

Datasheet for #sbcw27903 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.

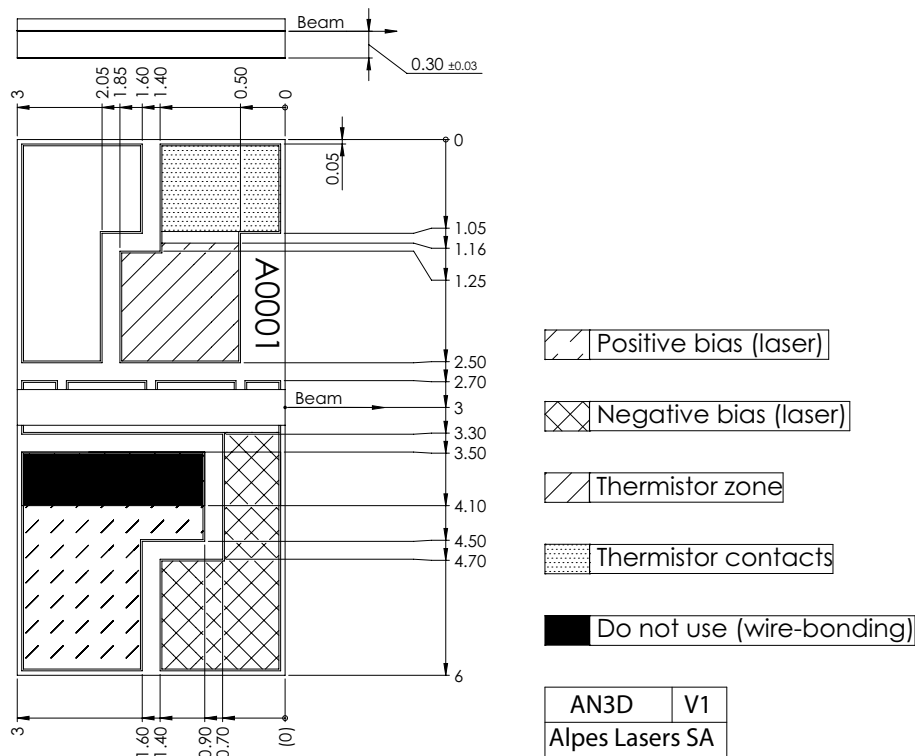


Figure 1: Mechanical and electrical interface for #sbcw27903 DN (please note that AlN submount numbering is P2777)

