

Datasheet for #sbcw27077 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.

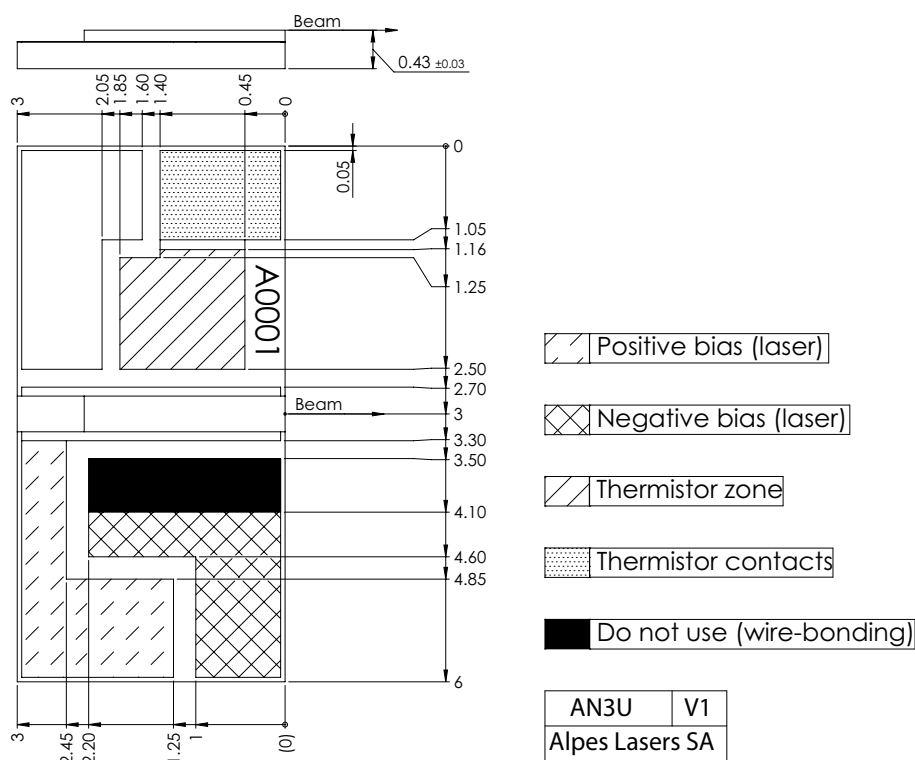


Figure 1: Mechanical and electrical interface for #sbcw27077 DN (please note that AlN submount numbering is A0YLK)

