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Datasheet for #sbcw24832 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.

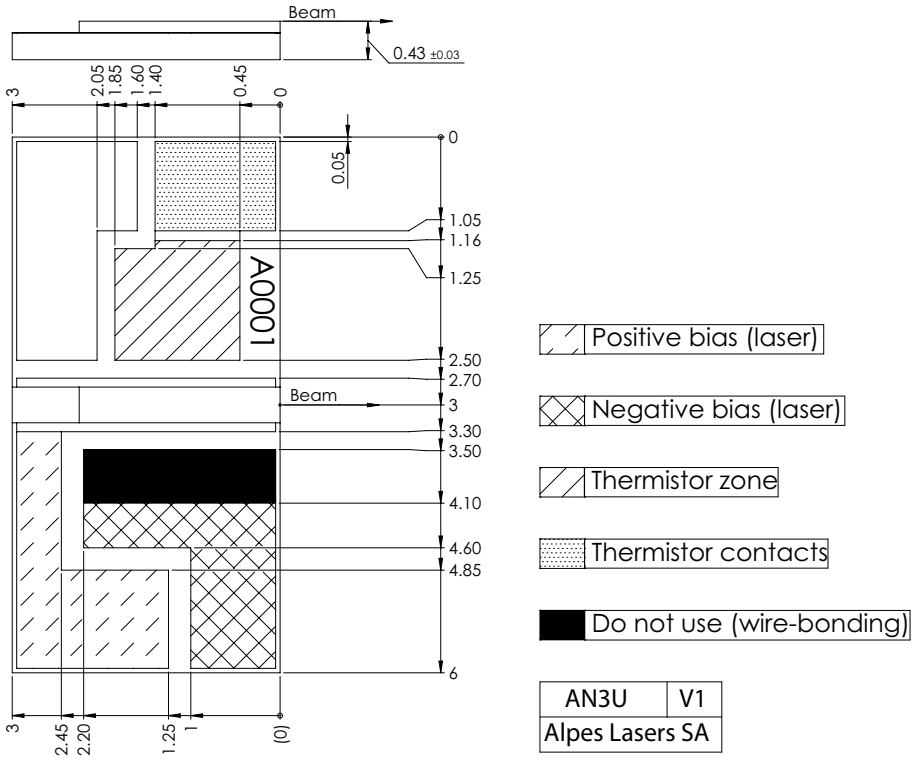

Figure 1: Mechanical and electrical interface for #sbcw24832 DN (please note that AlN submount numbering is A113P)

