

Datasheet for #sbcw27782 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.

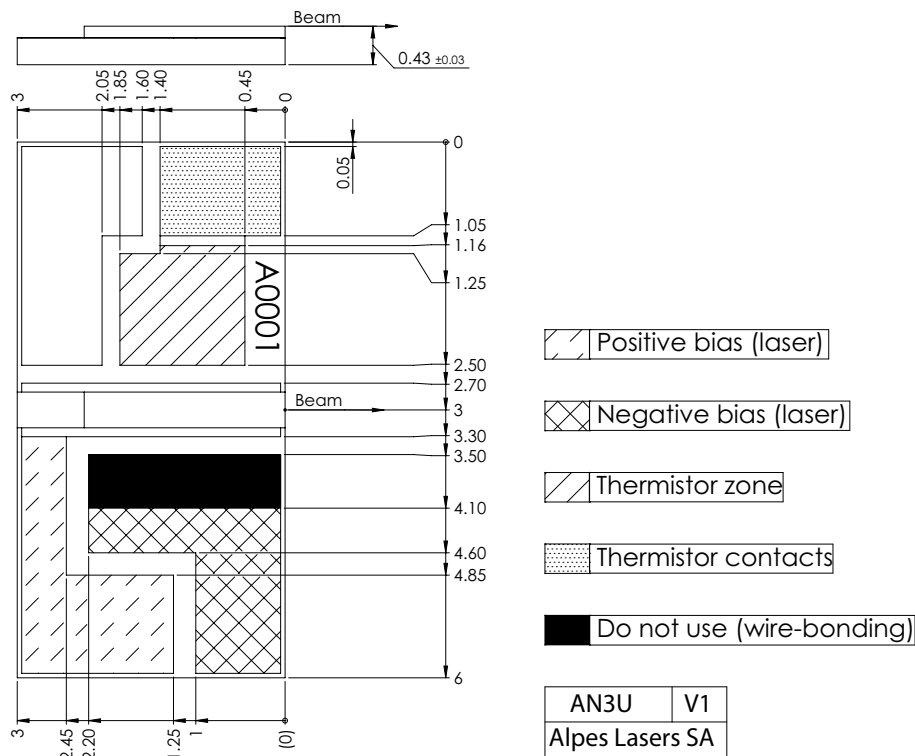


Figure 1: Mechanical and electrical interface for #sbcw27782 DN (please note that AlN submount numbering is A0VN3)

