

Datasheet for #sbcw27682 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.

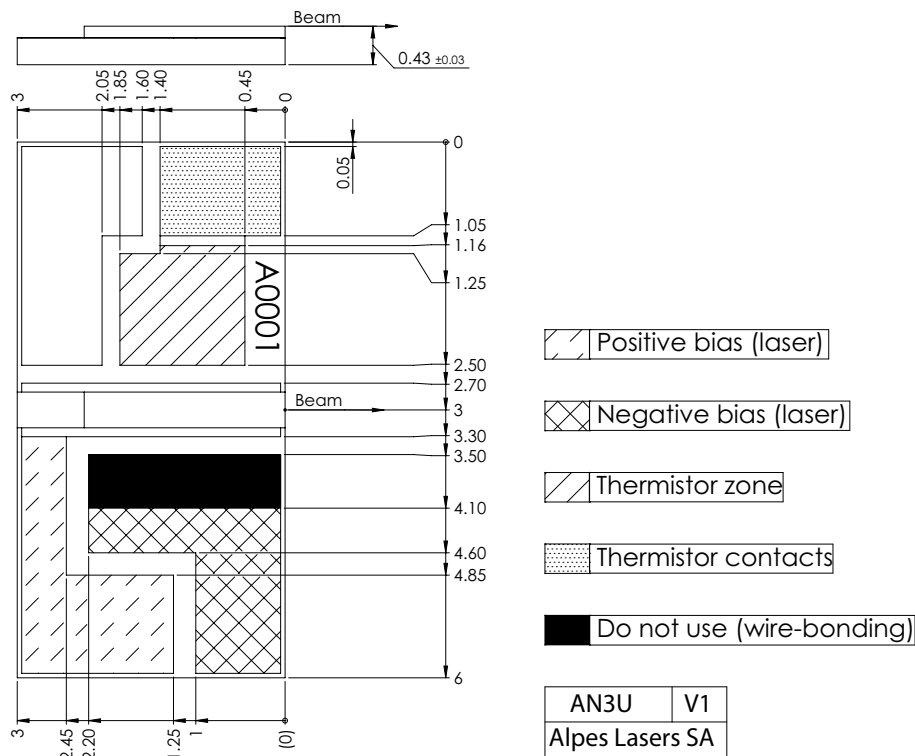


Figure 1: Mechanical and electrical interface for #sbcw27682 DN (please note that AlN submount numbering is A0VTM)

