

Datasheet for #sbcw27102 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.

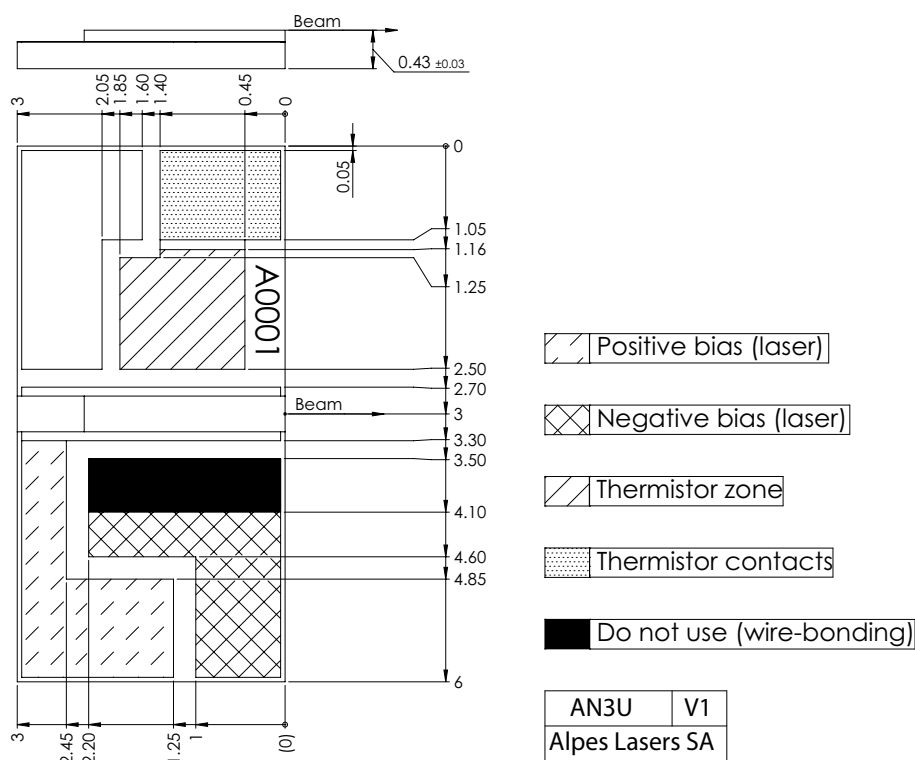


Figure 1: Mechanical and electrical interface for #sbcw27102 DN (please note that AlN submount numbering is A0X3G)

