

Datasheet for #sbcw27108 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.

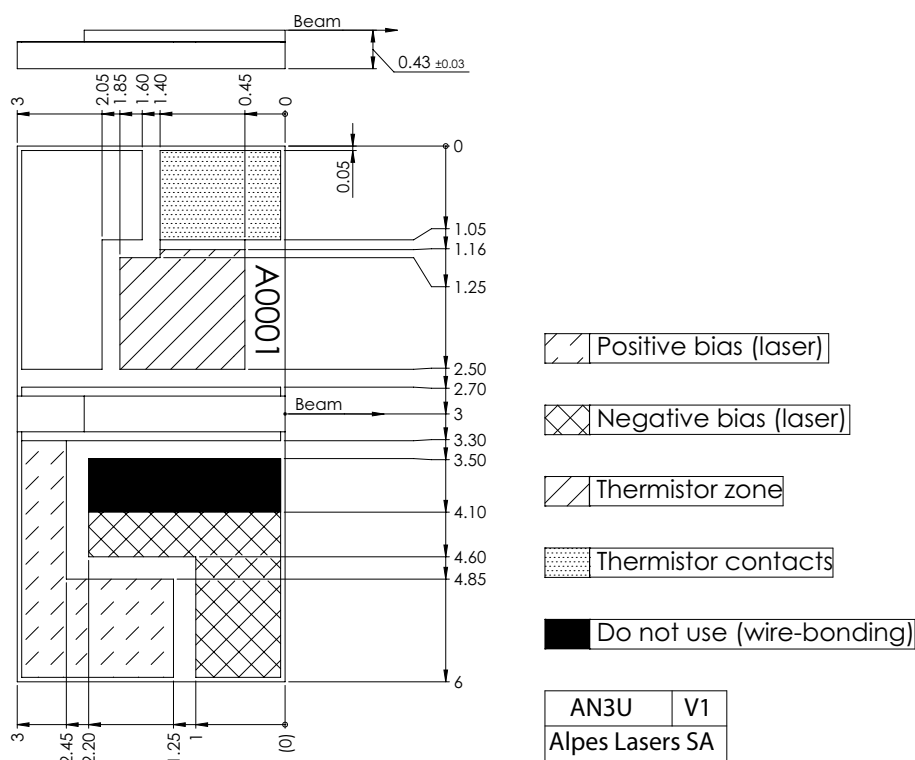


Figure 1: Mechanical and electrical interface for #sbcw27108 DN (please note that AlN submount numbering is A0WN7)