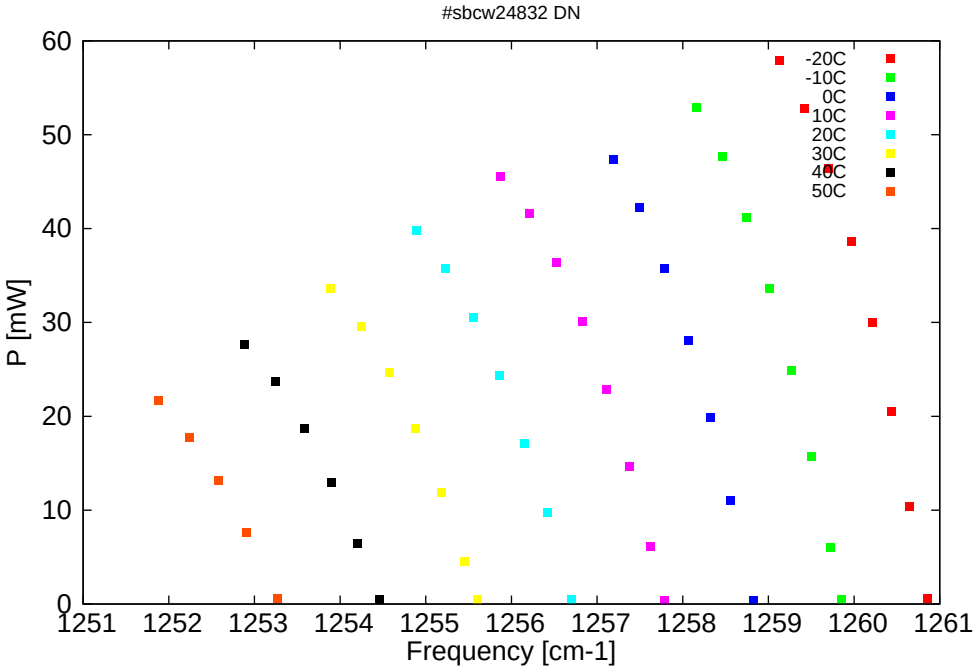

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

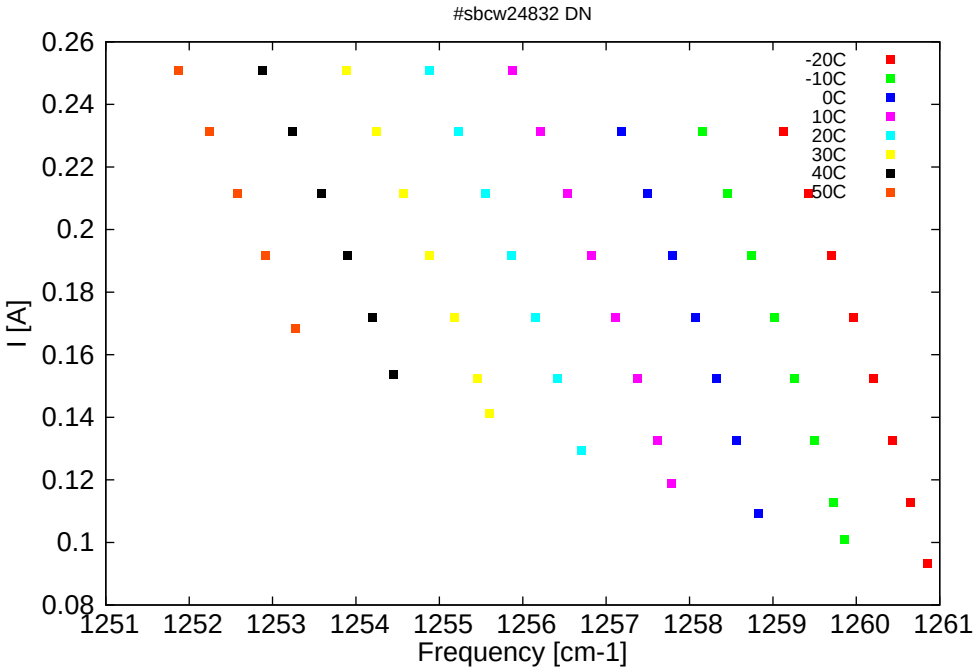

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7931.1	1260.9	0.6	-20	7.93	0.093
7932.4	1260.7	10.4	-20	8.18	0.113
7933.8	1260.4	20.5	-20	8.4	0.133
7935.2	1260.2	30	-20	8.63	0.152
7936.7	1260	38.6	-20	8.84	0.172
7938.4	1259.7	46.4	-20	9.05	0.192
7940.1	1259.4	52.8	-20	9.26	0.212
7942	1259.1	57.9	-20	9.47	0.231
7937.4	1259.9	0.5	-10	7.89	0.101
7938.2	1259.7	6	-10	8.04	0.113
7939.7	1259.5	15.8	-10	8.27	0.133
7941.1	1259.3	24.9	-10	8.48	0.152
7942.7	1259	33.6	-10	8.7	0.172
7944.4	1258.7	41.2	-10	8.9	0.192
7946.2	1258.5	47.6	-10	9.11	0.212
7948.1	1258.2	52.9	-10	9.32	0.231
7943.9	1258.8	0.4	0	7.87	0.109
7945.6	1258.6	11	0	8.14	0.133
7947.1	1258.3	19.9	0	8.36	0.152
7948.7	1258.1	28.1	0	8.56	0.172
7950.4	1257.8	35.7	0	8.77	0.192
7952.3	1257.5	42.2	0	8.97	0.212
7954.3	1257.2	47.4	0	9.18	0.231
7950.5	1257.8	0.4	10	7.87	0.119
7951.5	1257.6	6.1	10	8.03	0.133
7953.1	1257.4	14.7	10	8.24	0.152
7954.8	1257.1	22.8	10	8.44	0.172
7956.5	1256.8	30.1	10	8.65	0.192
7958.4	1256.5	36.4	10	8.85	0.212
7960.4	1256.2	41.6	10	9.05	0.231
7962.6	1255.9	45.6	10	9.27	0.251
