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Datasheet for #sbcw22891 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.

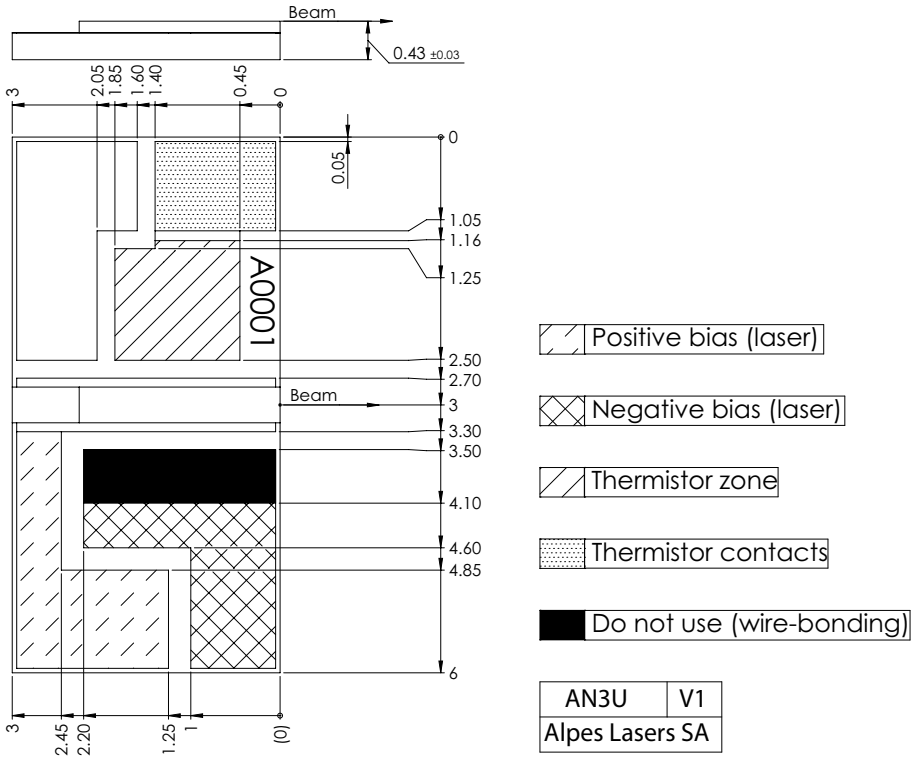

Figure 1: Mechanical and electrical interface for #sbcw22891 DN (please note that AlN submount numbering is A0TCF)

