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Datasheet for #sbcw25626 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.

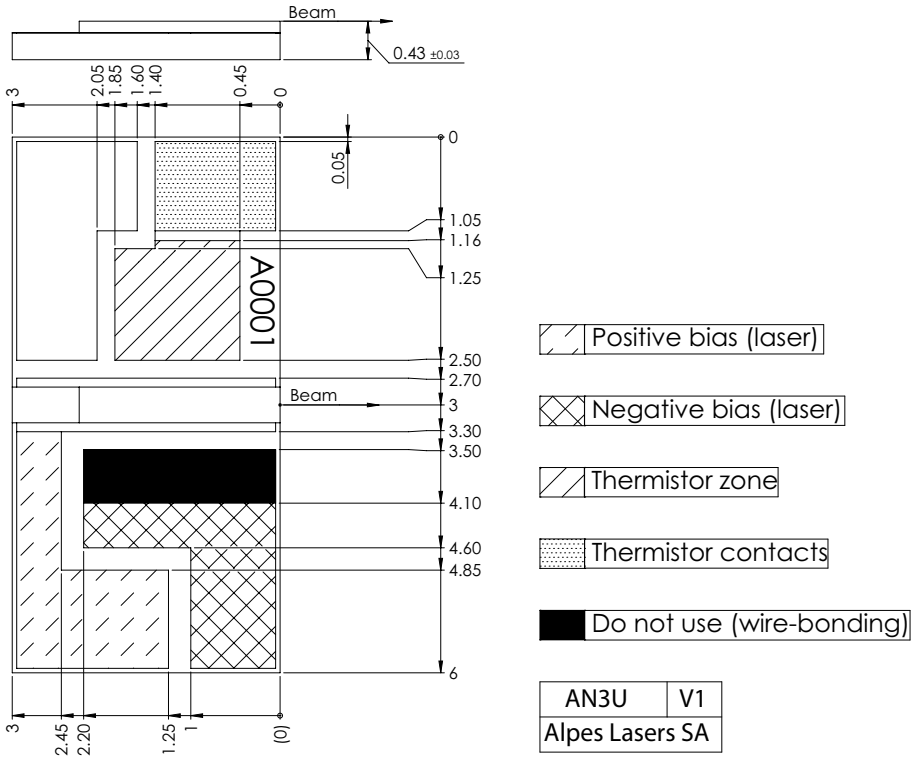

Figure 1: Mechanical and electrical interface for #sbcw25626 DN (please note that AlN submount numbering is A114C)

