

Datasheet for #sbcw27901 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.

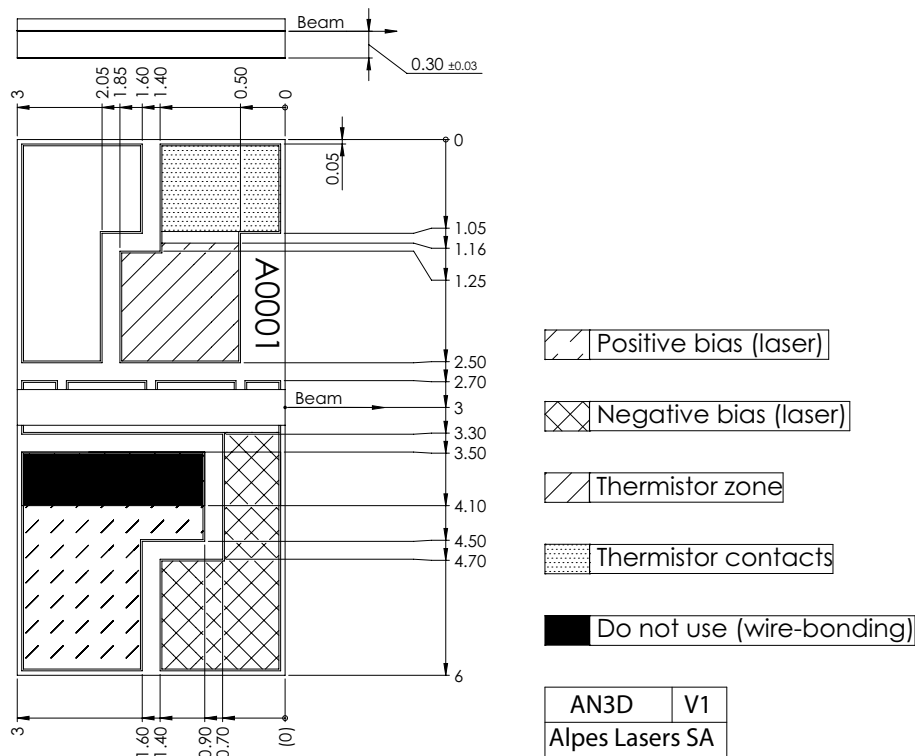


Figure 1: Mechanical and electrical interface for #sbcw27901 DN (please note that AlN submount numbering is P3649)