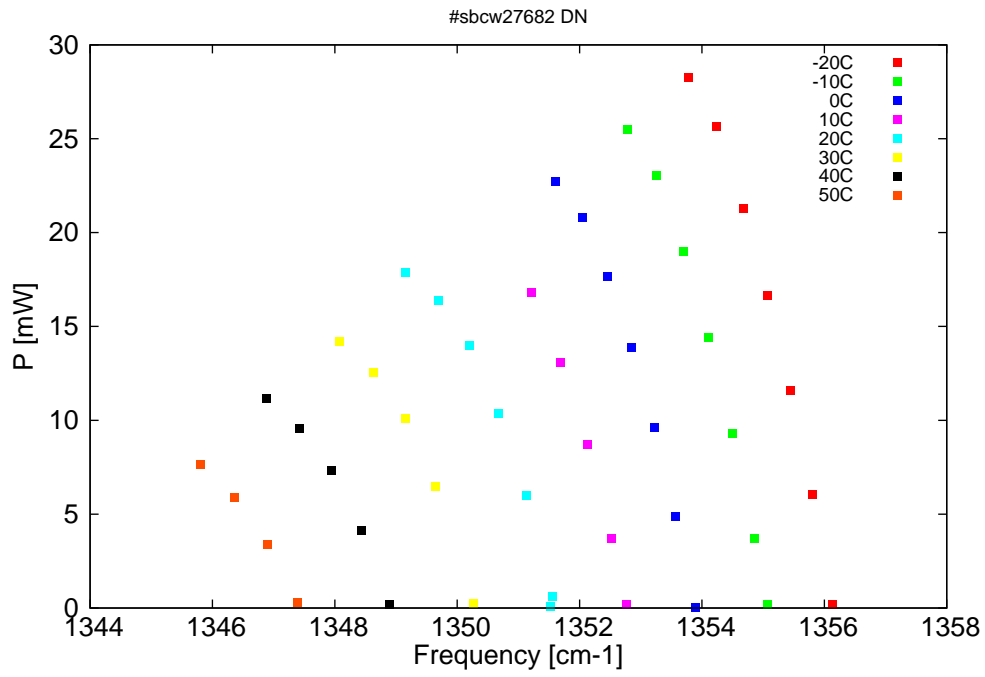


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

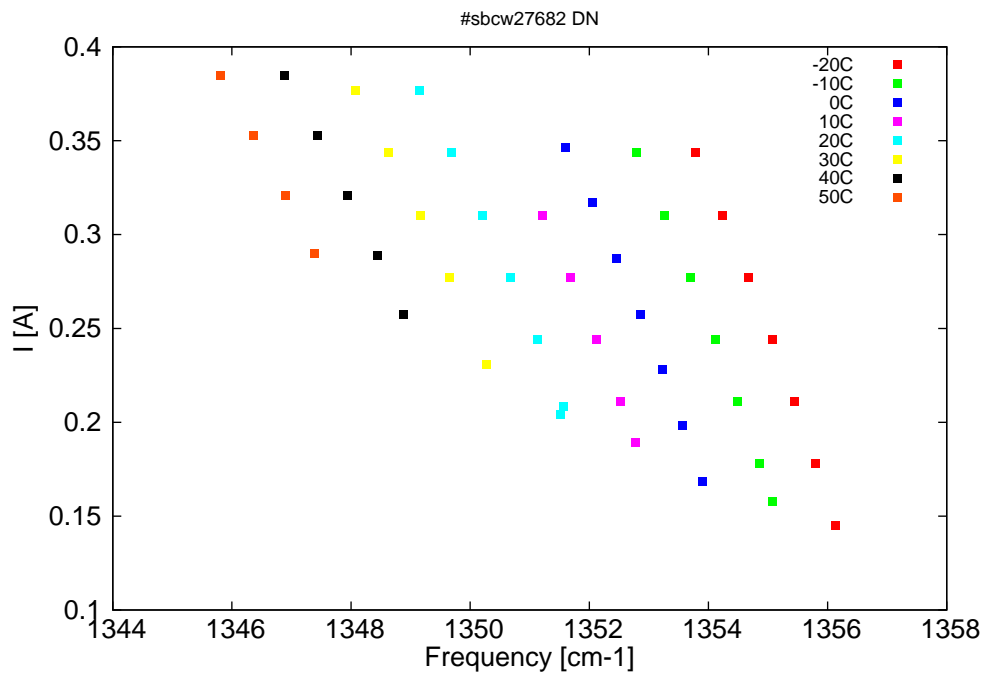


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7373.9	1356.1	0.2	-20	8.13	0.145
7375.7	1355.8	6	-20	8.39	0.178
7377.6	1355.4	11.6	-20	8.63	0.211
7379.7	1355.1	16.7	-20	8.87	0.244
7381.9	1354.7	21.3	-20	9.1	0.277
7384.2	1354.2	25.6	-20	9.34	0.31
7386.7	1353.8	28.3	-20	9.58	0.344
7379.7	1355.1	0.2	-10	8.15	0.158
7380.8	1354.9	3.7	-10	8.31	0.178
7382.8	1354.5	9.3	-10	8.55	0.211
7384.9	1354.1	14.4	-10	8.79	0.244
7387.2	1353.7	19	-10	9.03	0.277
7389.6	1353.3	23	-10	9.27	0.31
7392.1	1352.8	25.5	-10	9.51	0.344
7386.1	1353.9	0	0	8.14	0.169
7387.9	1353.6	4.9	0	8.37	0.198
7389.8	1353.2	9.6	0	8.58	0.228
7391.8	1352.9	13.9	0	8.8	0.258
7393.9	1352.5	17.6	0	9.01	0.287
7396.2	1352	20.8	0	9.22	0.317
7398.6	1351.6	22.7	0	9.44	0.347
7392.2	1352.8	0.2	10	8.24	0.189
7393.6	1352.5	3.7	10	8.4	0.211
7395.8	1352.1	8.7	10	8.65	0.244