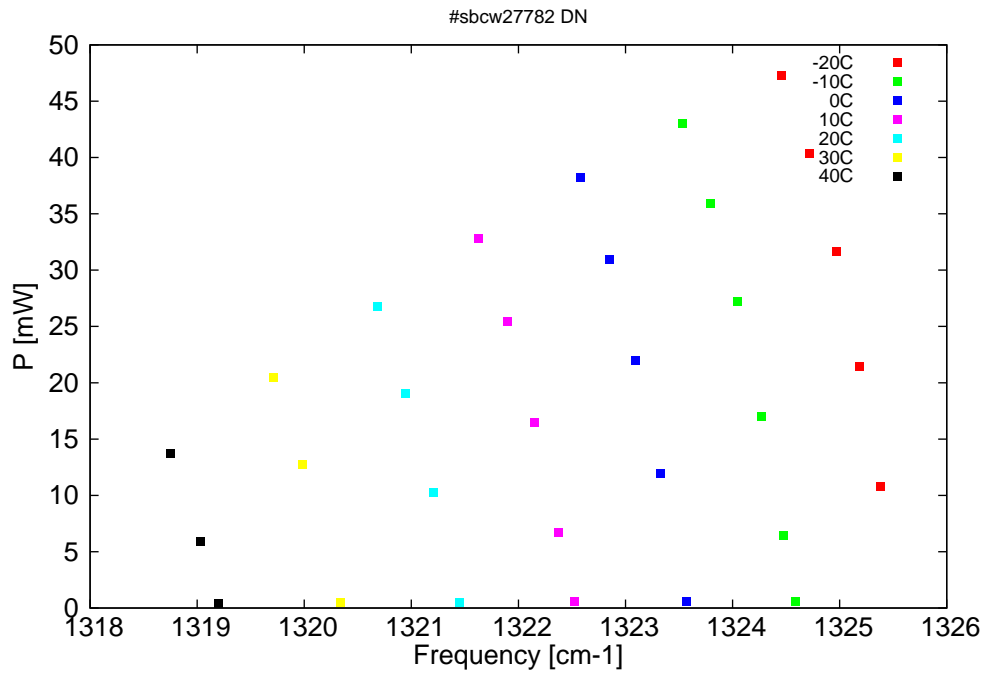


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

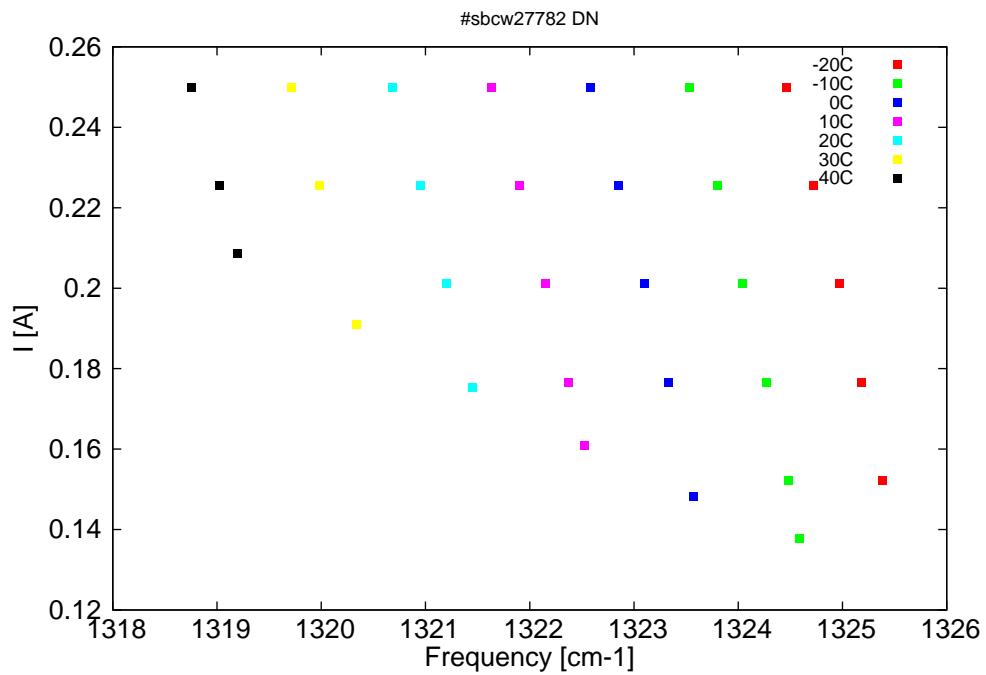


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7545	1325.4	10.8	-20	8.82	0.152
7546.1	1325.2	21.4	-20	9.09	0.177
7547.4	1325	31.6	-20	9.37	0.201
7548.8	1324.7	40.4	-20	9.64	0.226
7550.2	1324.5	47.3	-20	9.91	0.25
7549.5	1324.6	0.6	-10	8.54	0.138
7550.1	1324.5	6.4	-10	8.71	0.152
7551.3	1324.3	17	-10	8.98	0.177
7552.6	1324	27.2	-10	9.25	0.201
7554	1323.8	35.9	-10	9.52	0.226
7555.5	1323.5	43	-10	9.78	0.25
7555.3	1323.6	0.5	0	8.55	0.148
7556.7	1323.3	12	0	8.87	0.177
7558	1323.1	22	0	9.13	0.201
7559.4	1322.9	30.9	0	9.4	0.226
7561	1322.6	38.2	0	9.66	0.25
7561.3	1322.5	0.6	10	8.55	0.161
7562.1	1322.4	6.7	10	8.73	0.177
7563.4	1322.2	16.5	10	8.99	0.201
7564.9	1321.9	25.4	10	9.26	0.226
7566.4	1321.6	32.8	10	9.52	0.25
7567.4	1321.5	0.5	20	8.59	0.175
7568.9	1321.2	10.3	20	8.86	0.201
7570.3	1320.9	19.1	20	9.12	0.226
7571.8	1320.7	26.8	20	9.38	0.25
7573.8	1320.3	0.5	30	8.63	0.191
7575.9	1320	12.8	30	8.99	0.226
7577.4	1319.7	20.5	30	9.24	0.25
7580.4	1319.2	0.4	40	8.71	0.209
7581.4	1319	5.9	40	8.88	0.226
7582.9	1318.8	13.7	40	9.13	0.25

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

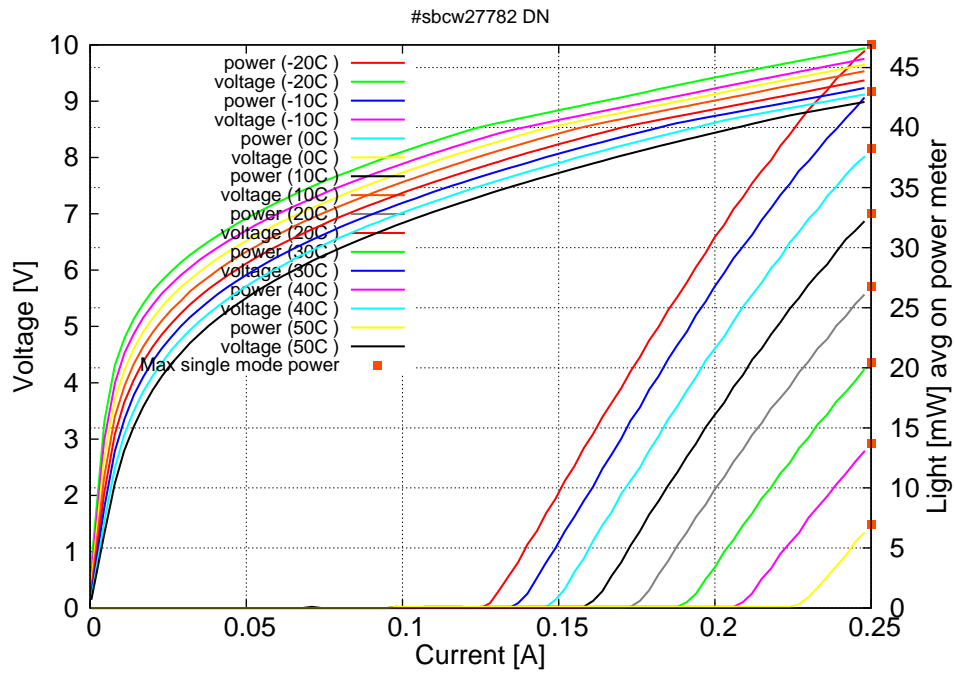


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.25A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