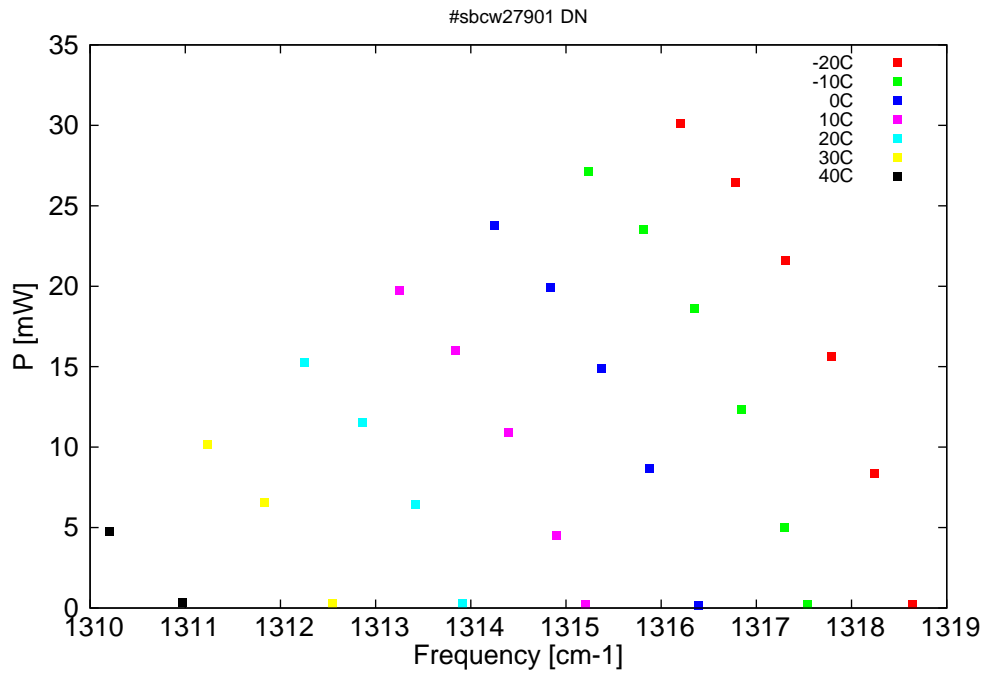


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

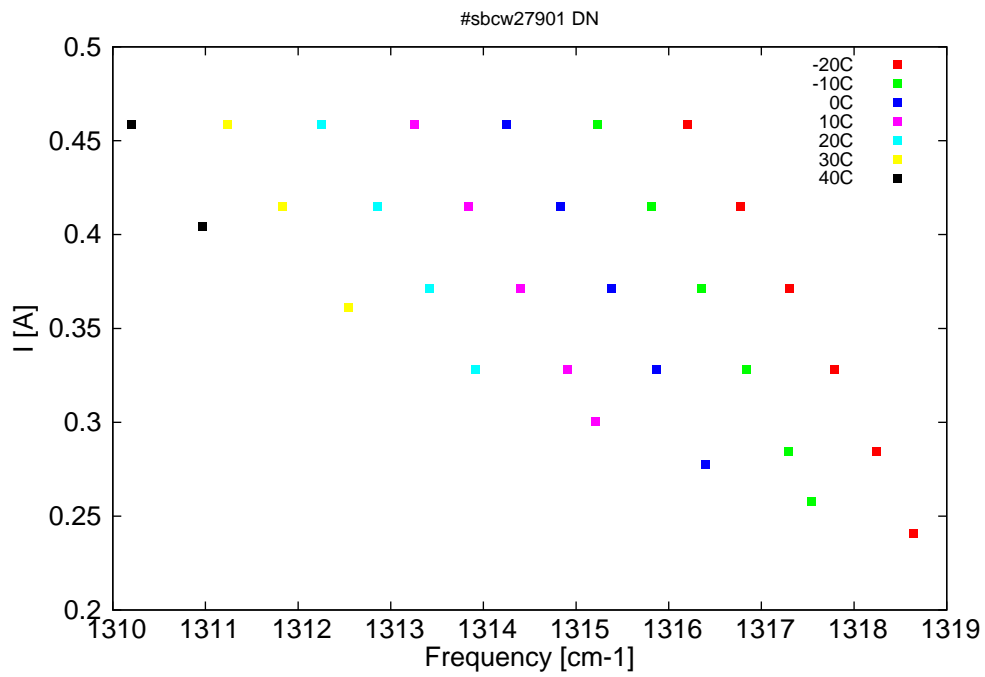


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7583.6	1318.6	0.2	-20	8.94	0.241
7585.9	1318.2	8.4	-20	9.26	0.284
7588.5	1317.8	15.6	-20	9.56	0.328
7591.2	1317.3	21.6	-20	9.87	0.371
7594.3	1316.8	26.5	-20	10.18	0.415
7597.6	1316.2	30.1	-20	10.5	0.458
7589.9	1317.5	0.2	-10	8.97	0.258
7591.3	1317.3	5	-10	9.16	0.284
7593.9	1316.8	12.4	-10	9.47	0.328
7596.8	1316.3	18.6	-10	9.77	0.371
7599.9	1315.8	23.5	-10	10.08	0.415
7603.2	1315.2	27.2	-10	10.39	0.458
7596.5	1316.4	0.1	0	9.03	0.278
7599.5	1315.9	8.7	0	9.38	0.328
7602.4	1315.4	14.9	0	9.69	0.371
7605.5	1314.8	19.9	0	10	0.415
7608.9	1314.2	23.7	0	10.31	0.458
7603.4	1315.2	0.2	10	9.11	0.3
7605.1	1314.9	4.5	10	9.31	0.328
7608.1	1314.4	10.9	10	9.61	0.371
7611.3	1313.8	16	10	9.92	0.415
7614.7	1313.3	19.7	10	10.22	0.458
7610.9	1313.9	0.3	20	9.23	0.328
7613.7	1313.4	6.4	20	9.53	0.371
7617	1312.9	11.5	20	9.83	0.415
7620.5	1312.3	15.3	20	10.14	0.459
7618.8	1312.5	0.3	30	9.38	0.361
7622.9	1311.8	6.6	30	9.75	0.415
7626.4	1311.2	10.2	30	10.05	0.458
7628	1311	0.3	40	9.58	0.405
7632.4	1310.2	4.8	40	9.95	0.458

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

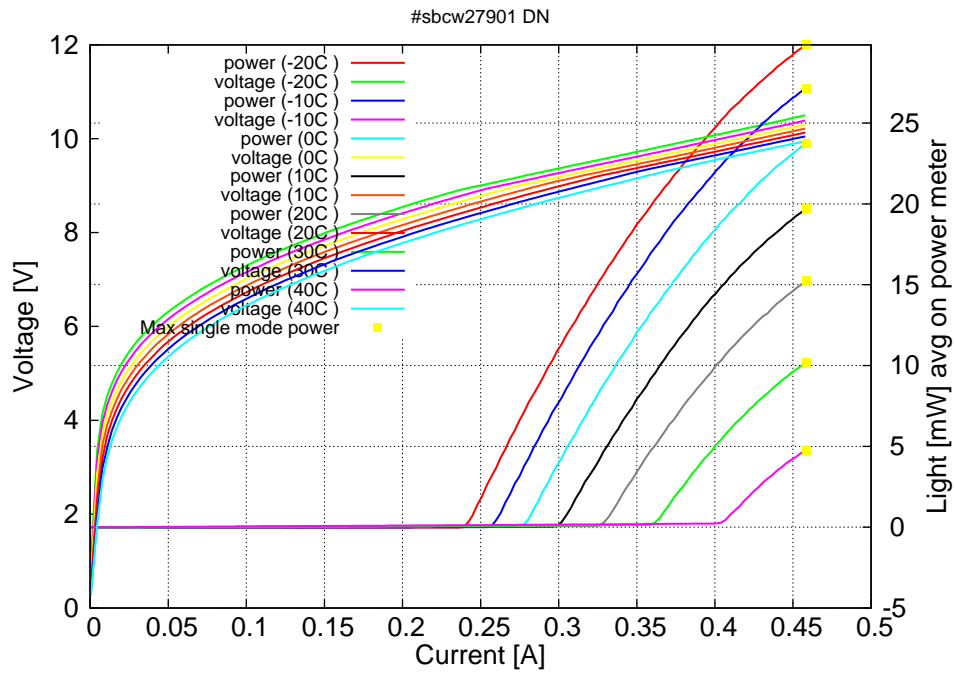


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.24A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.46A for all temperatures.