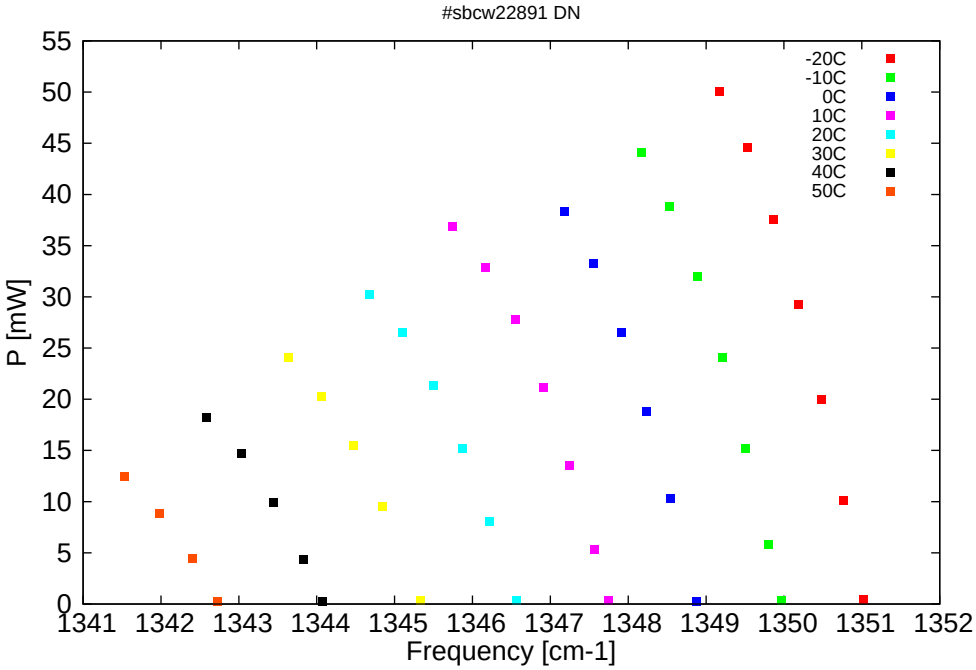

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

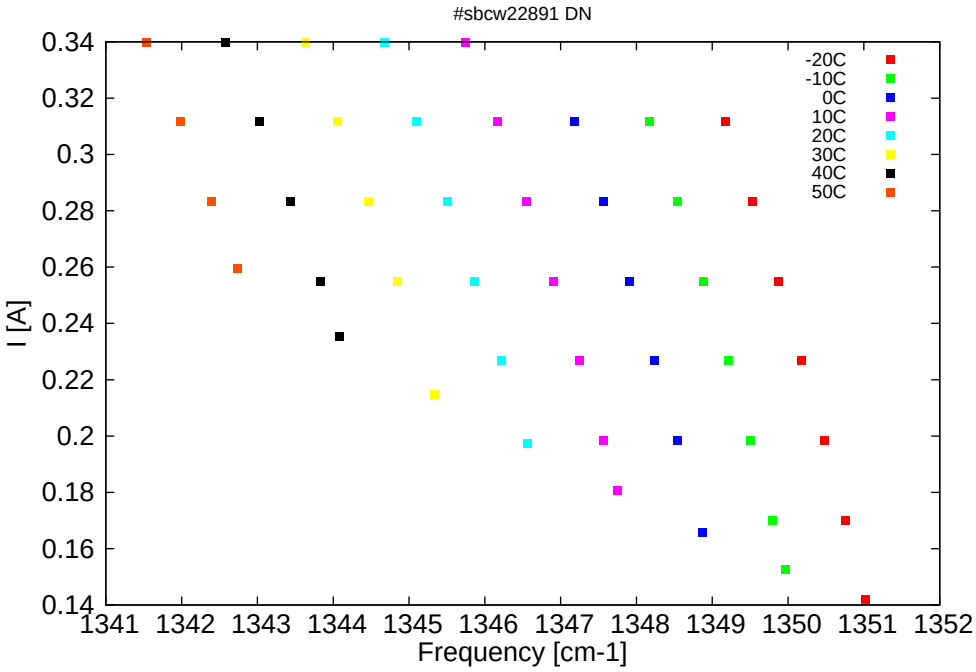

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7401.8	1351	0.4	-20	8.36	0.142
7403.2	1350.8	10.1	-20	8.62	0.17
7404.8	1350.5	20	-20	8.86	0.198
7406.4	1350.2	29.2	-20	9.1	0.227
7408.1	1349.9	37.5	-20	9.34	0.255
7410	1349.5	44.6	-20	9.58	0.283
7412	1349.2	50.1	-20	9.82	0.312
7407.6	1350	0.3	-10	8.35	0.153
7408.5	1349.8	5.8	-10	8.5	0.17
7410.1	1349.5	15.2	-10	8.75	0.198
7411.8	1349.2	24	-10	8.99	0.227
7413.5	1348.9	32	-10	9.22	0.255
7415.4	1348.5	38.8	-10	9.46	0.283
7417.5	1348.2	44.1	-10	9.71	0.312
7413.6	1348.9	0.3	0	8.36	0.166
7415.4	1348.5	10.3	0	8.65	0.198
7417.1	1348.2	18.8	0	8.89	0.227
7418.9	1347.9	26.5	0	9.12	0.255
7420.8	1347.6	33.3	0	9.37	0.283
7422.9	1347.2	38.4	0	9.61	0.312
7419.8	1347.8	0.4	10	8.4	0.181
7420.8	1347.6	5.3	10	8.56	0.198
7422.5	1347.3	13.6	10	8.8	0.227
7424.4	1346.9	21.2	10	9.04	0.255
7426.4	1346.6	27.8	10	9.28	0.283
