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Datasheet for #sbcw22890 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.

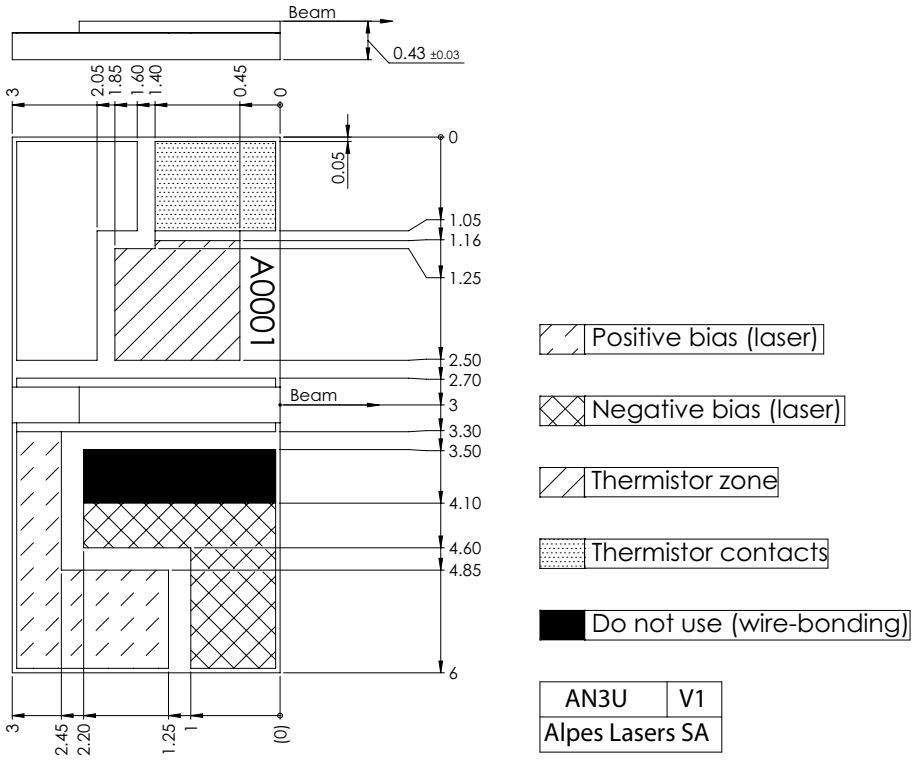

Figure 1: Mechanical and electrical interface for #sbcw22890 DN (please note that AlN submount numbering is A0W0V)