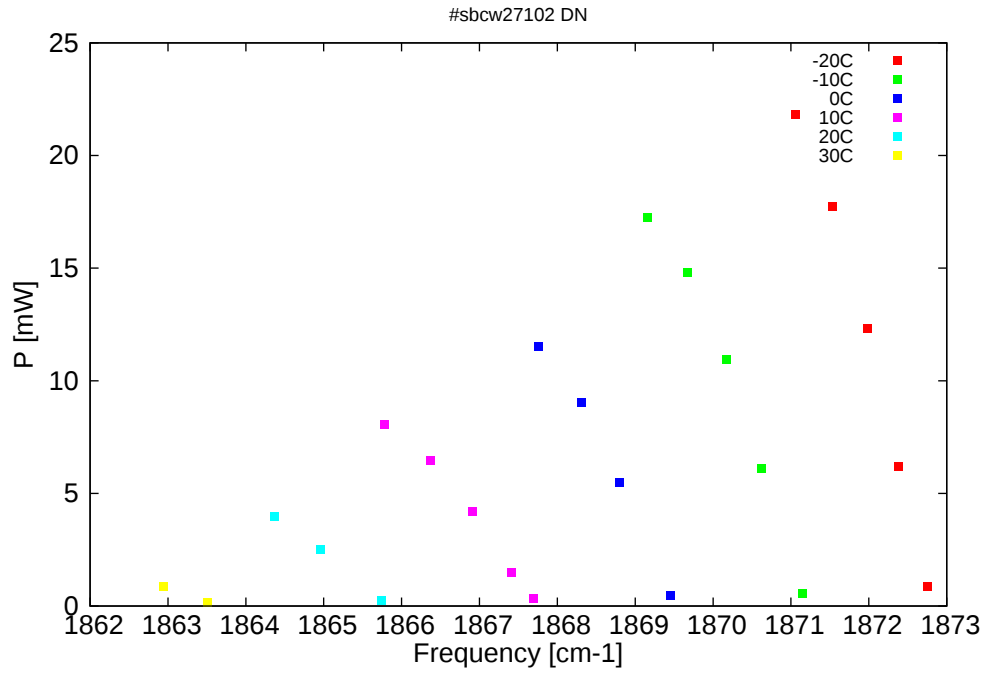


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

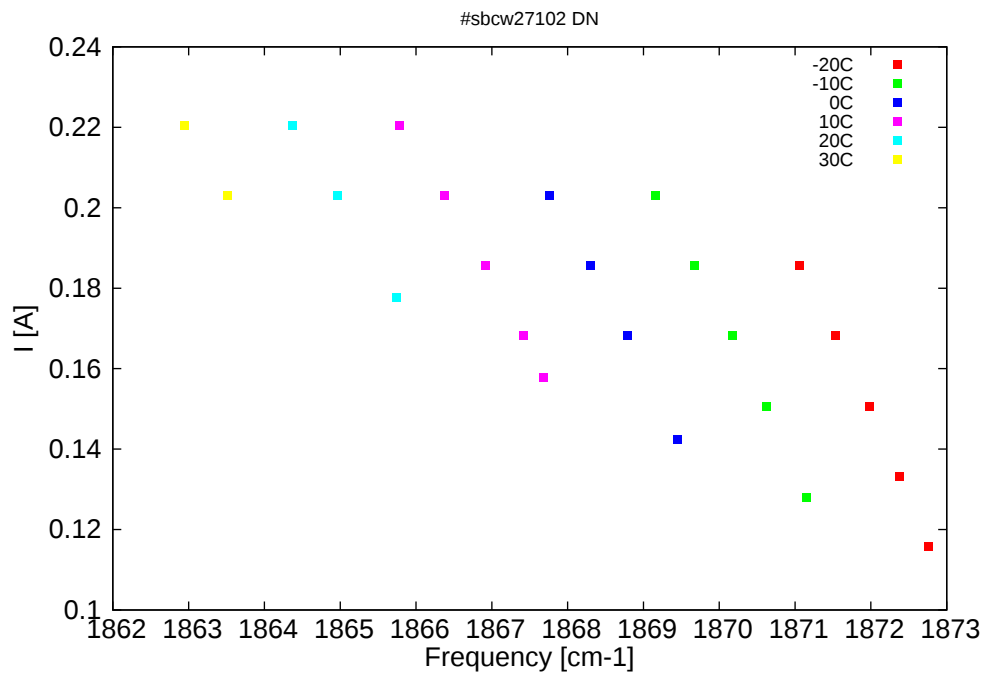


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5339.7	1872.8	0.9	-20	9.31	0.116
5340.8	1872.4	6.2	-20	9.61	0.133
5341.9	1872	12.3	-20	9.92	0.151
5343.2	1871.5	17.7	-20	10.23	0.168
5344.6	1871.1	21.8	-20	10.56	0.186
5344.3	1871.2	0.6	-10	9.42	0.128
5345.8	1870.6	6.1	-10	9.8	0.151
5347.1	1870.2	11	-10	10.11	0.168
5348.5	1869.7	14.8	-10	10.43	0.186
5350	1869.2	17.3	-10	10.75	0.203
5349.2	1869.5	0.5	0	9.58	0.142
5351	1868.8	5.5	0	10.02	0.168
5352.4	1868.3	9	0	10.32	0.186
5354	1867.8	11.5	0	10.64	0.203
5354.2	1867.7	0.3	10	9.75	0.158
5355	1867.4	1.5	10	9.91	0.168
5356.4	1866.9	4.2	10	10.21	0.186
5358	1866.4	6.5	10	10.52	0.203
5359.7	1865.8	8.1	10	10.83	0.221
5359.8	1865.7	0.3	20	10.03	0.178
5362	1865	2.5	20	10.45	0.203
5363.7	1864.4	4	20	10.75	0.221
5366.2	1863.5	0.1	30	10.4	0.203
5367.8	1862.9	0.9	30	10.68	0.221

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

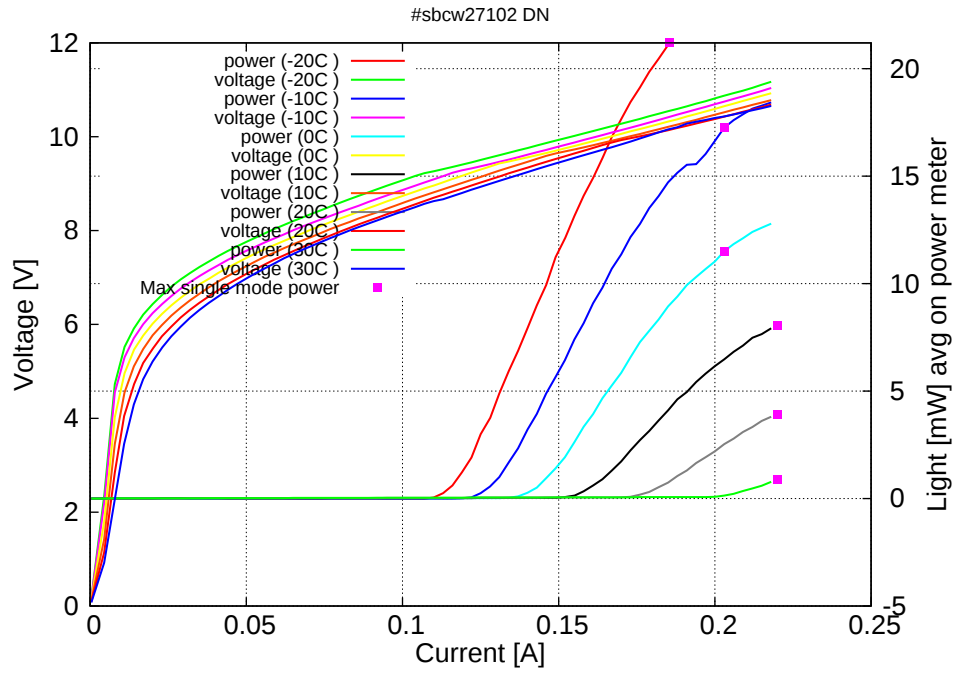


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=9.4V$ (2-wires measurements). Maximum operation current: 0.185A at -20C, 0.205A between -10C and 0C, 0.22A between 10C and 30C.

Figure 3: spectra at different temperatures for various DC currents