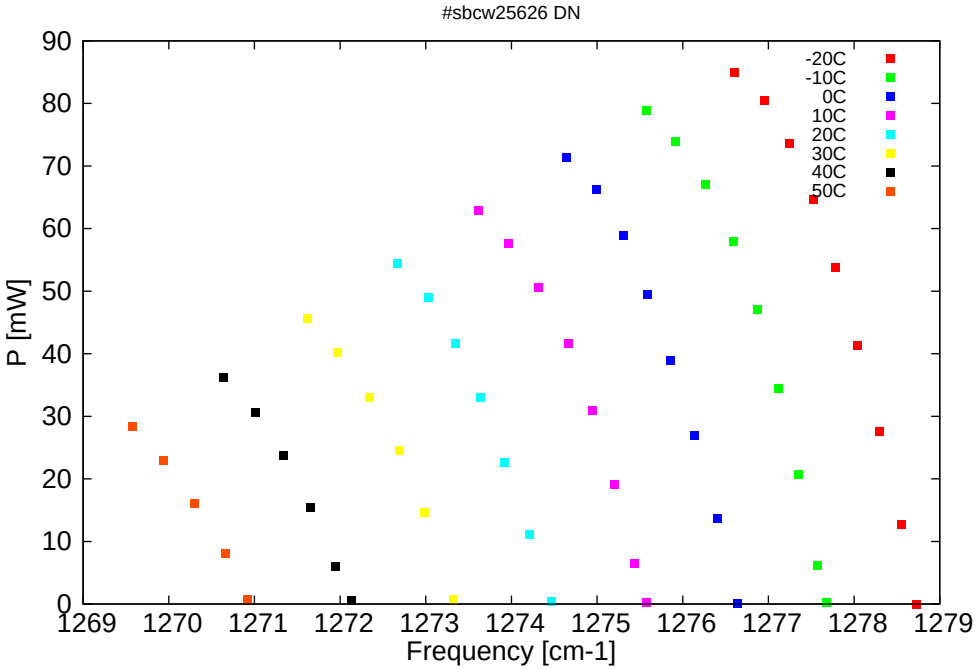

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

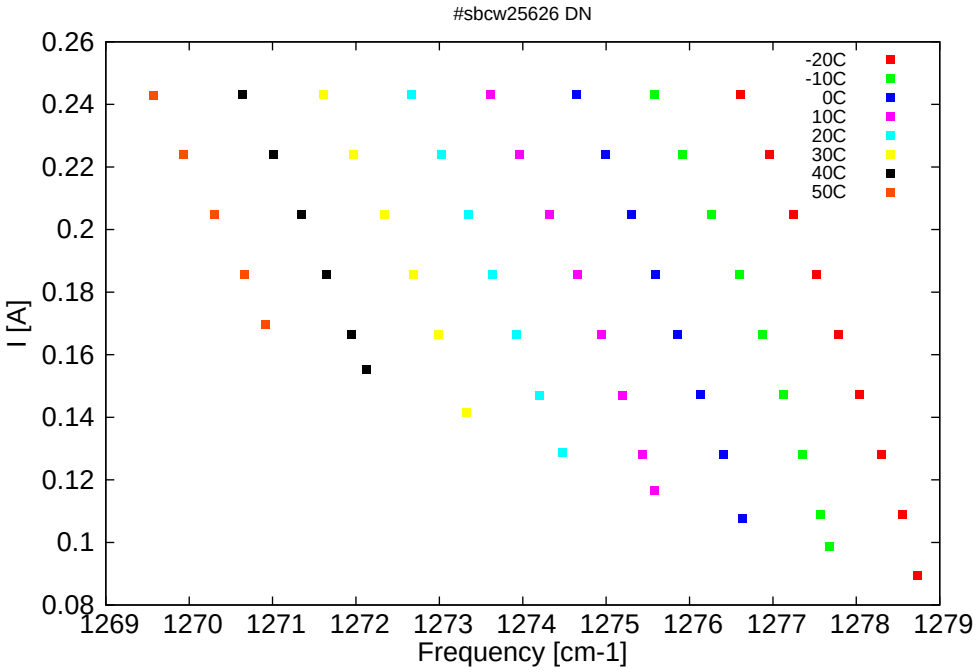

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7820.2	1278.7	0	-20	8.32	0.09
7821.4	1278.5	12.7	-20	8.59	0.109
7822.9	1278.3	27.6	-20	8.84	0.128
7824.5	1278	41.3	-20	9.07	0.147
7826	1277.8	53.8	-20	9.3	0.166
7827.6	1277.5	64.7	-20	9.53	0.186
7829.3	1277.2	73.7	-20	9.76	0.205
7831.1	1277	80.4	-20	9.98	0.224
7833.3	1276.6	84.9	-20	10.21	0.243
7826.7	1277.7	0.2	-10	8.26	0.099
7827.3	1277.6	6.1	-10	8.39	0.109
7828.7	1277.3	20.7	-10	8.64	0.128
7830.1	1277.1	34.5	-10	8.87	0.147
7831.6	1276.9	47.1	-10	9.1	0.166
7833.3	1276.6	58	-10	9.33	0.186
7835.4	1276.3	67.1	-10	9.55	0.205
7837.5	1275.9	73.9	-10	9.77	0.224
7839.6	1275.6	78.8	-10	10	0.243
7833.1	1276.6	0.2	0	8.21	0.108
7834.5	1276.4	13.6	0	8.46	0.128
7836.2	1276.1	26.9	0	8.7	0.147
7837.9	1275.9	39	0	8.92	0.166
7839.5	1275.6	49.5	0	9.14	0.186
7841.2	1275.3	58.9	0	9.36	0.205
7843.2	1275	66.2	0	9.59	0.224
7845.3	1274.6	71.4	0	9.81	0.243
7839.6	1275.6	0.2	10	8.18	0.117
7840.5	1275.4	6.4	10	8.31	0.128
7841.9	1275.2	19	10	8.54	0.147
7843.4	1275	30.9	10	8.76	0.166
7845.2	1274.7	41.6	10	8.98	0.186