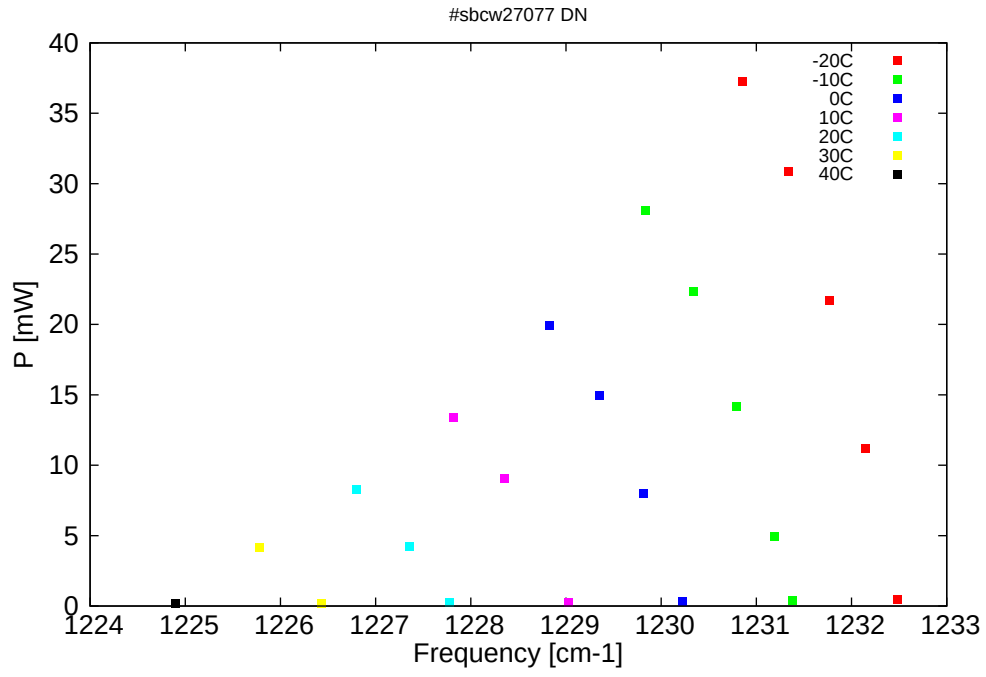


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

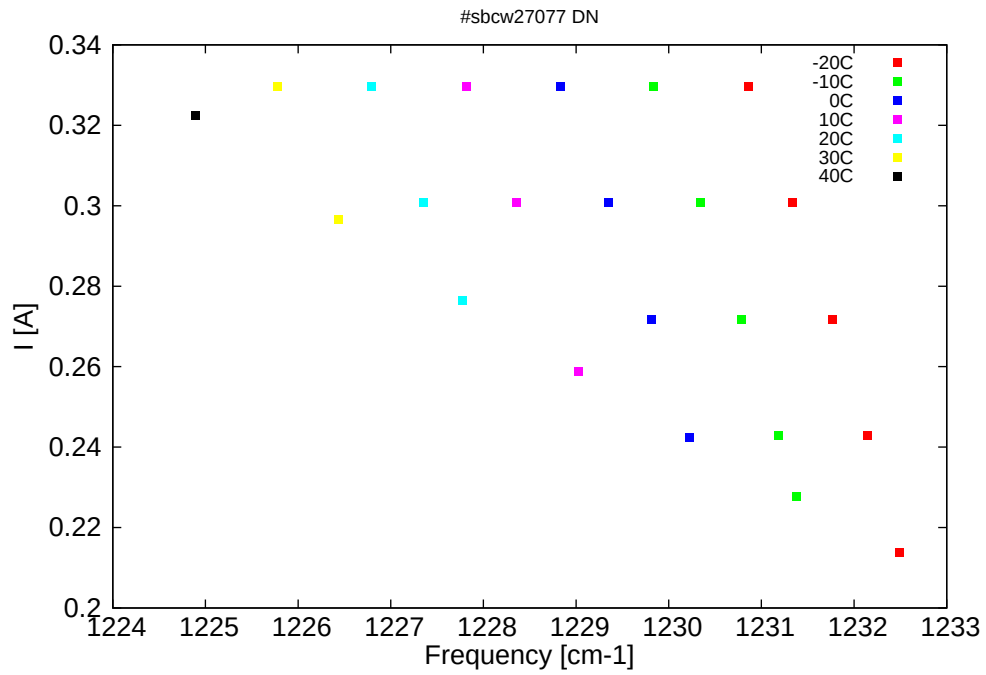


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8113.7	1232.5	0.5	-20	7.02	0.214
8115.9	1232.1	11.2	-20	7.36	0.243
8118.4	1231.8	21.7	-20	7.68	0.272
8121.2	1231.3	30.9	-20	8.03	0.301
8124.4	1230.9	37.3	-20	8.4	0.33
8121	1231.4	0.4	-10	7.13	0.228
8122.2	1231.2	5	-10	7.3	0.243
8124.9	1230.8	14.2	-10	7.65	0.272
8127.8	1230.3	22.3	-10	8	0.301
8131.1	1229.8	28.1	-10	8.38	0.33
8128.6	1230.2	0.3	0	7.26	0.242
8131.3	1229.8	8	0	7.62	0.272
8134.4	1229.3	15	0	7.98	0.301
8137.8	1228.8	19.9	0	8.36	0.33
8136.5	1229	0.3	10	7.44	0.259
8141	1228.4	9	10	7.96	0.301
8144.6	1227.8	13.4	10	8.35	0.33
8144.8	1227.8	0.3	20	7.63	0.276
8147.6	1227.4	4.2	20	7.94	0.301
8151.3	1226.8	8.3	20	8.34	0.33
8153.7	1226.4	0.2	30	7.86	0.297
8158.1	1225.8	4.1	30	8.31	0.33
8164	1224.9	0.2	40	8.18	0.323

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

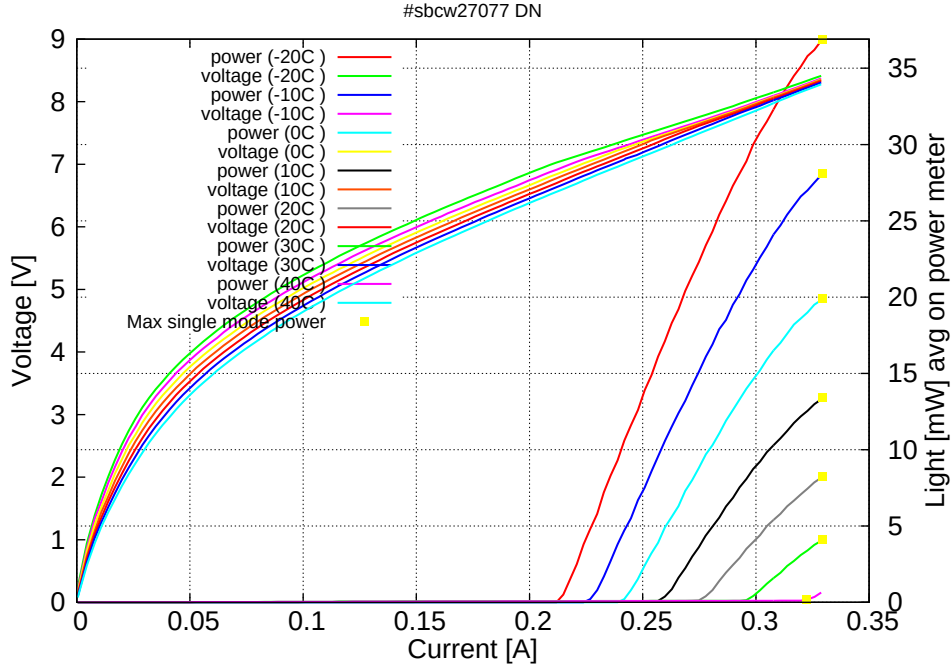


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=7.0V$ (2-wires measurements). Maximum operation current: 0.33A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

