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Datasheet for #sbcw24829 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.

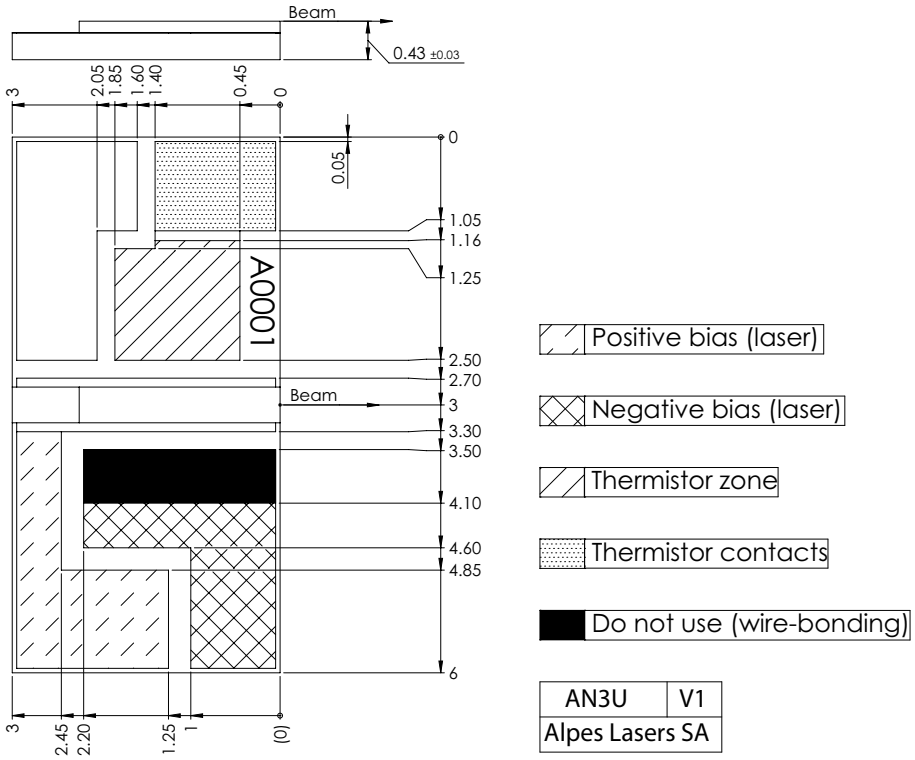

Figure 1: Mechanical and electrical interface for #sbcw24829 DN (please note that AlN submount numbering is A113F)

