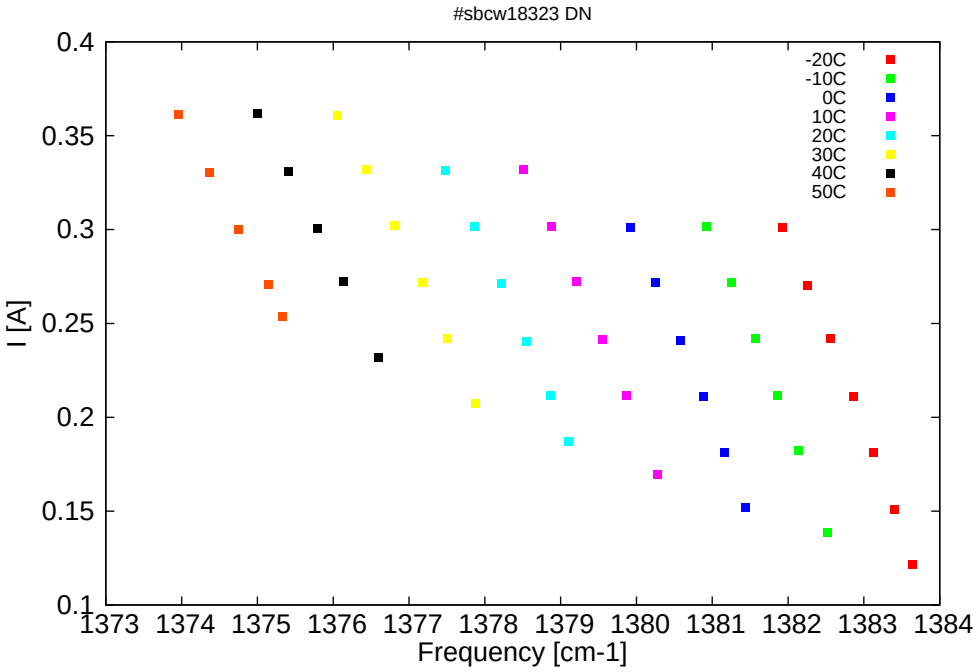

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7227.3	1383.6	0.6	-20	7.9	0.12
7228.6	1383.4	10.8	-20	8.2	0.15
7230	1383.1	22.4	-20	8.5	0.18
7231.4	1382.9	32.8	-20	8.8	0.21
7233	1382.6	41.3	-20	9	0.24
7234.5	1382.3	47.1	-20	9.2	0.27
7236.3	1381.9	51.5	-20	9.5	0.3
7233.1	1382.5	1.4	-10	8	0.14
7235.2	1382.1	16.9	-10	8.4	0.18
7236.6	1381.9	27.4	-10	8.7	0.21
7238.2	1381.6	36.4	-10	8.9	0.24
7239.8	1381.3	43.2	-10	9.2	0.27
7241.5	1380.9	47.9	-10	9.4	0.3
7238.8	1381.4	1	0	8	0.15
7240.3	1381.2	10.4	0	8.3	0.18
7241.8	1380.9	20.7	0	8.6	0.21
7243.3	1380.6	30.2	0	8.8	0.24
7245	1380.3	37.8	0	9	0.27
7246.8	1379.9	43.2	0	9.3	0.3
7245	1380.3	1.1	10	8.1	0.17
7247.1	1379.9	14.2	10	8.4	0.21
7248.7	1379.5	23.5	10	8.7	0.24
7250.5	1379.2	31.9	10	8.9	0.27
7252.3	1378.9	38.1	10	9.2	0.3
7254.2	1378.5	42.5	10	9.4	0.33
7251.1	1379.1	0.9	20	8.1	0.19
7252.3	1378.9	7.6	20	8.3	0.21
7254	1378.6	16.2	20	8.6	0.24
7255.8	1378.2	25.1	20	8.8	0.27
7257.6	1377.9	31.8	20	9.1	0.3
7259.6	1377.5	37	20	9.3	0.33
7257.5	1377.9	1.1	30	8.2	0.21
7259.5	1377.5	10.3	30	8.5	0.24
7261.2	1377.2	18.1	30	8.7	0.27
7263.2	1376.8	25.1	30	8.9	0.3
7265.1	1376.4	30.6	30	9.2	0.33
7267.2	1376.1	34.5	30	9.4	0.36
7264.3	1376.6	1.3	40	8.3	0.23
7266.7	1376.1	11.9	40	8.6	0.27
7268.5	1375.8	17.9	40	8.8	0.3
7270.6	1375.4	23.7	40	9.1	0.33
7272.7	1375	28.1	40	9.3	0.36
7271	1375.3	1.1	50	8.4	0.25
7272	1375.1	4.8	50	8.5	0.27
7274	1374.8	10.9	50	8.7	0.3
7276.1	1374.4	16.8	50	9	0.33
7278.2	1374	21.4	50	9.2	0.36

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#sbcw18323 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.

