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Datasheet for #sbcw19933 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.

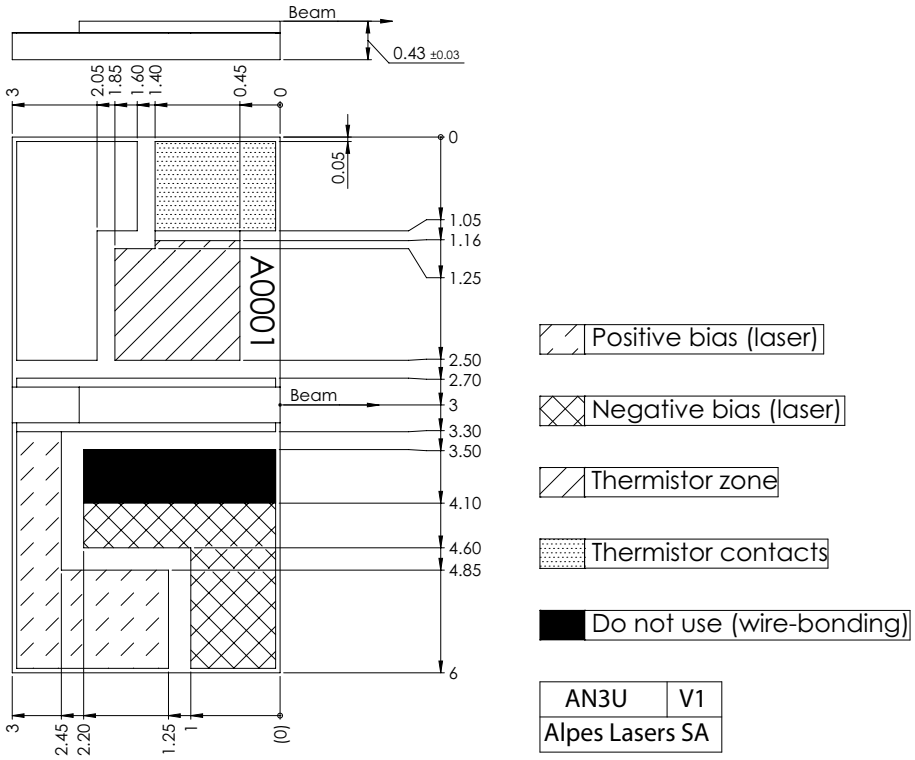

Figure 1: Mechanical and electrical interface for #sbcw19933 DN (please note that AlN submount numbering is A0RJE)