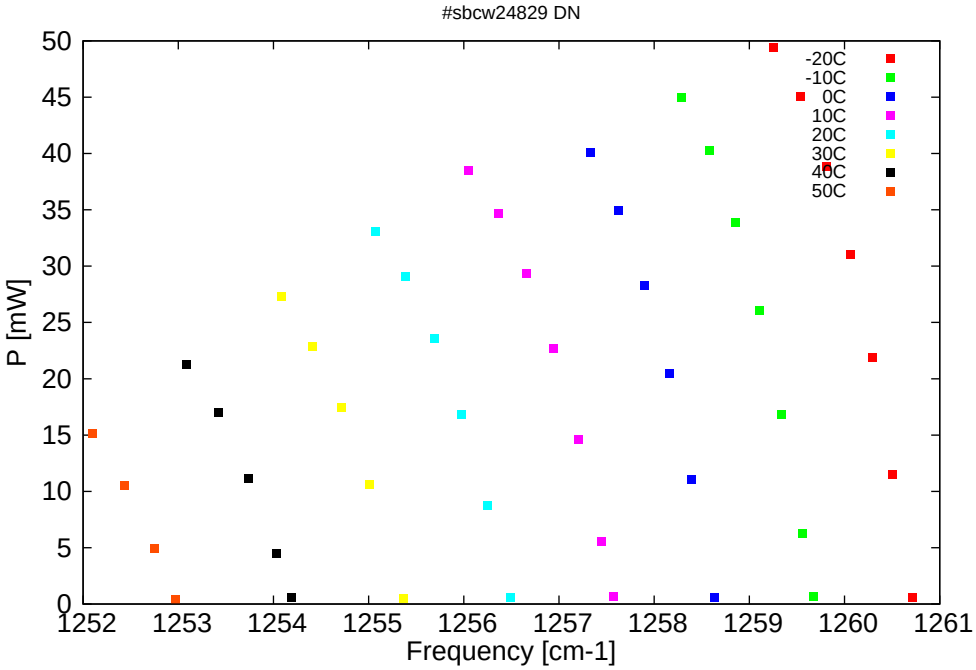

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

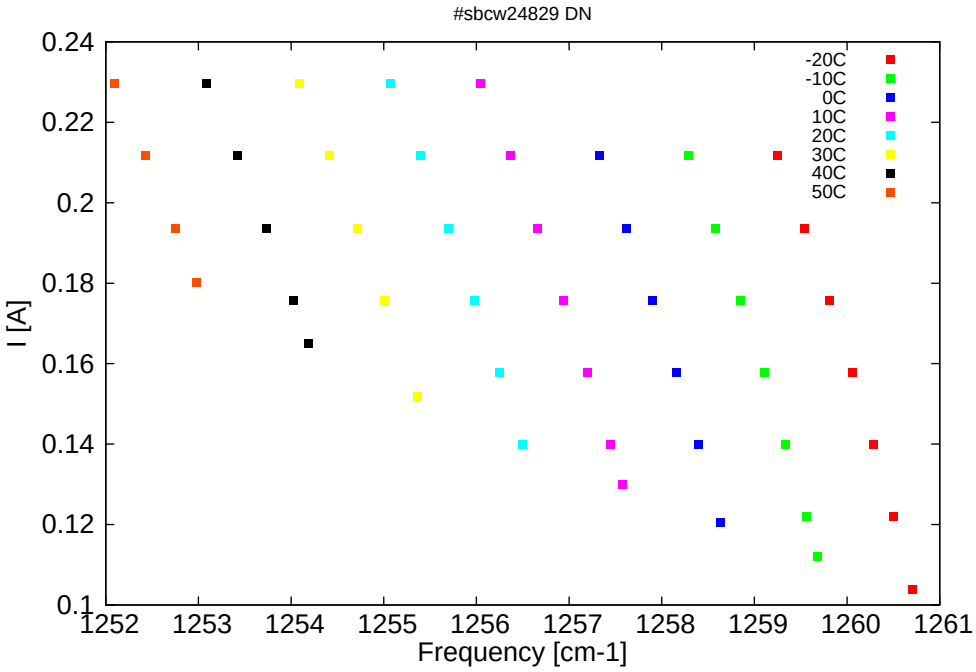

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7932	1260.7	0.6	-20	8.43	0.104
7933.3	1260.5	11.5	-20	8.67	0.122
7934.7	1260.3	21.9	-20	8.89	0.14
7936.1	1260.1	31	-20	9.11	0.158
7937.7	1259.8	38.9	-20	9.32	0.176
7939.4	1259.5	45	-20	9.53	0.194
7941.2	1259.2	49.4	-20	9.74	0.212
7938.5	1259.7	0.6	-10	8.36	0.112
7939.3	1259.6	6.2	-10	8.49	0.122
7940.7	1259.3	16.8	-10	8.71	0.14
7942.1	1259.1	26.1	-10	8.92	0.158
7943.8	1258.9	33.9	-10	9.13	0.176
7945.5	1258.6	40.3	-10	9.34	0.194
7947.3	1258.3	45	-10	9.55	0.212
7945.1	1258.6	0.6	0	8.31	0.121
7946.6	1258.4	11.1	0	8.54	0.14
7948.1	1258.2	20.4	0	8.75	0.158
7949.8	1257.9	28.3	0	8.96	0.176
7951.5	1257.6	35	0	9.16	0.194
7953.4	1257.3	40.1	0	9.37	0.212
7951.8	1257.6	0.6	10	8.28	0.13
7952.6	1257.4	5.6	10	8.39	0.14
7954.2	1257.2	14.6	10	8.6	0.158
7955.8	1256.9	22.7	10	8.8	0.176
7957.6	1256.7	29.4	10	9	0.194
7959.5	1256.4	34.7	10	9.2	0.212