7398.2	1351.7	13.1	10	8.89	0.277
7400.7	1351.2	16.8	10	9.13	0.31
7399	1351.5	0.1	20	8.26	0.204
7398.8	1351.6	0.6	20	8.31	0.208
7401.2	1351.1	6	20	8.57	0.244
7403.7	1350.7	10.4	20	8.82	0.277
7406.3	1350.2	14	20	9.05	0.31
7409.1	1349.7	16.4	20	9.3	0.344
7412.1	1349.1	17.9	20	9.54	0.377
7405.9	1350.3	0.2	30	8.4	0.231
7409.4	1349.6	6.5	30	8.74	0.277
7412	1349.2	10.1	30	8.98	0.31
7414.9	1348.6	12.5	30	9.22	0.344
7417.9	1348.1	14.2	30	9.47	0.377
7413.5	1348.9	0.2	40	8.52	0.257
7416	1348.4	4.1	40	8.76	0.289
7418.7	1347.9	7.3	40	8.99	0.321
7421.5	1347.4	9.6	40	9.22	0.353
7424.6	1346.9	11.1	40	9.45	0.385
7421.8	1347.4	0.3	50	8.69	0.29
7424.5	1346.9	3.4	50	8.92	0.321
7427.4	1346.4	5.9	50	9.15	0.353
7430.5	1345.8	7.7	50	9.38	0.385

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

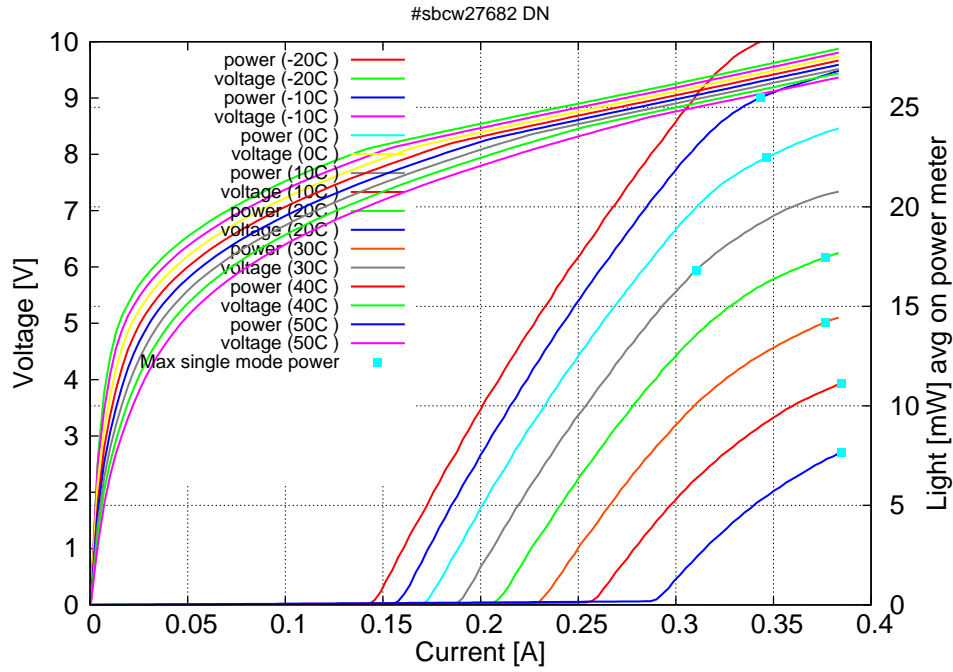


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.345A between -20C and 10C, 0.38A between 20C and 30C, 0.385A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