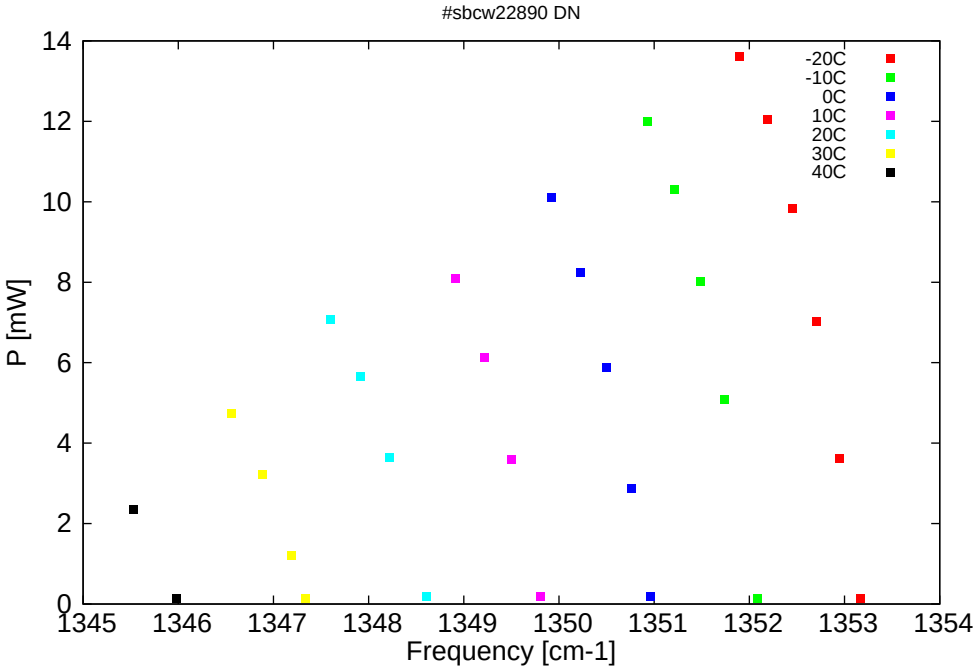

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

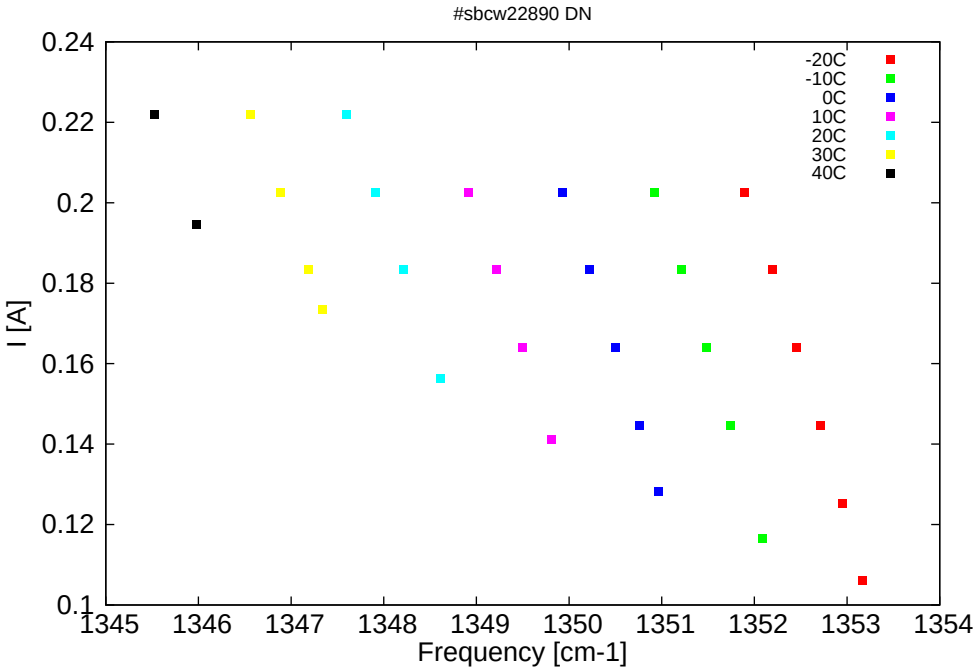

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7390.1	1353.2	0.1	-20	8.86	0.106
7391.3	1352.9	3.6	-20	9.17	0.125
7392.6	1352.7	7	-20	9.47	0.145
7394	1352.5	9.8	-20	9.77	0.164
7395.4	1352.2	12	-20	10.07	0.183
7397	1351.9	13.6	-20	10.37	0.203
7396	1352.1	0.1	-10	8.89	0.117
7397.9	1351.7	5.1	-10	9.32	0.145
7399.3	1351.5	8	-10	9.61	0.164
7400.7	1351.2	10.3	-10	9.91	0.183
7402.3	1350.9	12	-10	10.21	0.203
7402.1	1351	0.2	0	8.92	0.128
7403.3	1350.8	2.9	0	9.16	0.145
7404.7	1350.5	5.9	0	9.44	0.164
7406.2	1350.2	8.3	0	9.73	0.183
7407.8	1349.9	10.1	0	10.01	0.203
7408.5	1349.8	0.2	10	8.98	0.141
7410.2	1349.5	3.6	10	9.31	0.164
7411.7	1349.2	6.1	10	9.58	0.183
7413.4	1348.9	8.1	10	9.86	0.203
7415	1348.6	0.2	20	9.07	0.156
7417.2	1348.2	3.6	20	9.45	0.183
7418.9	1347.9	5.7	20	9.72	0.203
7420.6	1347.6	7.1	20	10	0.222
7422	1347.3	0.1	30	9.2	0.173
7422.8	1347.2	1.2	30	9.34	0.183
7424.5	1346.9	3.2	30	9.6	0.203
7426.3	1346.6	4.7	30	9.87	0.222
7429.5	1346	0.1	40	9.38	0.195
7432	1345.5	2.3	40	9.74	0.222