7961.5	1256	38.5	10	9.41	0.23
7958.7	1256.5	0.6	20	8.25	0.14
7960.2	1256.2	8.7	20	8.46	0.158
7961.9	1256	16.9	20	8.66	0.176
7963.7	1255.7	23.5	20	8.86	0.194
7965.6	1255.4	29.1	20	9.05	0.212
7967.7	1255.1	33.1	20	9.25	0.23
7965.8	1255.4	0.5	30	8.27	0.152
7968.1	1255	10.6	30	8.53	0.176
7969.9	1254.7	17.4	30	8.73	0.194
7971.9	1254.4	22.9	30	8.92	0.212
7973.9	1254.1	27.3	30	9.11	0.23
7973.3	1254.2	0.6	40	8.29	0.165
7974.3	1254	4.5	40	8.41	0.176
7976.2	1253.7	11.2	40	8.6	0.194
7978.2	1253.4	17	40	8.79	0.212
7980.3	1253.1	21.3	40	8.98	0.23
7981	1253	0.4	50	8.35	0.18
7982.5	1252.7	5	50	8.49	0.194
7984.5	1252.4	10.5	50	8.68	0.212
7986.6	1252.1	15.1	50	8.86	0.23

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#sbcw24829 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.

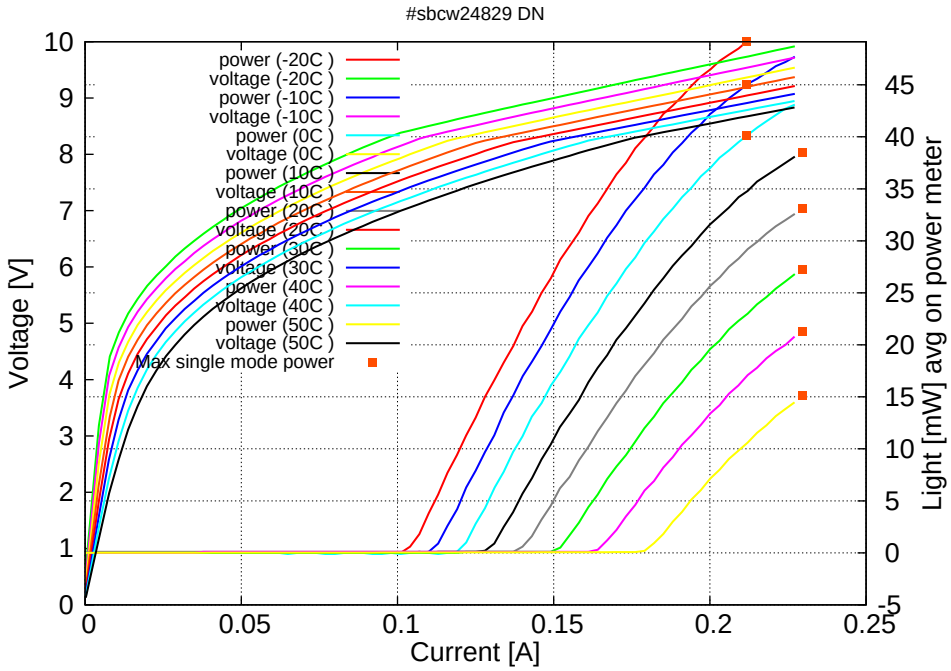

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.10A / Vth=8.4V (2-wires measurements). Maximum operation current: 0.21A between -20C and 0C, 0.23A between 10C and 50C.