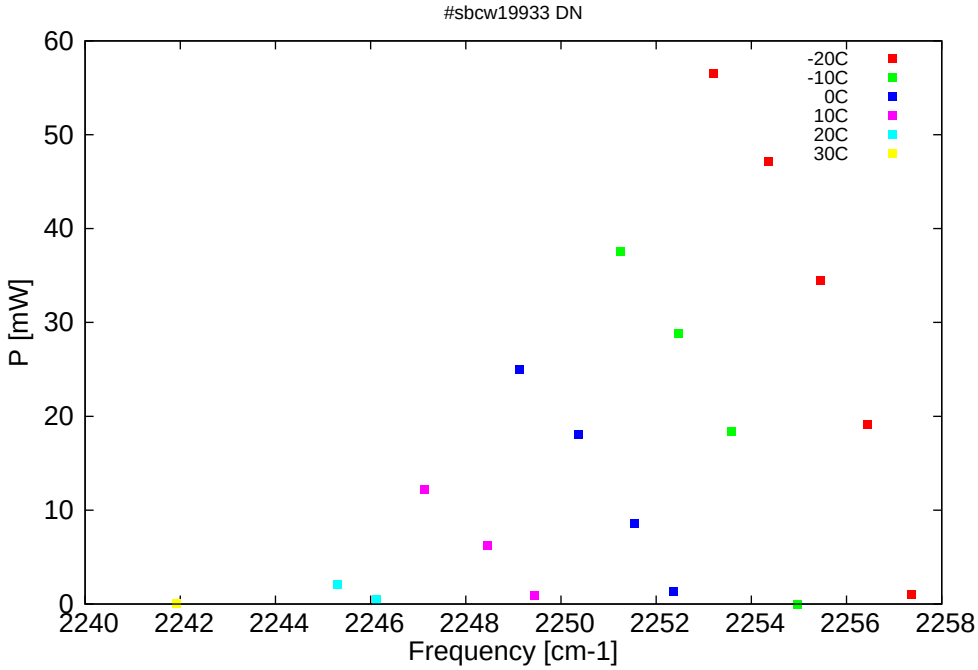

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

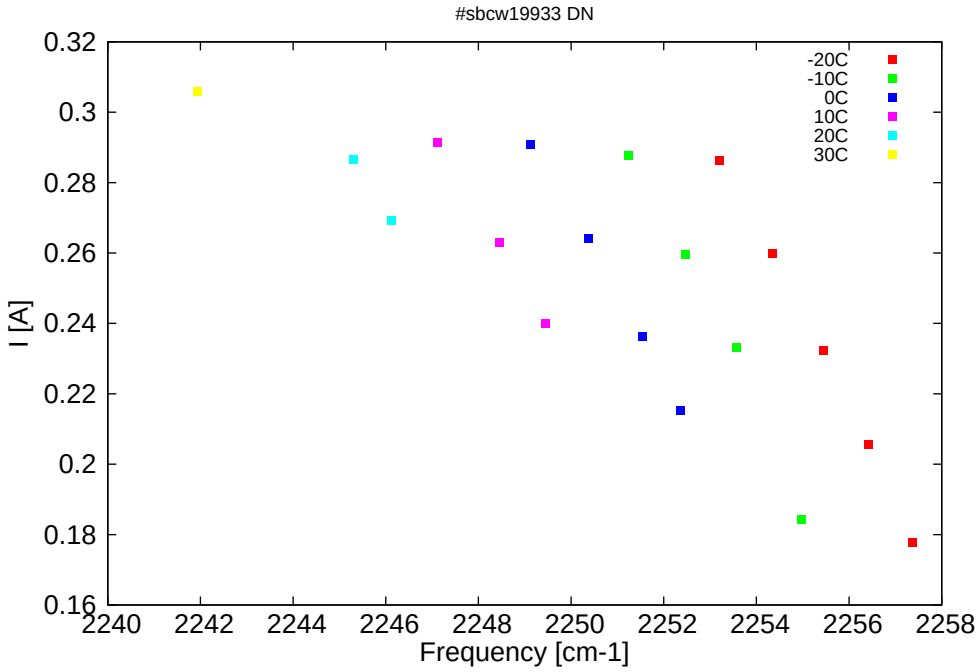

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
4429.9	2257.4	1	-20	12.18	0.178
4431.8	2256.4	19.1	-20	12.39	0.206
4433.7	2255.5	34.4	-20	12.61	0.232
4435.9	2254.4	47.2	-20	12.83	0.26
4438.1	2253.2	56.5	-20	13.05	0.286
4434.6	2255	0	-10	12.2	0.184
4437.4	2253.6	18.4	-10	12.5	0.233
4439.6	2252.5	28.9	-10	12.71	0.26
4442	2251.2	37.6	-10	12.94	0.288
4439.8	2252.4	1.3	0	12.27	0.215
4441.4	2251.5	8.6	0	12.42	0.236
4443.7	2250.4	18	0	12.64	0.264
4446.2	2249.1	25	0	12.85	0.291
4445.5	2249.4	0.9	10	12.38	0.24
4447.5	2248.5	6.3	10	12.54	0.263
4450.1	2247.1	12.2	10	12.76	0.291
4452.1	2246.1	0.5	20	12.53	0.269
4453.8	2245.3	2.1	20	12.65	0.287
4460.4	2241.9	0.1	30	12.78	0.306

