

Datasheet for #sbcw27686 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.

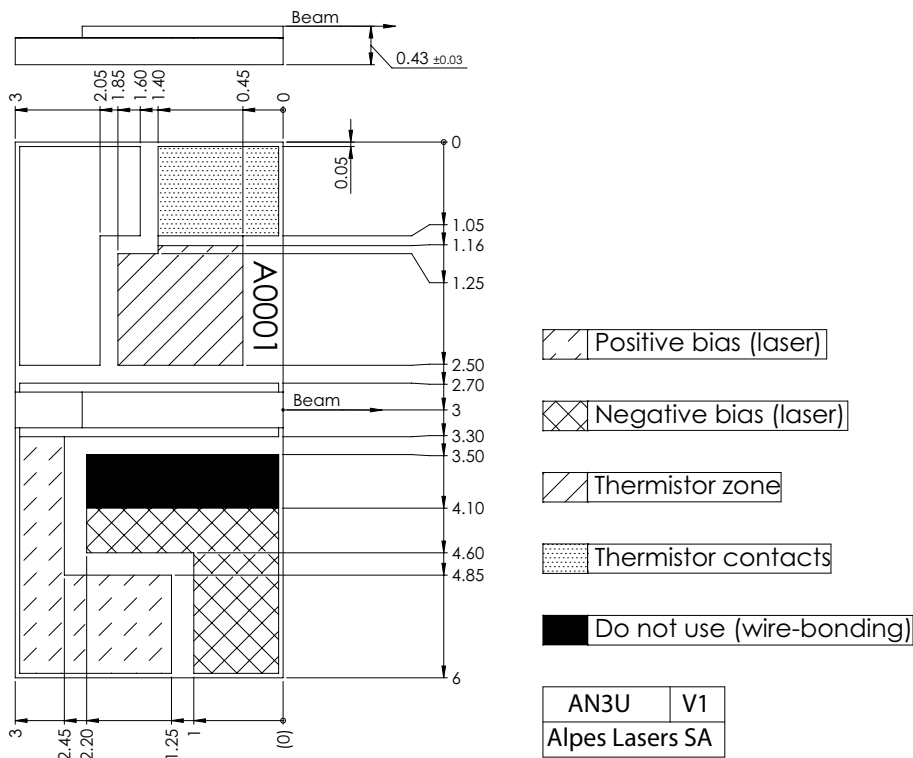


Figure 1: Mechanical and electrical interface for #sbcw27686 DN (please note that AlN submount numbering is A0YNJ)