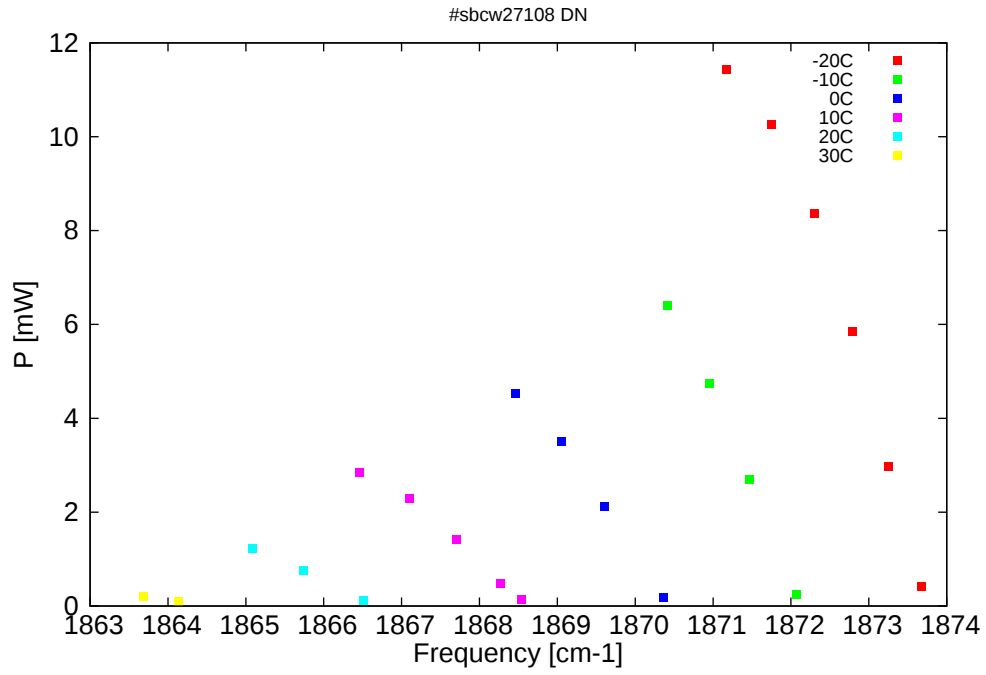


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

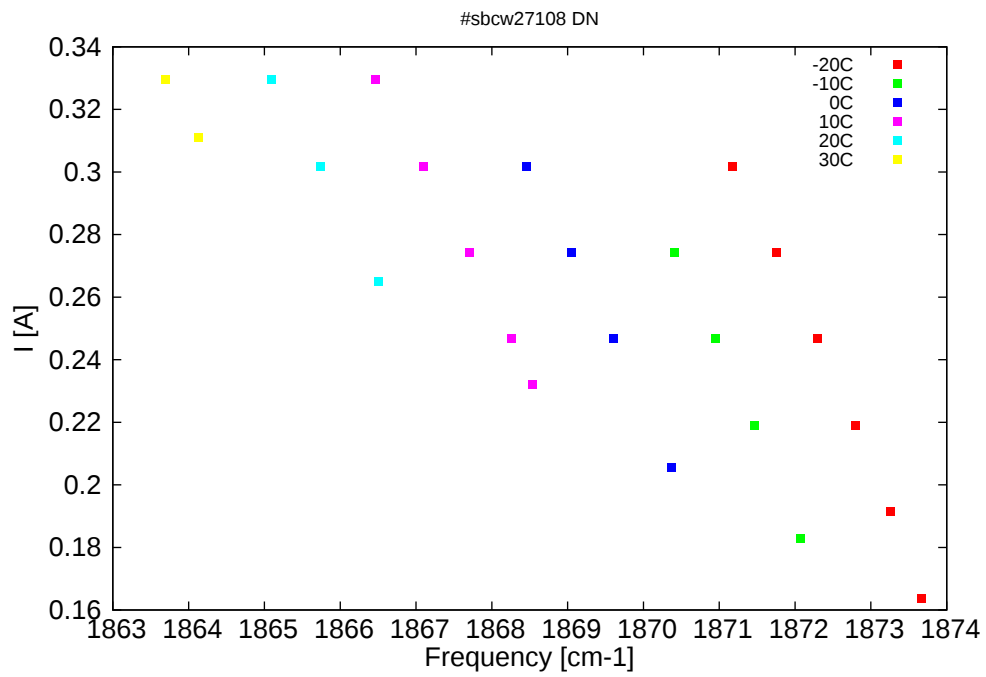


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5337.1	1873.7	0.4	-20	9.57	0.164
5338.3	1873.3	3	-20	9.89	0.191
5339.6	1872.8	5.9	-20	10.21	0.219
5341	1872.3	8.4	-20	10.54	0.247
5342.6	1871.8	10.3	-20	10.85	0.274
5344.2	1871.2	11.4	-20	11.18	0.302
5341.7	1872.1	0.2	-10	9.73	0.183
5343.4	1871.5	2.7	-10	10.14	0.219
5344.9	1871	4.7	-10	10.46	0.247
5346.4	1870.4	6.4	-10	10.78	0.274
5346.5	1870.4	0.2	0	9.92	0.206
5348.7	1869.6	2.1	0	10.38	0.247
5350.3	1869.1	3.5	0	10.69	0.274
5352	1868.5	4.5	0	11	0.302
5351.8	1868.5	0.1	10	10.15	0.232
5352.6	1868.3	0.5	10	10.3	0.247
5354.2	1867.7	1.4	10	10.61	0.274
5355.9	1867.1	2.3	10	10.92	0.302
5357.7	1866.5	2.9	10	11.23	0.33
5357.6	1866.5	0.1	20	10.46	0.265
5359.8	1865.7	0.8	20	10.84	0.302
5361.7	1865.1	1.2	20	11.15	0.33
5364.4	1864.1	0.1	30	10.86	0.311
5365.7	1863.7	0.2	30	11.05	0.33

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

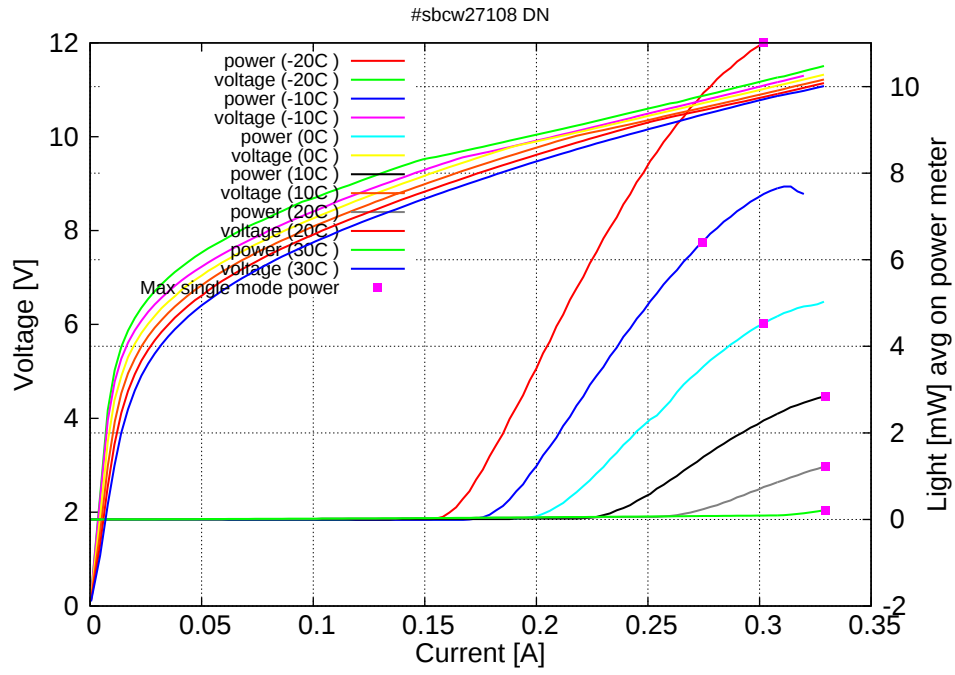


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=9.6V$ (2-wires measurements). Maximum operation current: 0.30A between -20C and 0C, 0.33A between 10C and 30C.

Figure 3: spectra at different temperatures for various DC currents