7957.3	1256.7	0.5	20	7.88	0.129
7959.1	1256.4	9.7	20	8.13	0.152
7960.8	1256.2	17.1	20	8.34	0.172
7962.6	1255.9	24.3	20	8.54	0.192
7964.6	1255.6	30.5	20	8.74	0.212
7966.6	1255.2	35.7	20	8.94	0.231
7968.8	1254.9	39.8	20	9.14	0.251
7964.3	1255.6	0.5	30	7.9	0.141
7965.2	1255.5	4.5	30	8.03	0.152
7967	1255.2	11.9	30	8.23	0.172
7968.9	1254.9	18.7	30	8.43	0.192
7970.8	1254.6	24.6	30	8.63	0.212
7972.9	1254.2	29.6	30	8.83	0.231
7975.2	1253.9	33.7	30	9.02	0.251
7971.6	1254.5	0.5	40	7.93	0.154
7973.2	1254.2	6.4	40	8.12	0.172
7975.1	1253.9	13	40	8.32	0.192
7977.1	1253.6	18.7	40	8.51	0.212

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λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7979.3	1253.2	23.7	40	8.71	0.231
7981.6	1252.9	27.7	40	8.91	0.251
7979.1	1253.3	0.6	50	7.98	0.168
7981.4	1252.9	7.6	50	8.21	0.192
7983.5	1252.6	13.1	50	8.41	0.212
7985.7	1252.2	17.8	50	8.6	0.231
7988	1251.9	21.7	50	8.79	0.251

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

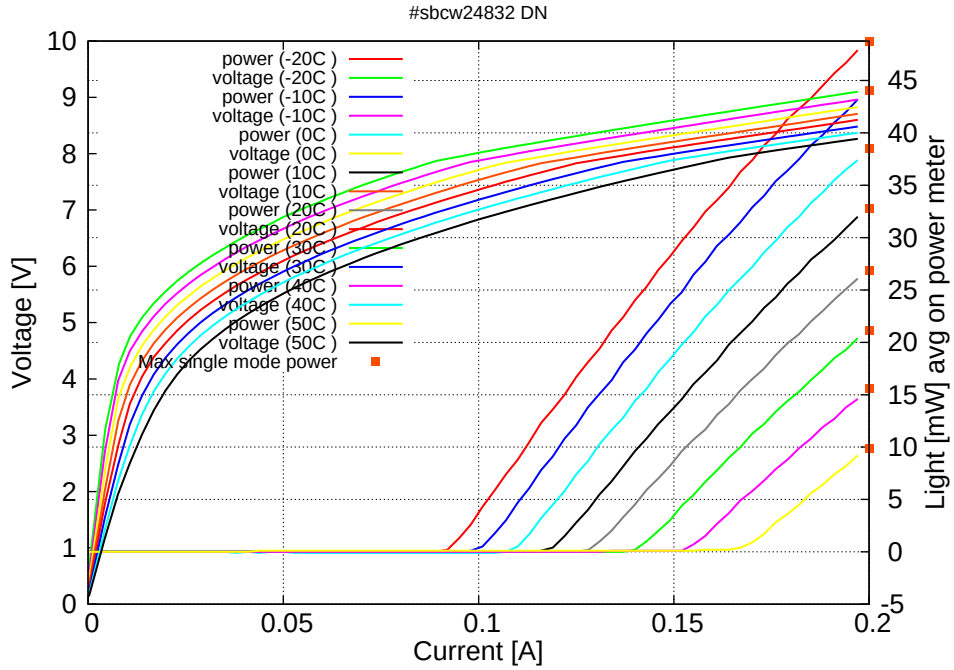

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.09A / Vth=7.9V (2-wires measurements). Maximum operation current: 0.23A between -20C and 0C, 0.25A between 10C and 50C.