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

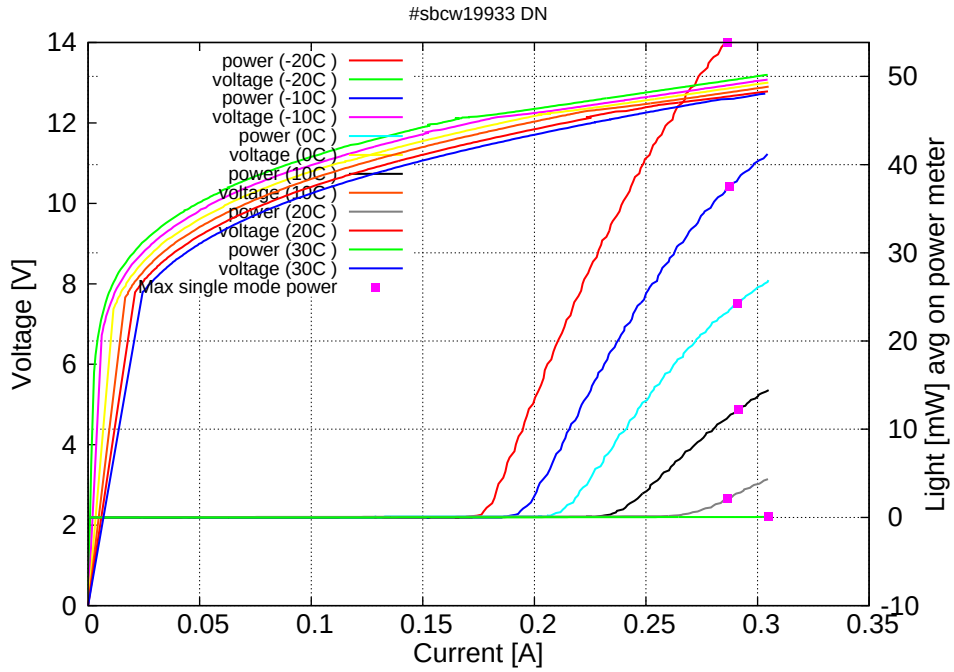

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.17A / Vth=12.2V (2-wires measurements). Maximum operation current: 0.305A for all temperatures.

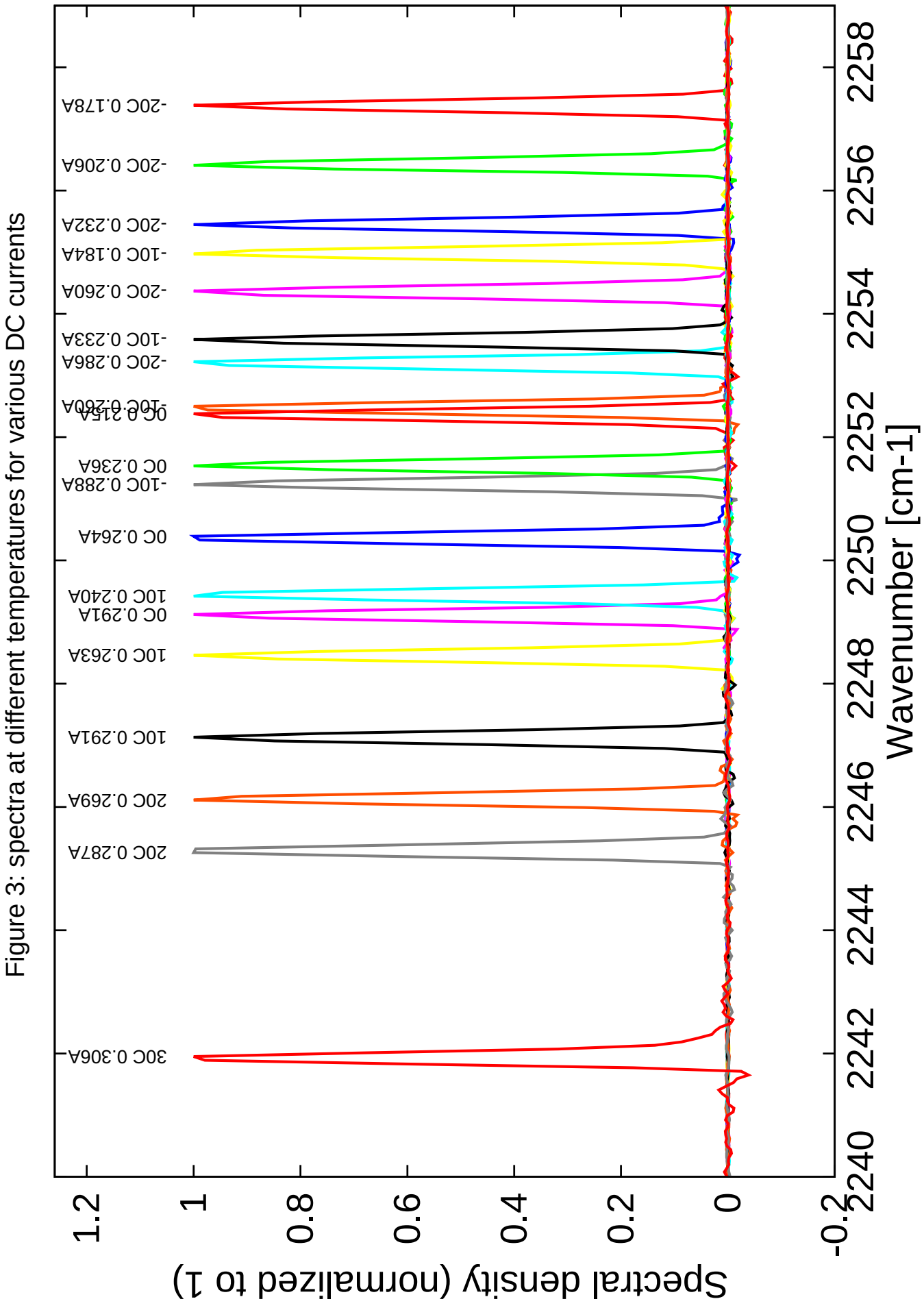

Figure 3: spectra at different temperatures for various DC currents