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Datasheet for #sbcw27688 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at
`https://www.alpeslasers.ch/resources/#faq`

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.

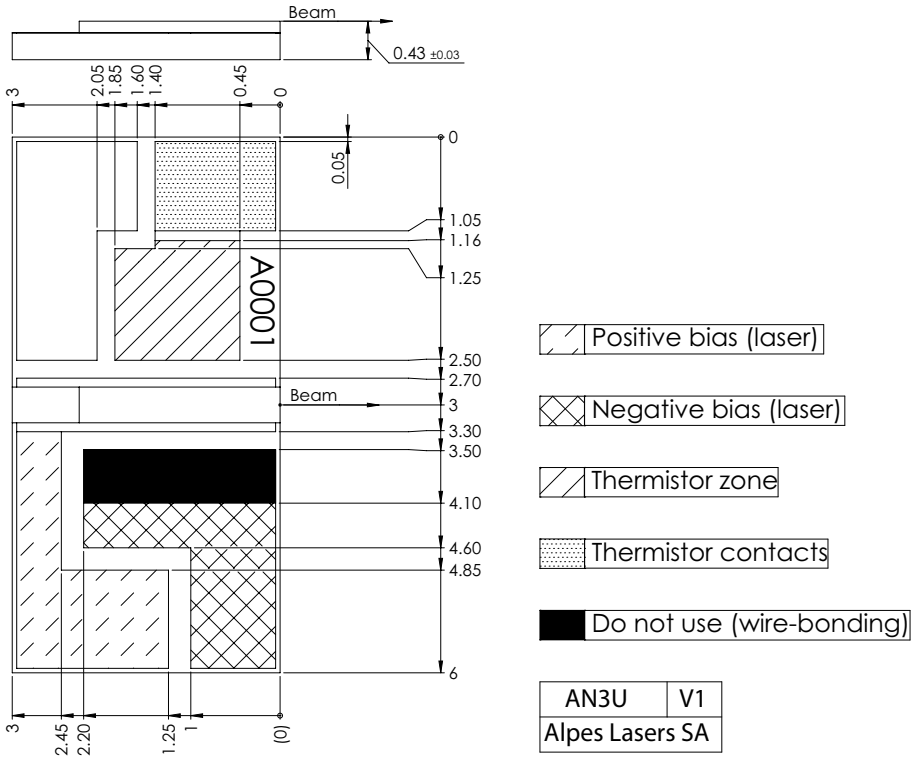

Figure 1: Mechanical and electrical interface for #sbcw27688 DN (please note that AlN submount numbering is A0UCC)

