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Datasheet for #sbcw25086 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.

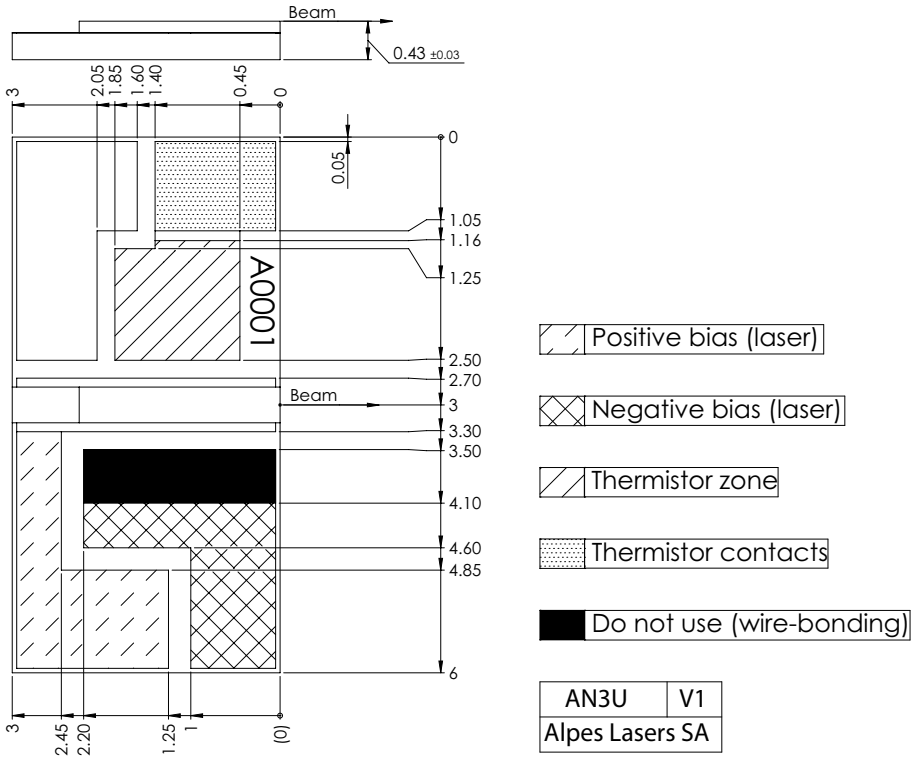

Figure 1: Mechanical and electrical interface for #sbcw25086 DN (please note that AlN submount numbering is A0ZRP)