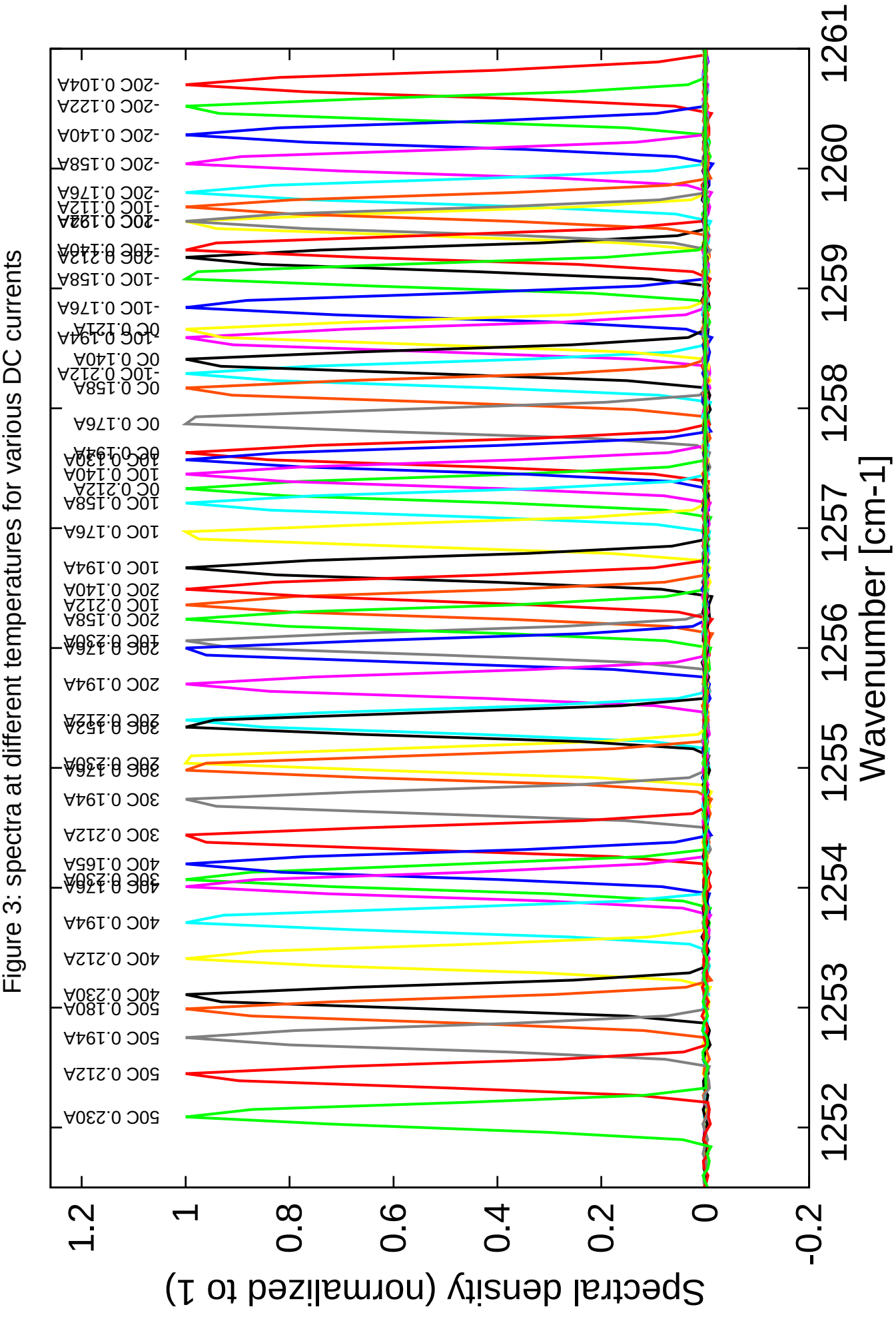

Figure 3: spectra at different temperatures for various DC currents