7847.3	1274.3	50.6	10	9.2	0.205
7849.5	1274	57.7	10	9.41	0.224
7851.7	1273.6	62.9	10	9.63	0.243
7846.4	1274.5	0.4	20	8.18	0.129
7848	1274.2	11.1	20	8.39	0.147
7849.8	1273.9	22.6	20	8.61	0.166
7851.5	1273.6	33	20	8.82	0.186
7853.3	1273.3	41.7	20	9.03	0.205
7855.3	1273	49.1	20	9.25	0.224
7857.5	1272.7	54.4	20	9.46	0.243
7853.4	1273.3	0.8	30	8.19	0.141
7855.5	1273	14.7	30	8.46	0.166
7857.4	1272.7	24.6	30	8.68	0.186
7859.5	1272.3	33.1	30	8.88	0.205
7861.8	1272	40.3	30	9.09	0.224
7864	1271.6	45.7	30	9.3	0.243
7860.8	1272.1	0.6	40	8.22	0.155
7862	1271.9	5.9	40	8.34	0.166

continued on next page

#sbcw25626 DN

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7863.8	1271.7	15.4	40	8.54	0.186
7865.7	1271.3	23.7	40	8.74	0.205
7867.7	1271	30.7	40	8.94	0.224
7870.1	1270.6	36.3	40	9.14	0.243
7868.4	1270.9	0.7	50	8.25	0.17
7869.9	1270.7	8	50	8.41	0.186
7872.1	1270.3	16	50	8.62	0.205
7874.4	1269.9	22.9	50	8.81	0.224
7876.6	1269.6	28.4	50	9.01	0.243

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

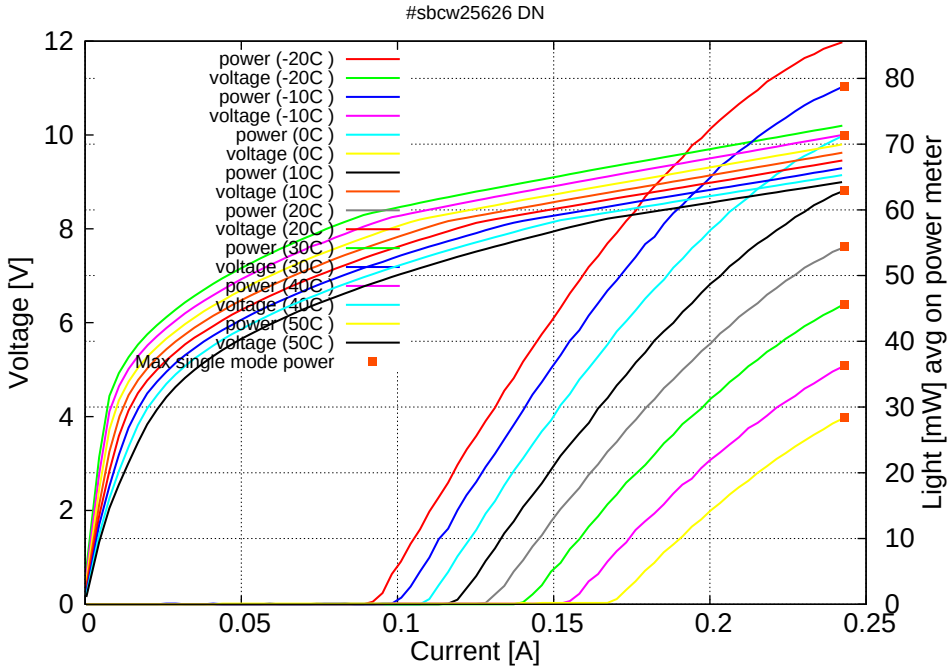

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.09A / Vth=8.3V (2-wires measurements). Maximum operation current: 0.245A for all temperatures.