7428.5	1346.2	32.9	10	9.52	0.312
7430.8	1345.7	36.8	10	9.76	0.34
7426.3	1346.6	0.4	20	8.46	0.197
7428.2	1346.2	8.1	20	8.72	0.227
7430.1	1345.9	15.2	20	8.95	0.255
7432.2	1345.5	21.4	20	9.19	0.283
7434.4	1345.1	26.5	20	9.44	0.312
7436.7	1344.7	30.3	20	9.68	0.34
7433.1	1345.3	0.3	30	8.54	0.215
7435.8	1344.8	9.5	30	8.88	0.255
7437.9	1344.5	15.5	30	9.12	0.283
7440.1	1344.1	20.3	30	9.36	0.312
7442.5	1343.6	24.1	30	9.61	0.34
7440	1344.1	0.3	40	8.64	0.235
7441.4	1343.8	4.3	40	8.81	0.255
7443.6	1343.4	10	40	9.05	0.283
7445.9	1343	14.7	40	9.29	0.312
7448.3	1342.6	18.3	40	9.53	0.34
7447.5	1342.7	0.2	50	8.77	0.26
7449.3	1342.4	4.4	50	8.97	0.283
7451.7	1342	8.9	50	9.21	0.312
7454.1	1341.5	12.5	50	9.45	0.34

continued on next page

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.

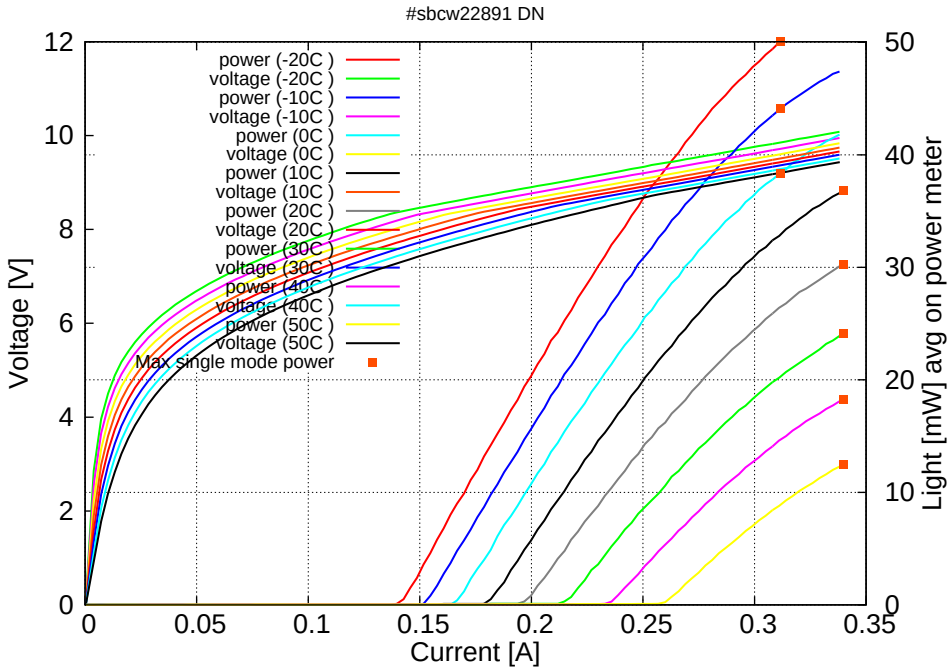

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.14A / Vth=8.35V (2-wires measurements). Maximum operation current: 0.315A between -20C and 0C, 0.34A between 10C and 50C.