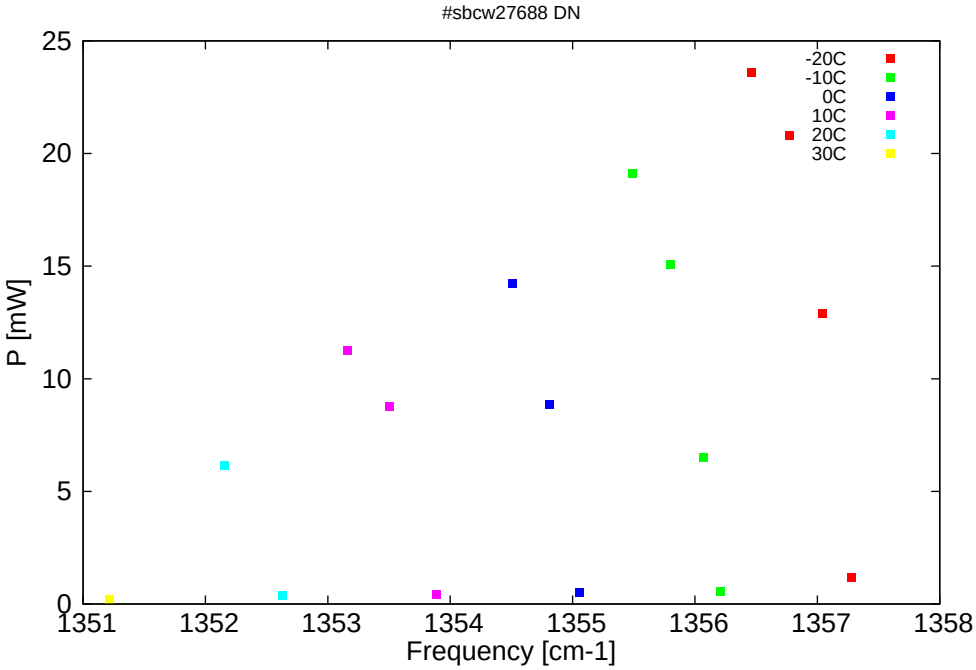

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

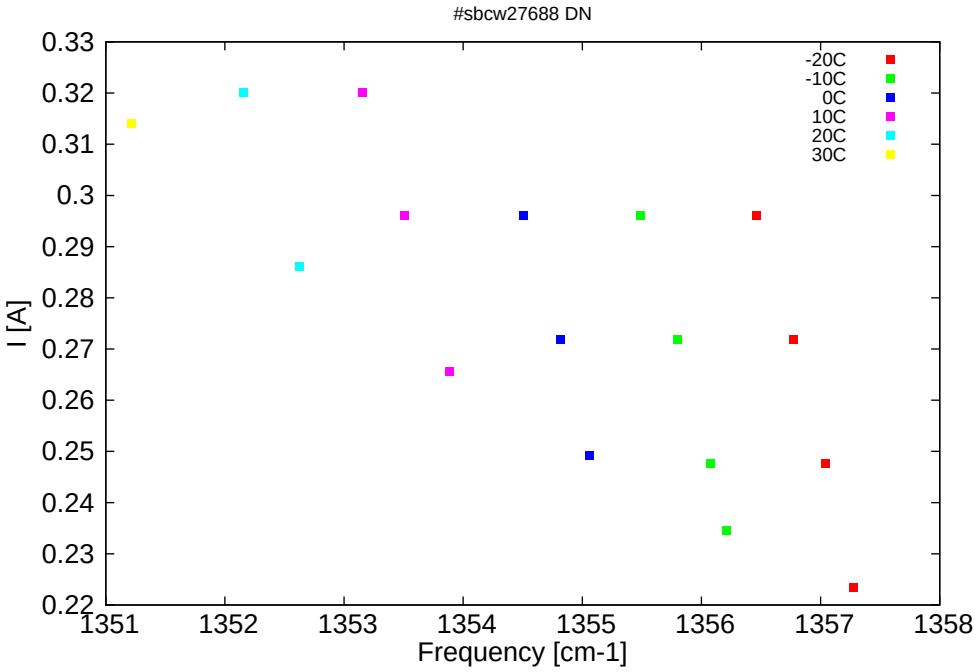

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7367.7	1357.3	1.2	-20	9.63	0.223
7369	1357	12.9	-20	9.81	0.248
7370.4	1356.8	20.8	-20	10.01	0.272
7372.1	1356.5	23.6	-20	10.23	0.296
7373.5	1356.2	0.6	-10	9.6	0.235
7374.2	1356.1	6.5	-10	9.7	0.248
7375.7	1355.8	15.1	-10	9.9	0.272
7377.4	1355.5	19.1	-10	10.11	0.296
7379.8	1355.1	0.5	0	9.62	0.249
7381.1	1354.8	8.8	0	9.79	0.272
7382.8	1354.5	14.2	0	10.01	0.296
7386.2	1353.9	0.4	10	9.65	0.266
7388.2	1353.5	8.8	10	9.9	0.296
7390.1	1353.2	11.2	10	10.13	0.32
7393	1352.6	0.4	20	9.72	0.286
7395.6	1352.2	6.2	20	10.03	0.32
7400.8	1351.2	0.2	30	9.86	0.314