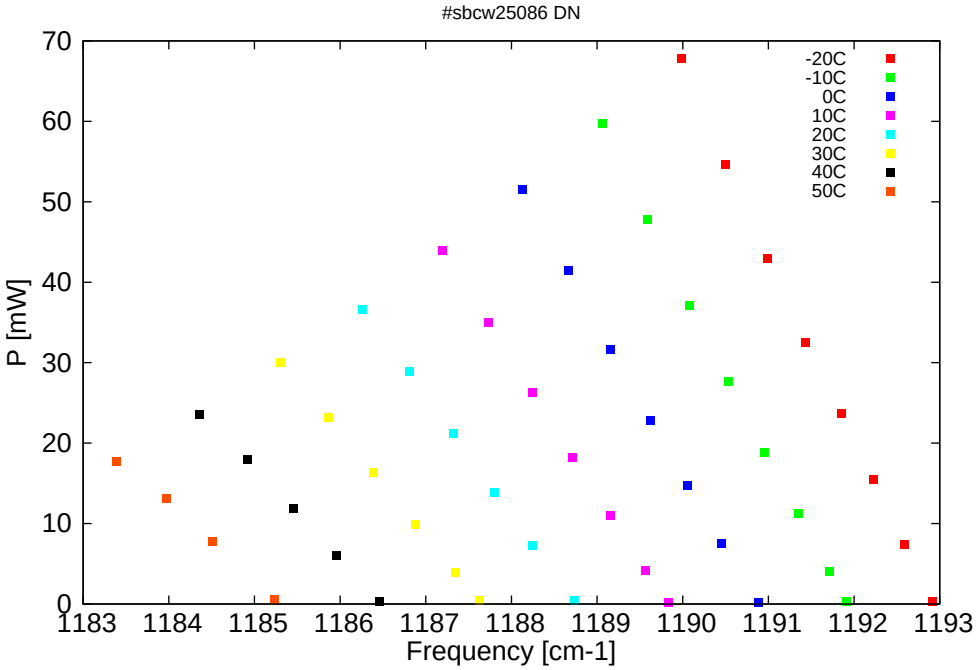

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

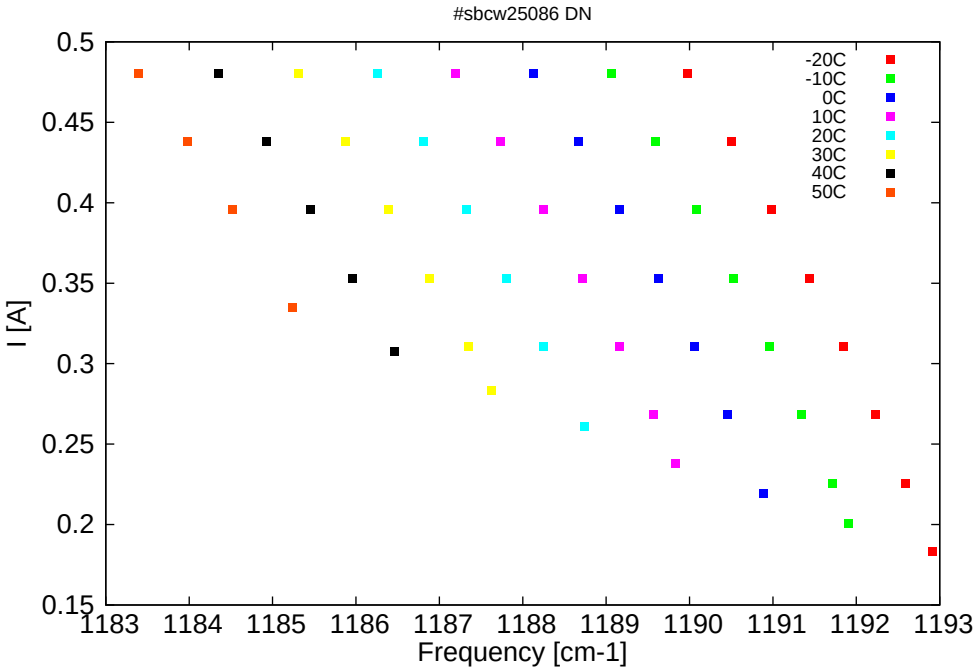

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
8382.9	1192.9	0.4	-20	8.05	0.183
8385.2	1192.6	7.4	-20	8.53	0.226
8387.6	1192.2	15.5	-20	9	0.268
8390.3	1191.8	23.7	-20	9.46	0.311
8393.2	1191.4	32.5	-20	9.92	0.353
8396.4	1191	42.9	-20	10.38	0.396
8399.8	1190.5	54.7	-20	10.85	0.438
8403.5	1190	67.8	-20	11.31	0.48
8389.9	1191.9	0.3	-10	8.09	0.201
8391.3	1191.7	4.1	-10	8.36	0.226
8393.8	1191.3	11.2	-10	8.82	0.268
8396.6	1191	18.8	-10	9.26	0.311
8399.6	1190.5	27.7	-10	9.7	0.353
8402.8	1190.1	37.1	-10	10.13	0.396
8406.3	1189.6	47.8	-10	10.57	0.438
8410	1189.1	59.7	-10	11	0.48
8397.1	1190.9	0.2	0	8.15	0.219
8400.1	1190.5	7.5	0	8.66	0.268
8403	1190.1	14.7	0	9.08	0.311
8406	1189.6	22.8	0	9.51	0.353
8409.3	1189.2	31.6	0	9.92	0.396
8412.8	1188.7	41.4	0	10.33	0.438
8416.6	1188.1	51.5	0	10.74	0.48
8404.5	1189.8	0.1	10	8.19	0.238
8406.4	1189.6	4.2	10	8.49	0.268
8409.3	1189.2	11	10	8.9	0.311
8412.4	1188.7	18.2	10	9.31	0.353
8415.8	1188.2	26.3	10	9.7	0.396