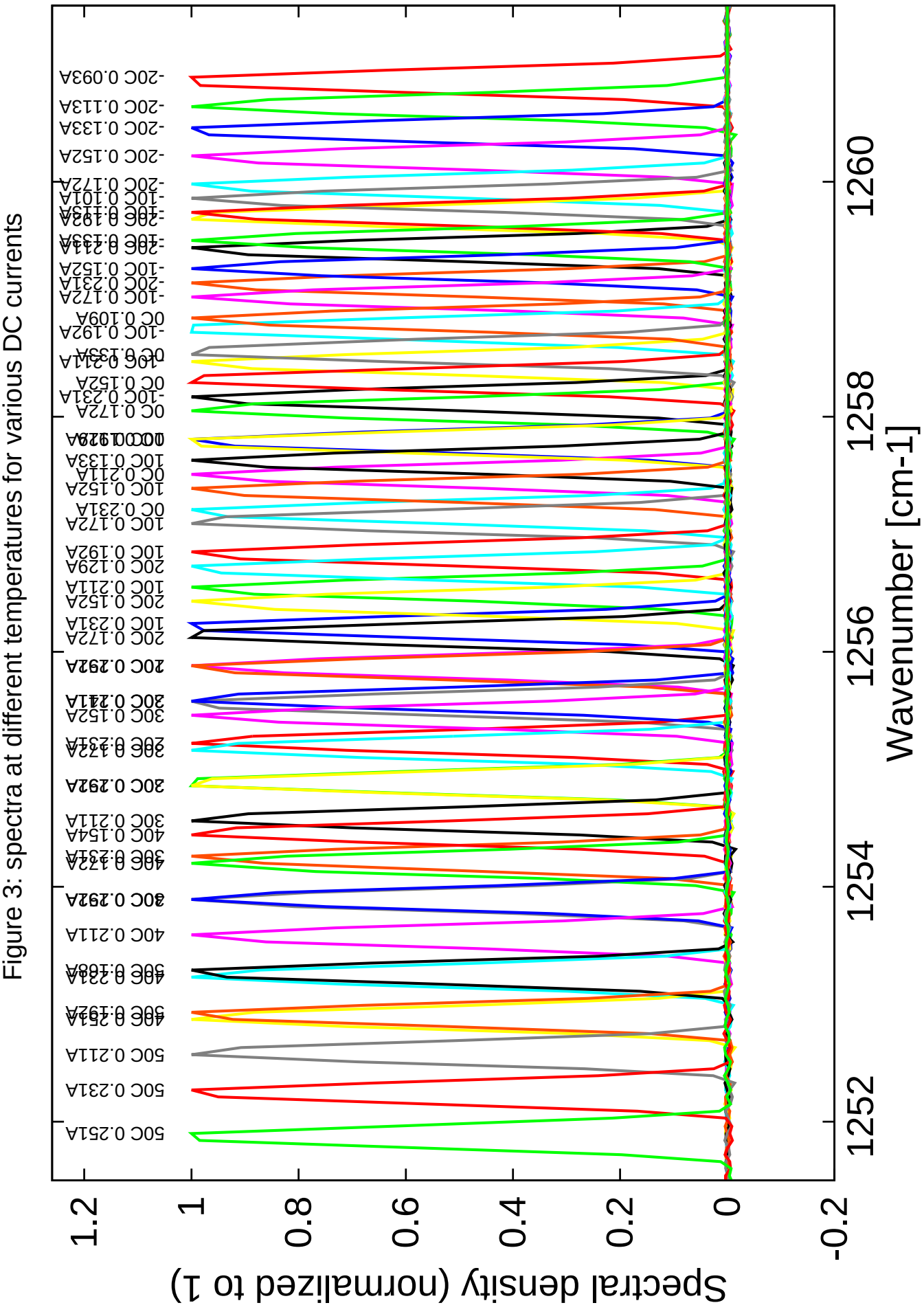

Figure 3: spectra at different temperatures for various DC currents