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

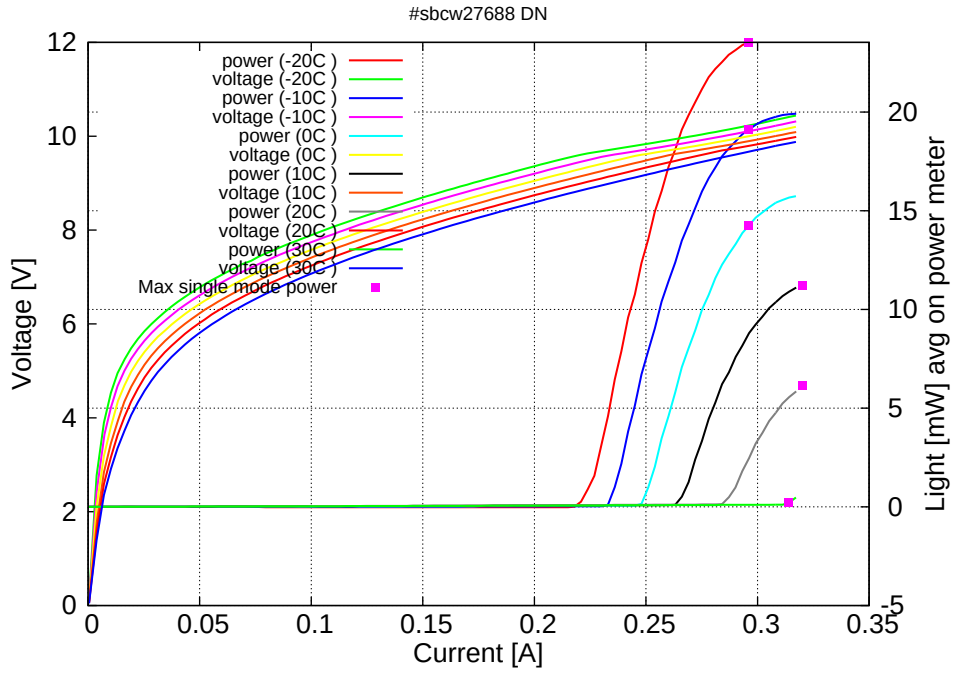

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.22A / Vth=9.6V (2-wires measurements). Maximum operation current: 0.30A between -20C and 0C, 0.32A between 10C and 30C.

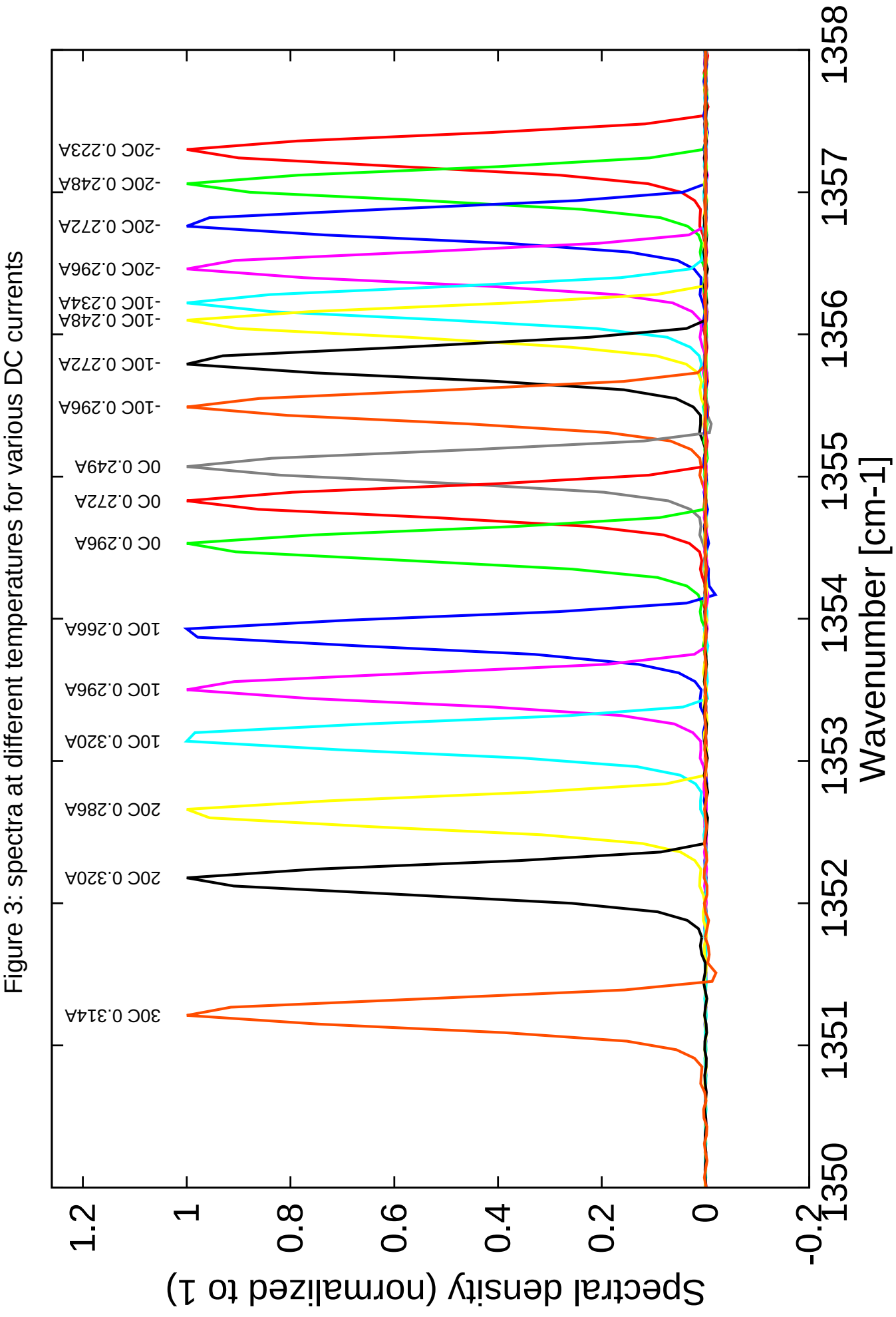

Figure 3: spectra at different temperatures for various DC currents