8419.4	1187.7	35	10	10.08	0.438
8423.2	1187.2	43.9	10	10.47	0.48
8412.3	1188.7	0.4	20	8.28	0.261
8415.7	1188.3	7.3	20	8.76	0.311
8418.9	1187.8	13.9	20	9.14	0.353
8422.3	1187.3	21.1	20	9.52	0.396
8426	1186.8	28.9	20	9.9	0.438
8429.9	1186.3	36.7	20	10.26	0.48
8420.1	1187.6	0.4	30	8.35	0.283
8422.2	1187.3	3.9	30	8.6	0.311
8425.4	1186.9	9.9	30	8.98	0.353
8428.9	1186.4	16.3	30	9.35	0.396
8432.6	1185.9	23.2	30	9.7	0.438
8436.6	1185.3	30.1	30	10.05	0.48
8428.4	1186.5	0.4	40	8.44	0.308
8432	1186	6	40	8.83	0.353
8435.6	1185.5	11.9	40	9.19	0.396
8439.4	1184.9	18	40	9.54	0.438
8443.4	1184.4	23.6	40	9.88	0.48
8437.1	1185.2	0.6	50	8.59	0.335
8442.3	1184.5	7.7	50	9.09	0.396

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λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
8446.1	1184	13.2	50	9.42	0.438
8450.3	1183.4	17.7	50	9.74	0.48

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

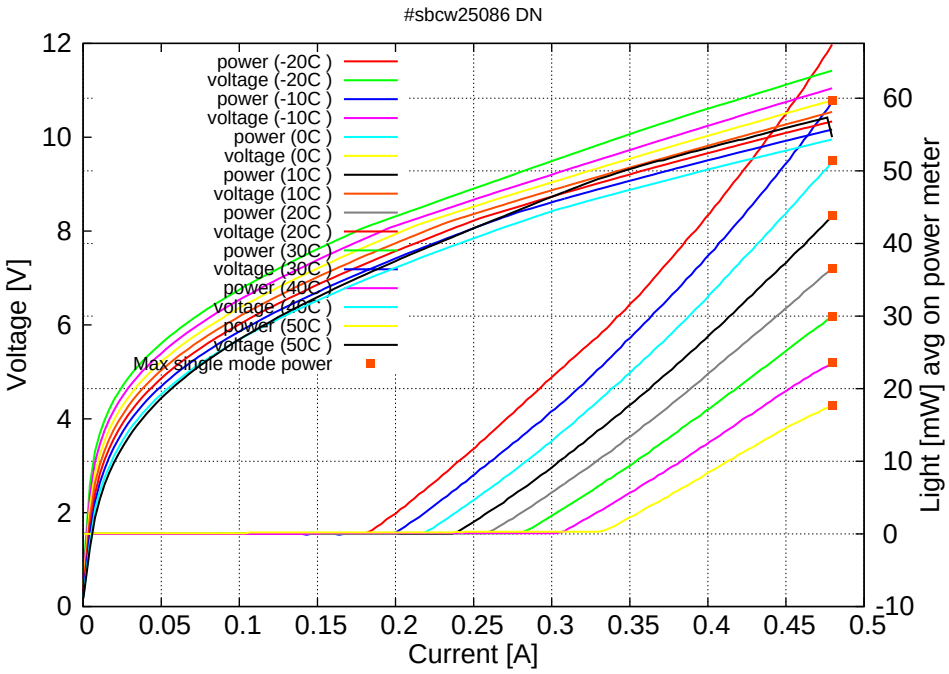

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.18A / Vth=8.0V (2-wires measurements). Maximum operation current: 0.48A for all temperatures.