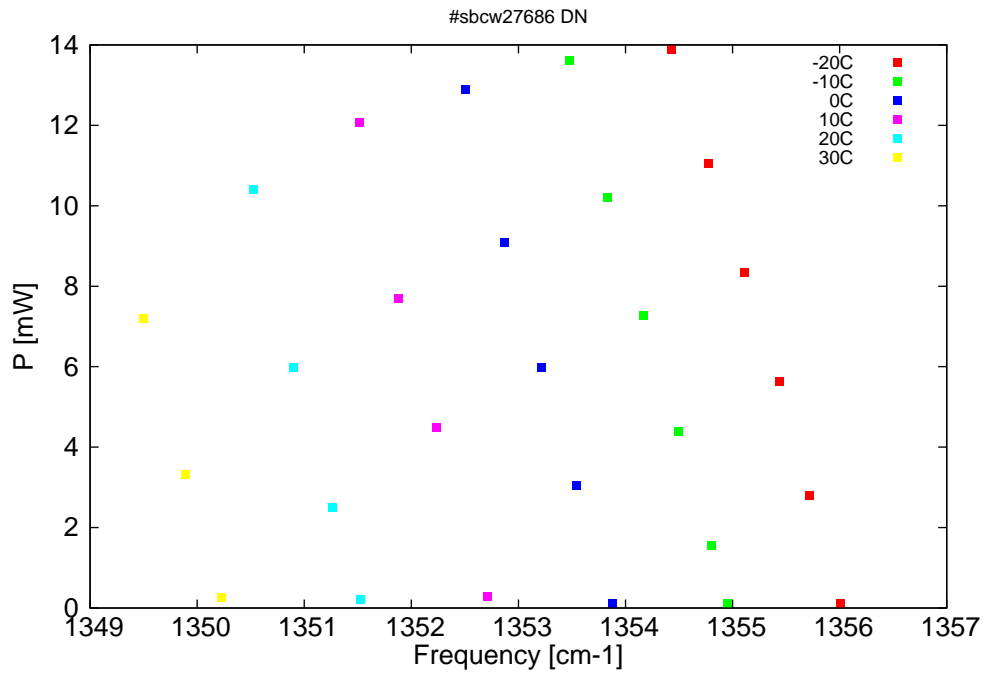


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

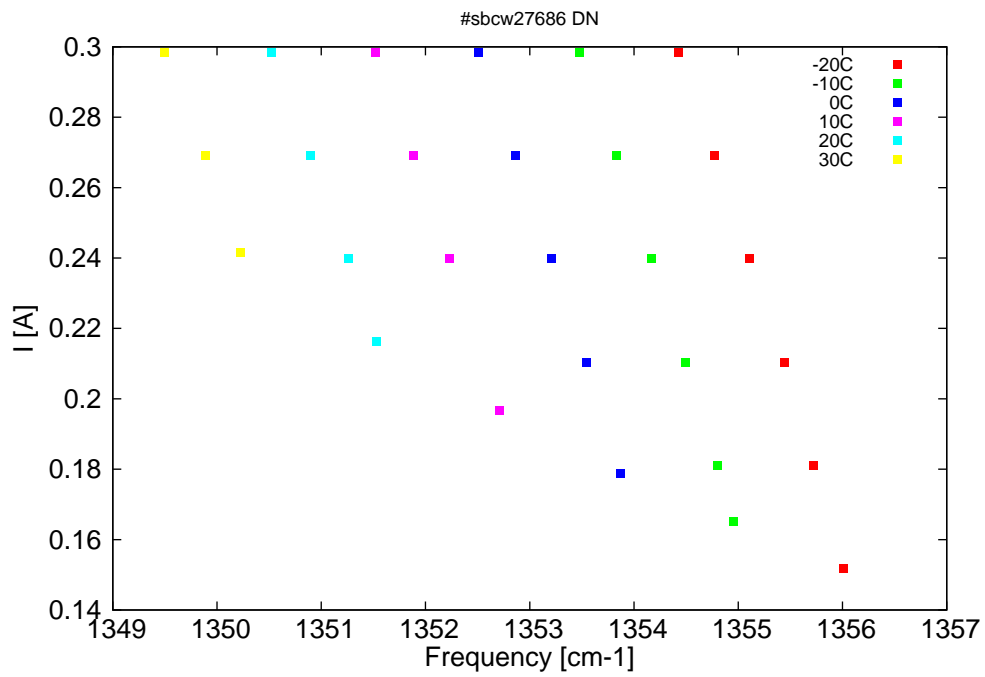


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7374.6	1356	0.1	-20	8.34	0.152
7376.1	1355.7	2.8	-20	8.58	0.181
7377.7	1355.4	5.6	-20	8.82	0.21
7379.5	1355.1	8.3	-20	9.04	0.24
7381.3	1354.8	11.1	-20	9.27	0.269
7383.2	1354.4	13.9	-20	9.49	0.299
7380.3	1355	0.1	-10	8.34	0.165
7381.2	1354.8	1.6	-10	8.48	0.181
7382.8	1354.5	4.4	-10	8.71	0.21
7384.6	1354.2	7.3	-10	8.94	0.24
7386.4	1353.8	10.2	-10	9.16	0.269
7388.4	1353.5	13.6	-10	9.38	0.299
7386.2	1353.9	0.1	0	8.36	0.179
7388	1353.5	3.1	0	8.61	0.21
7389.8	1353.2	6	0	8.84	0.24
7391.7	1352.9	9.1	0	9.06	0.269
7393.7	1352.5	12.9	0	9.28	0.299
7392.6	1352.7	0.3	10	8.41	0.197
7395.2	1352.2	4.5	10	8.74	0.24
7397.1	1351.9	7.7	10	8.96	0.269
7399.1	1351.5	12.1	10	9.18	0.299
7399	1351.5	0.2	20	8.47	0.216
7400.5	1351.3	2.5	20	8.65	0.24
7402.5	1350.9	6	20	8.87	0.269
7404.5	1350.5	10.4	20	9.1	0.299
7406.2	1350.2	0.3	30	8.57	0.242
7408	1349.9	3.3	30	8.79	0.269
7410.2	1349.5	7.2	30	9.02	0.299

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

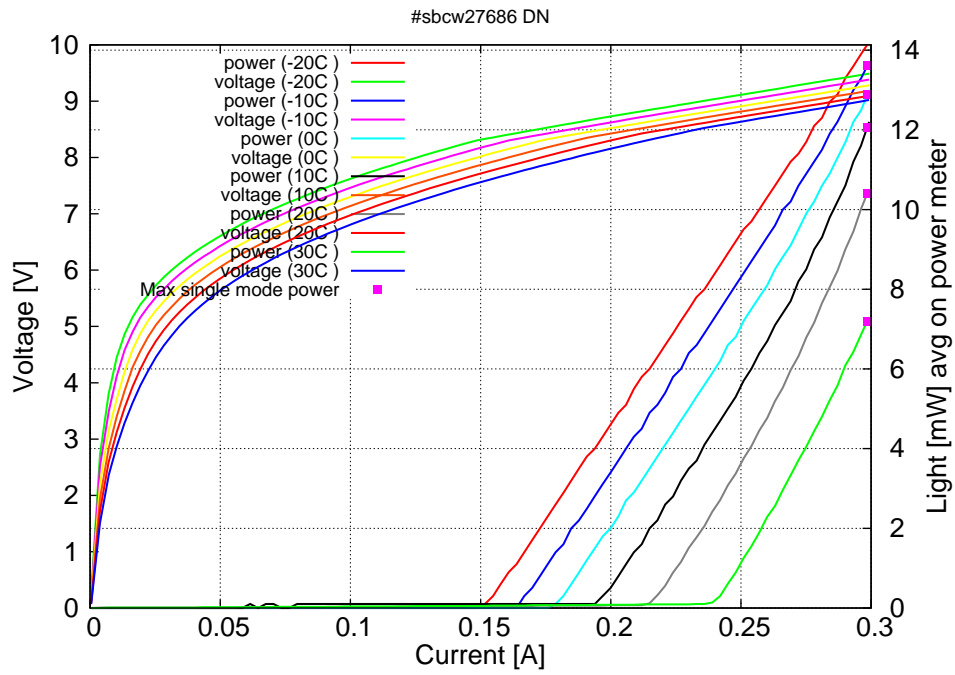


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