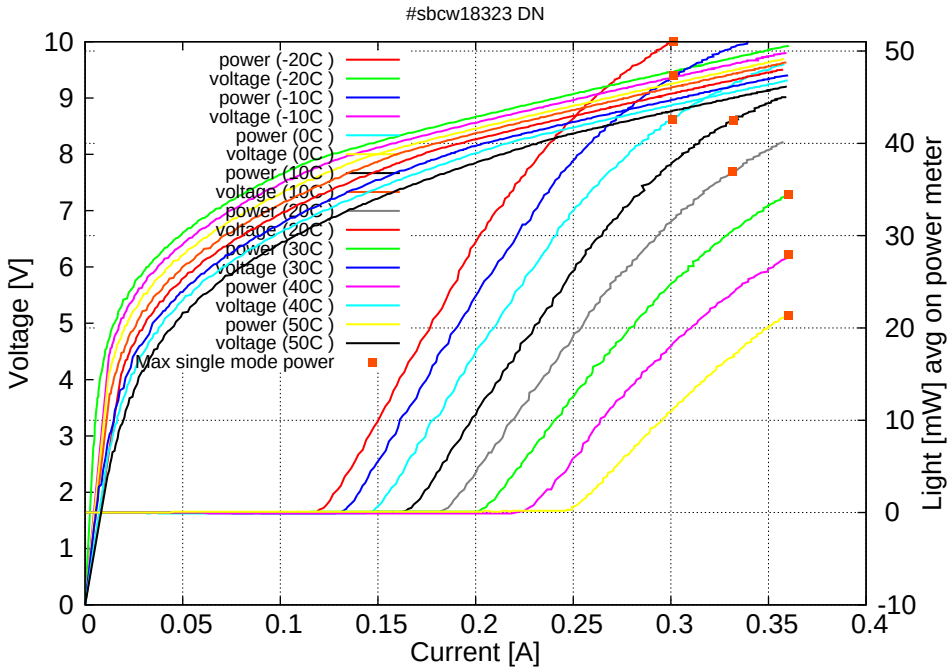

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.12A / Vth=7.9V (2-wires measurements). Maximum operation current: 0.30A between -20C and 0C, 0.33A between 10C and 20C, 0.36A between 30C and 50C.

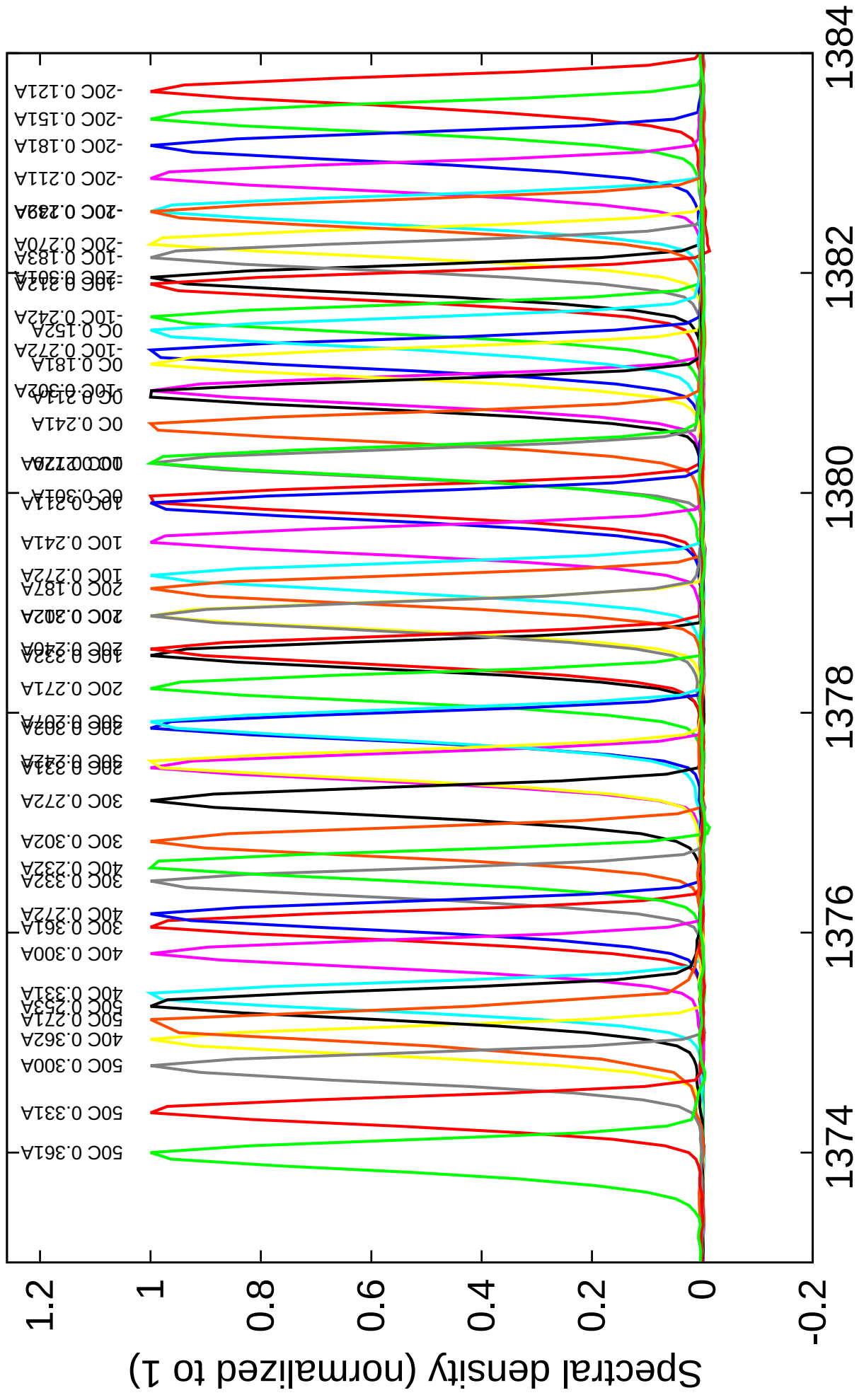

Figure 3: spectra at different temperatures for various DC currents