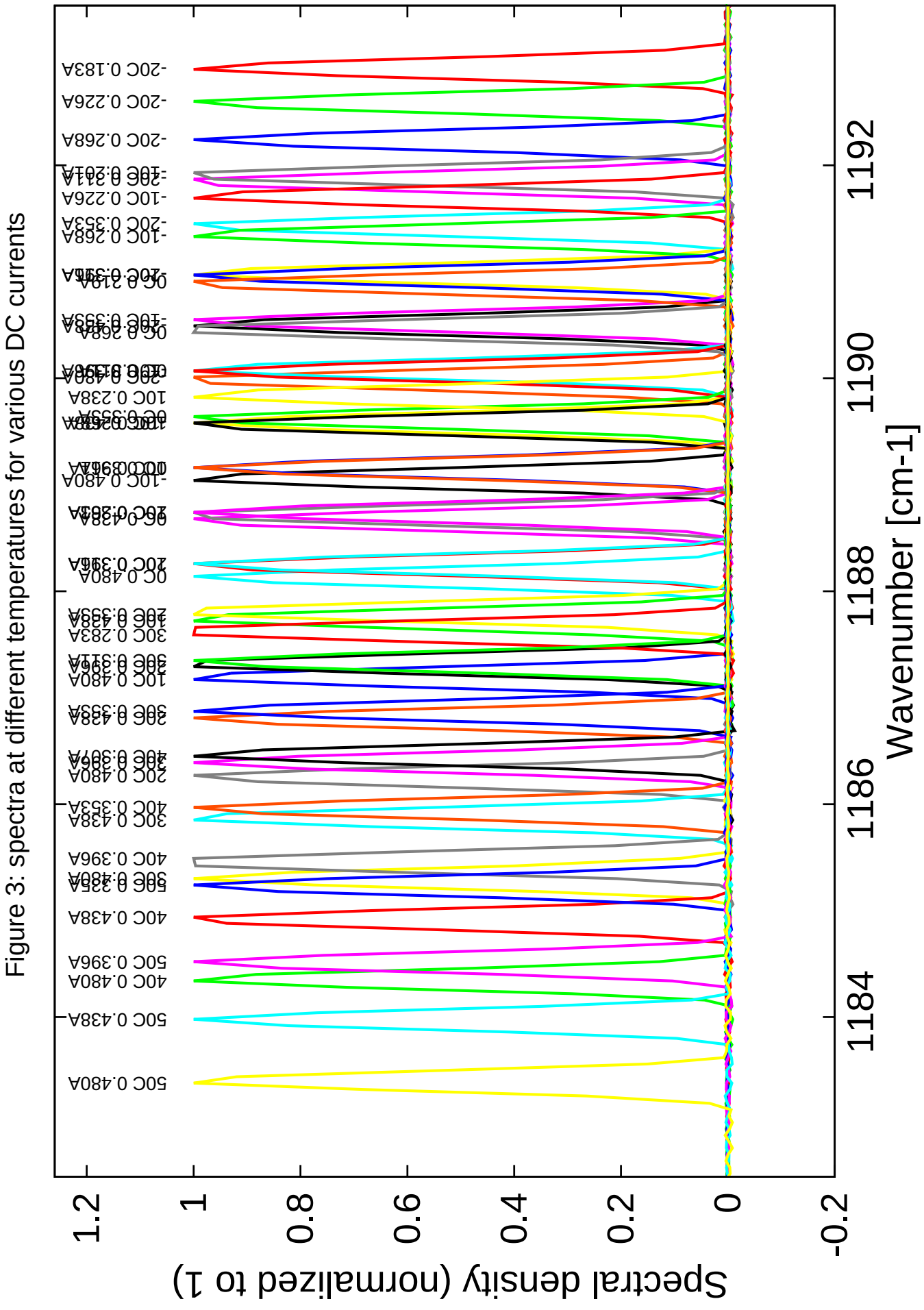

Figure 3: spectra at different temperatures for various DC currents