

Datasheet for #sbcw27902 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.

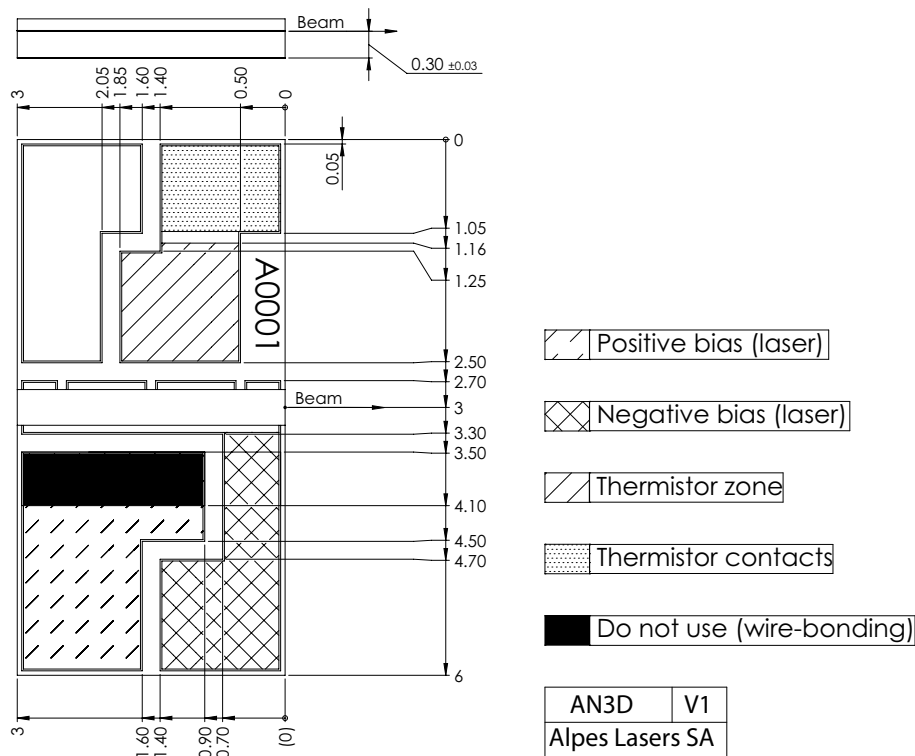


Figure 1: Mechanical and electrical interface for #sbcw27902 DN (please note that AlN submount numbering is P3681)