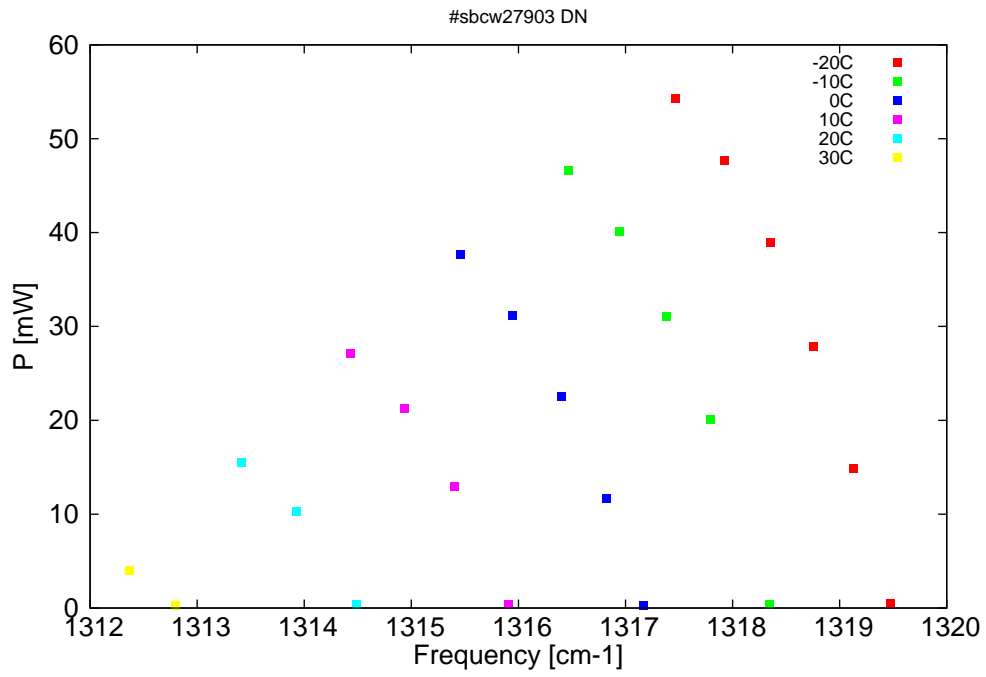


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

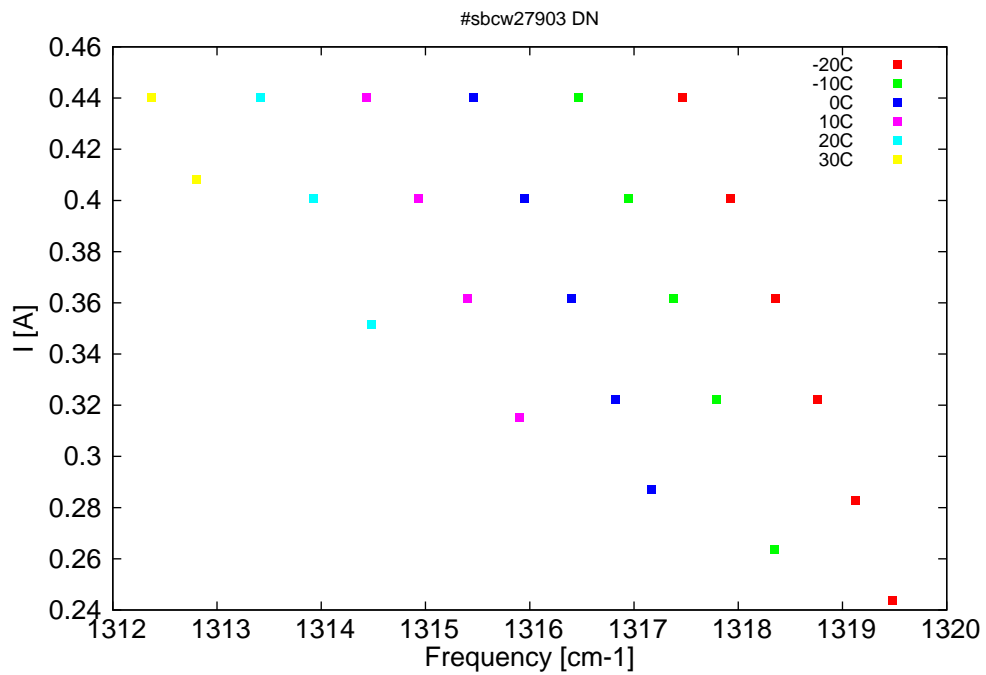


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7578.8	1319.5	0.5	-20	9.03	0.244
7580.8	1319.1	14.9	-20	9.33	0.283
7582.9	1318.8	27.8	-20	9.62	0.322
7585.2	1318.4	38.9	-20	9.91	0.362
7587.7	1317.9	47.7	-20	10.2	0.401
7590.3	1317.5	54.3	-20	10.5	0.44
7585.3	1318.3	0.3	-10	9.1	0.264
7588.5	1317.8	20.1	-10	9.53	0.322
7590.8	1317.4	31.1	-10	9.82	0.362
7593.3	1316.9	40.1	-10	10.12	0.401
7596.1	1316.5	46.7	-10	10.42	0.44
7592.1	1317.2	0.3	0	9.2	0.287
7594	1316.8	11.7	0	9.46	0.322
7596.5	1316.4	22.6	0	9.76	0.362
7599.1	1315.9	31.2	0	10.05	0.401
7601.9	1315.5	37.6	0	10.35	0.44
7599.3	1315.9	0.4	10	9.34	0.315
7602.3	1315.4	12.9	10	9.68	0.362
7604.9	1314.9	21.3	10	9.98	0.401
7607.8	1314.4	27.1	10	10.28	0.44
7607.5	1314.5	0.4	20	9.54	0.351
7610.8	1313.9	10.3	20	9.92	0.401
7613.7	1313.4	15.5	20	10.22	0.44
7617.3	1312.8	0.3	30	9.92	0.408
7619.8	1312.4	4	30	10.16	0.44

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

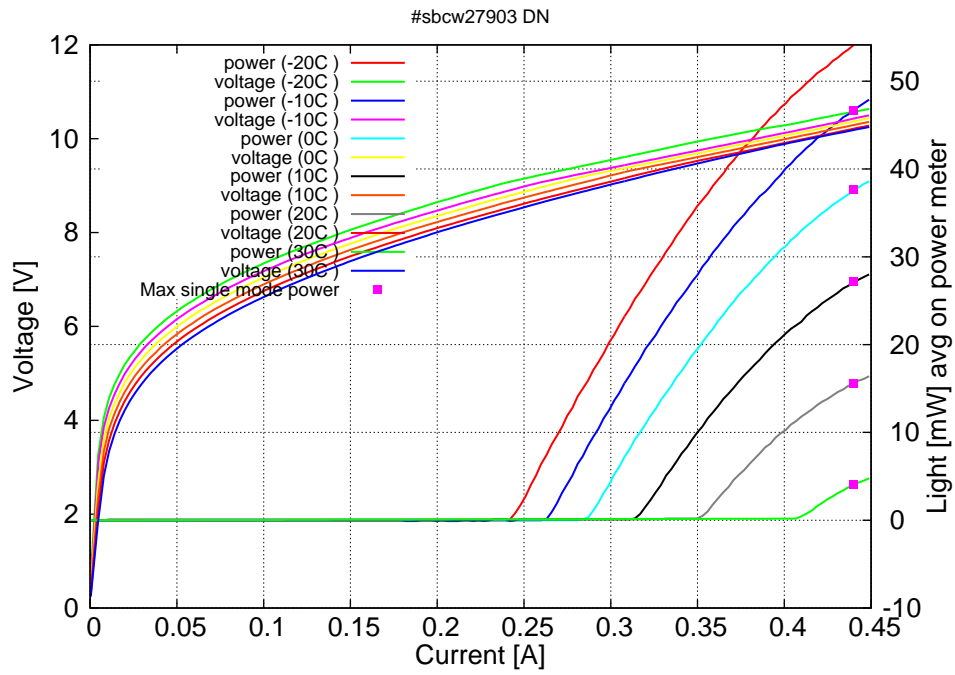


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.24A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.45A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