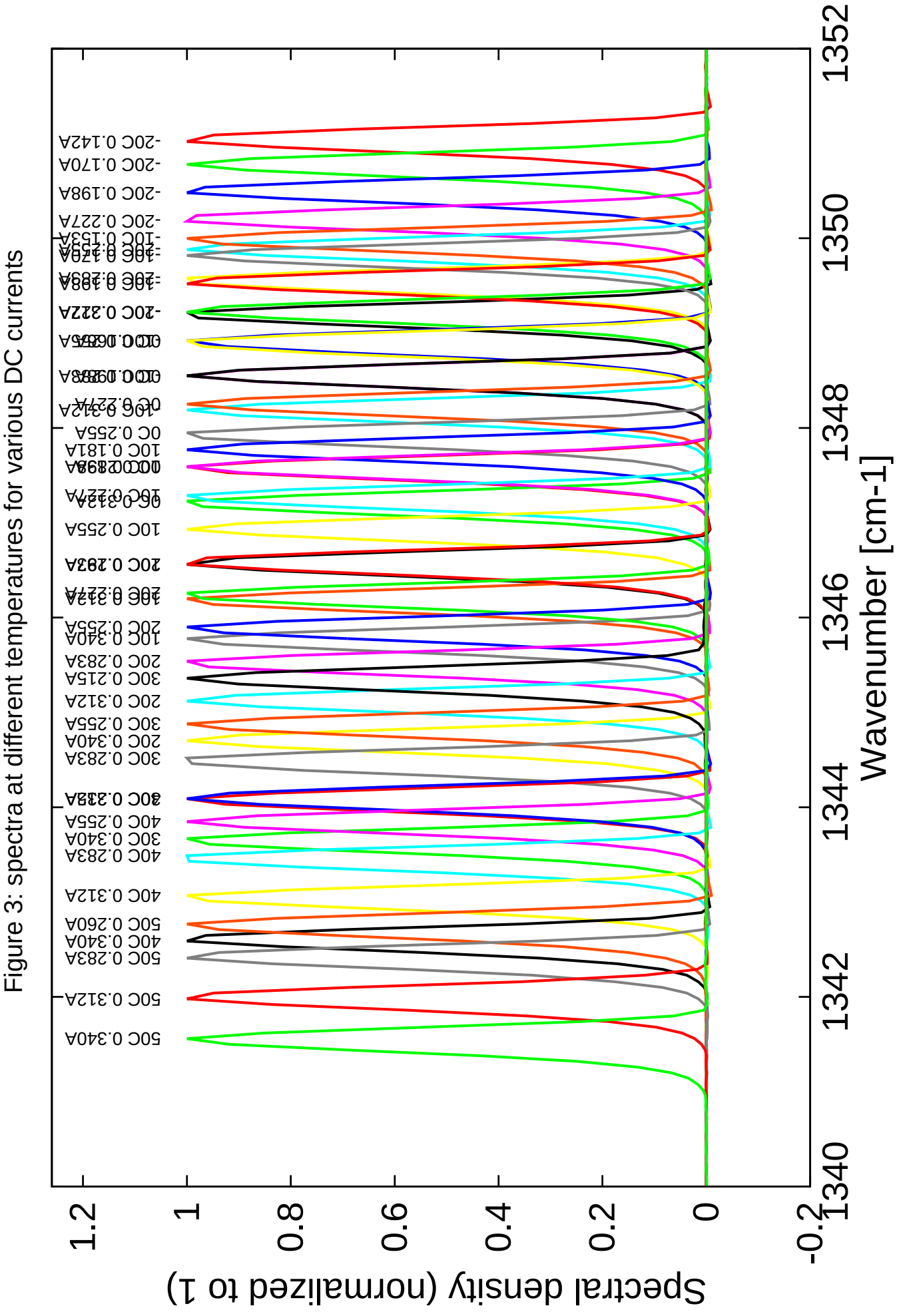

Figure 3: spectra at different temperatures for various DC currents