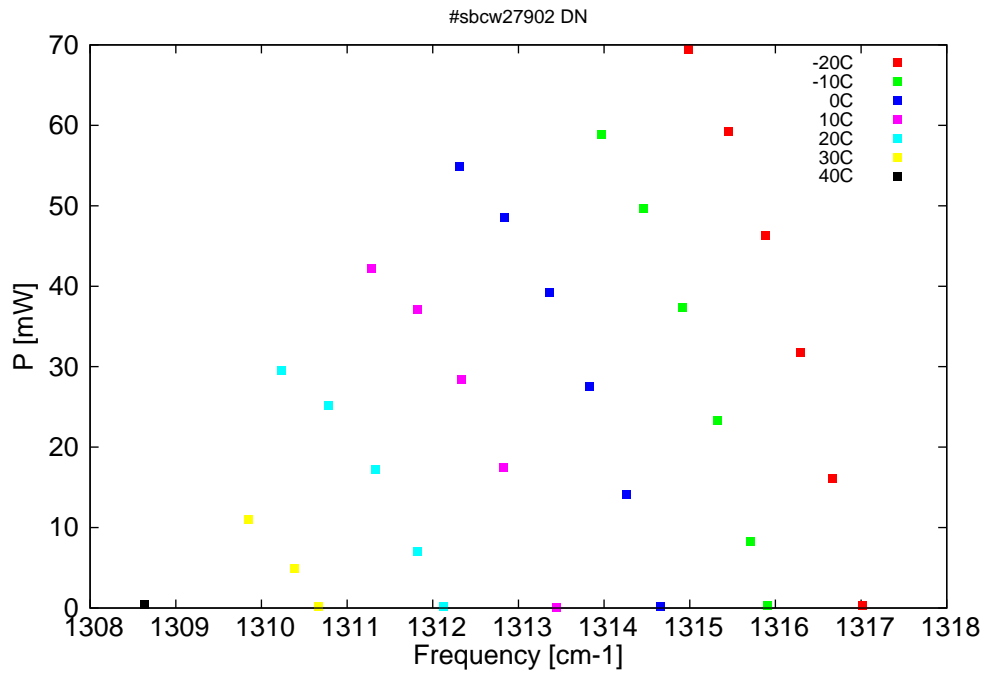


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

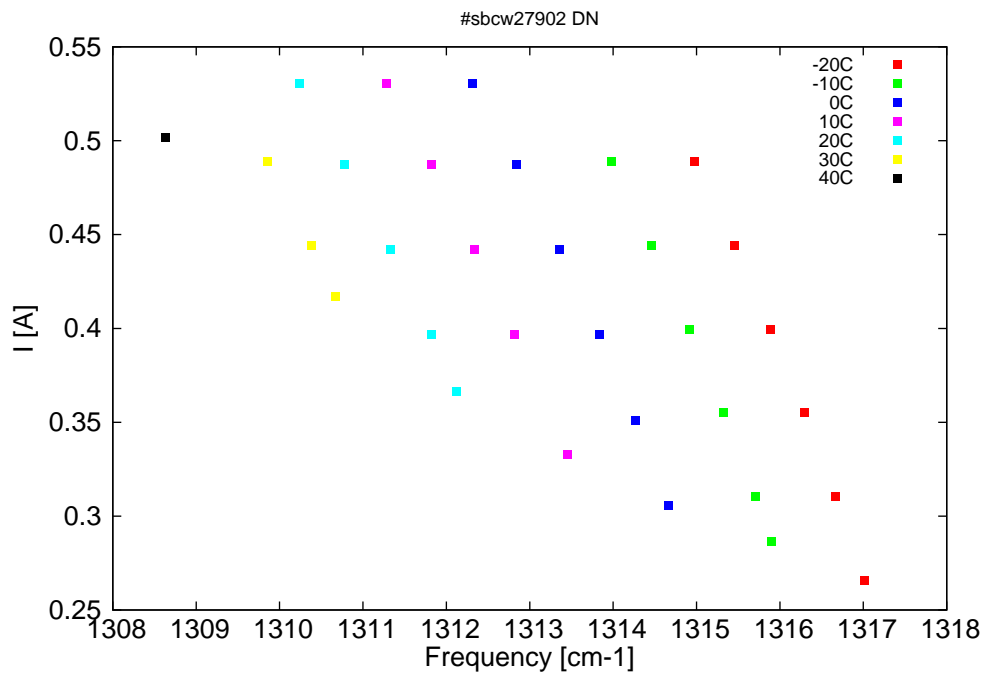


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7592.9	1317	0.3	-20	8.55	0.266
7595	1316.7	16.2	-20	8.81	0.31
7597.1	1316.3	31.7	-20	9.06	0.355
7599.4	1315.9	46.4	-20	9.31	0.4
7601.9	1315.5	59.2	-20	9.57	0.444
7604.7	1315	69.5	-20	9.84	0.489
7599.3	1315.9	0.3	-10	8.6	0.286
7600.5	1315.7	8.3	-10	8.74	0.31
7602.7	1315.3	23.3	-10	8.99	0.355
7605.1	1314.9	37.3	-10	9.25	0.4
7607.7	1314.5	49.6	-10	9.51	0.444
7610.5	1314	58.9	-10	9.78	0.489
7606.5	1314.7	0.2	0	8.74	0.306
7608.8	1314.3	14.1	0	9.02	0.351
7611.3	1313.8	27.6	0	9.3	0.397
7614.1	1313.4	39.2	0	9.58	0.442
7617.1	1312.8	48.6	0	9.86	0.488
7620.1	1312.3	54.9	0	10.13	0.53
7613.5	1313.4	0.1	10	8.83	0.333
7617.2	1312.8	17.5	10	9.22	0.397
7620	1312.3	28.4	10	9.5	0.442
7623	1311.8	37.1	10	9.78	0.488
7626.1	1311.3	42.2	10	10.05	0.53
7621.3	1312.1	0.2	20	8.96	0.366
7623	1311.8	7	20	9.15	0.397
7625.9	1311.3	17.3	20	9.43	0.442
7629	1310.8	25.1	20	9.71	0.488
7632.2	1310.2	29.5	20	9.98	0.53
7629.7	1310.7	0.2	30	9.12	0.417
7631.3	1310.4	4.9	30	9.29	0.444
7634.5	1309.9	11.1	30	9.56	0.489
7641.5	1308.6	0.4	40	9.59	0.502

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

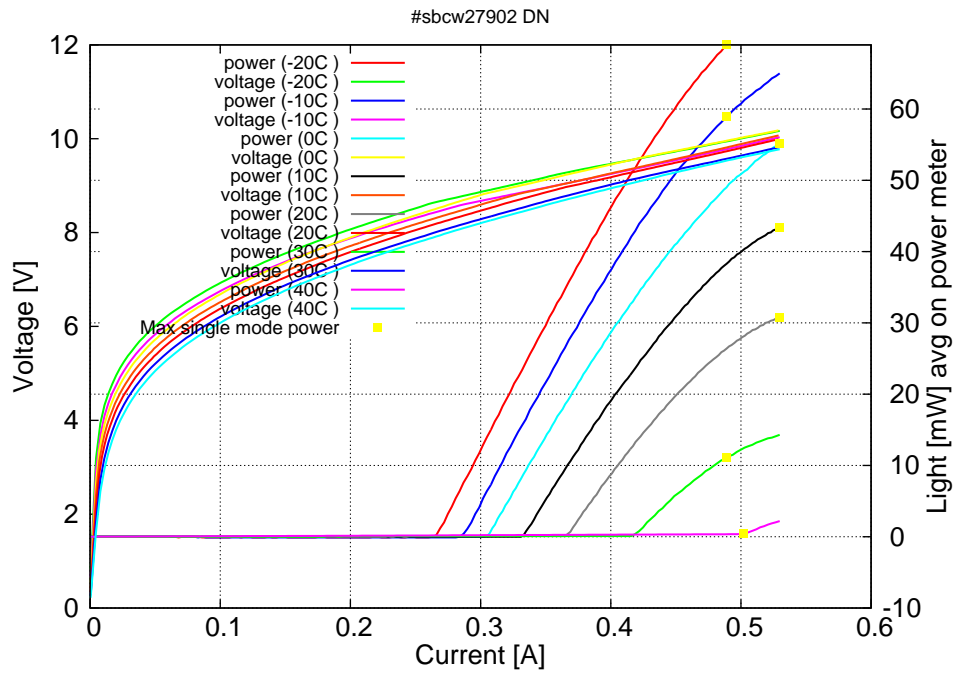


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.26A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.53A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