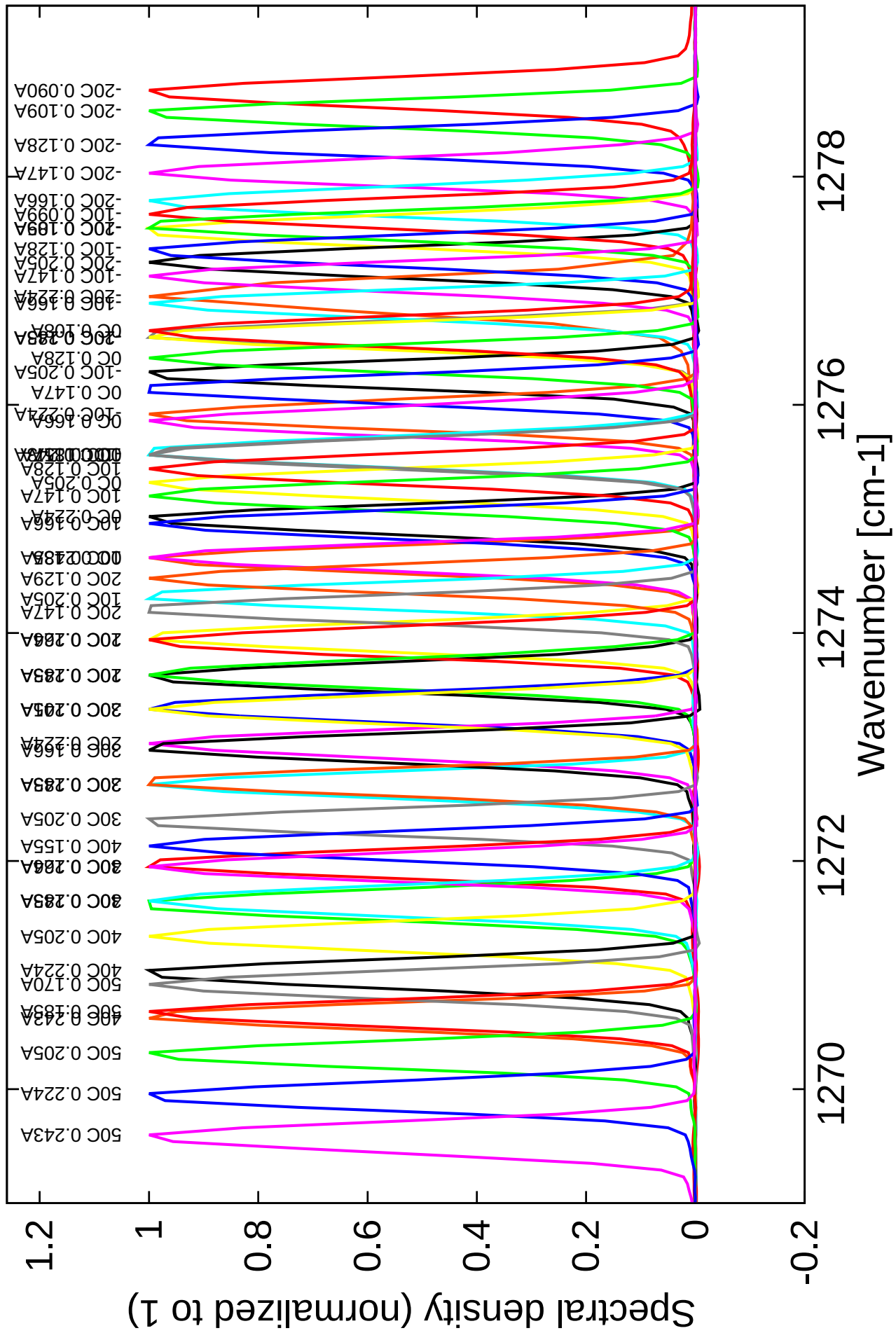

Figure 3: spectra at different temperatures for various DC currents