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

#sbcw22890 DN

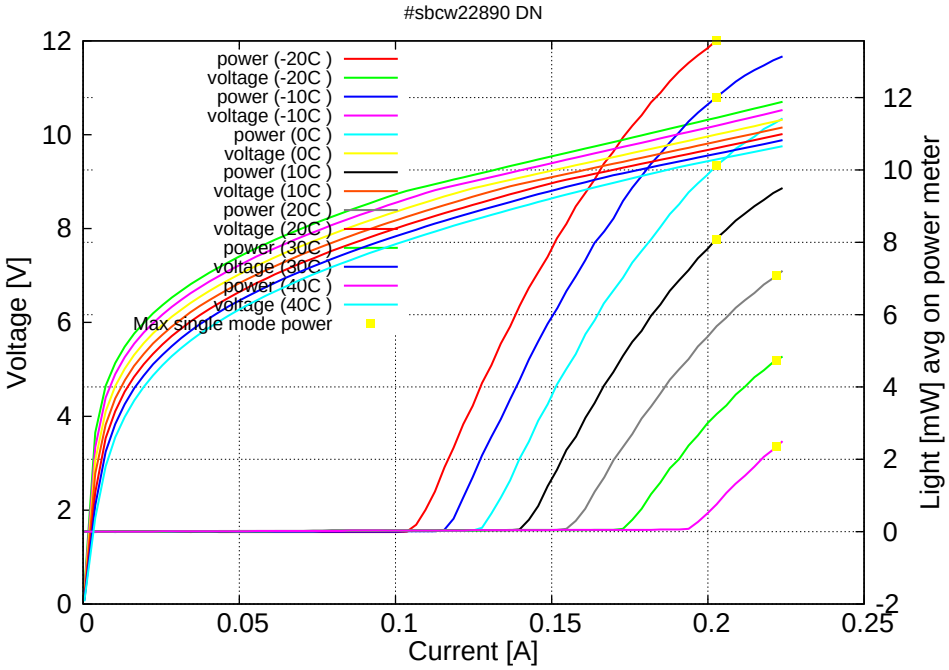

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.10A / Vth=8.8V (2-wires measurements). Maximum operation current: 0.205A between -20C and 10C, 0.225A between 20C and 40C.

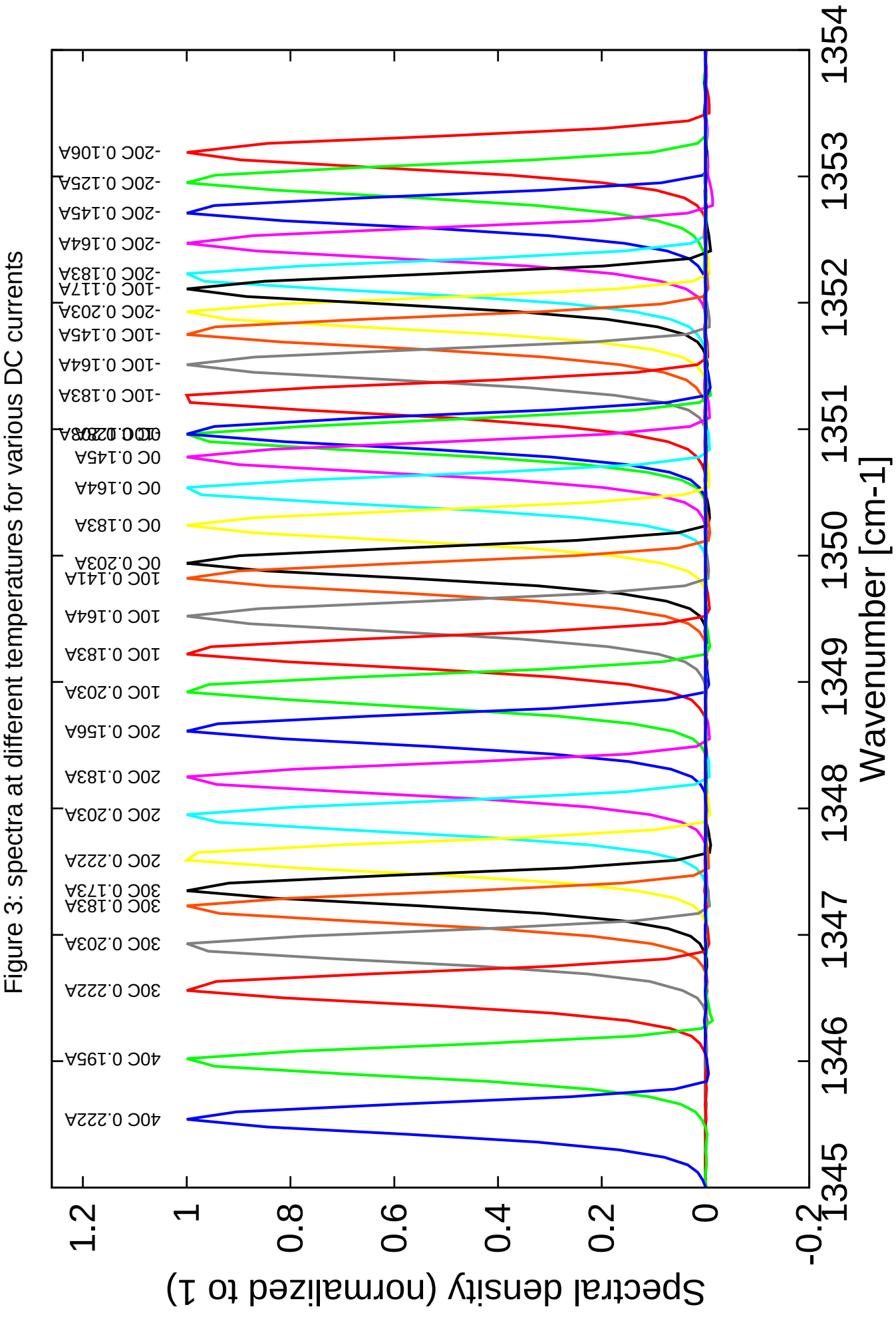

Figure 3: spectra at different temperatures for various DC currents