

Datasheet for #sbcw27101 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.

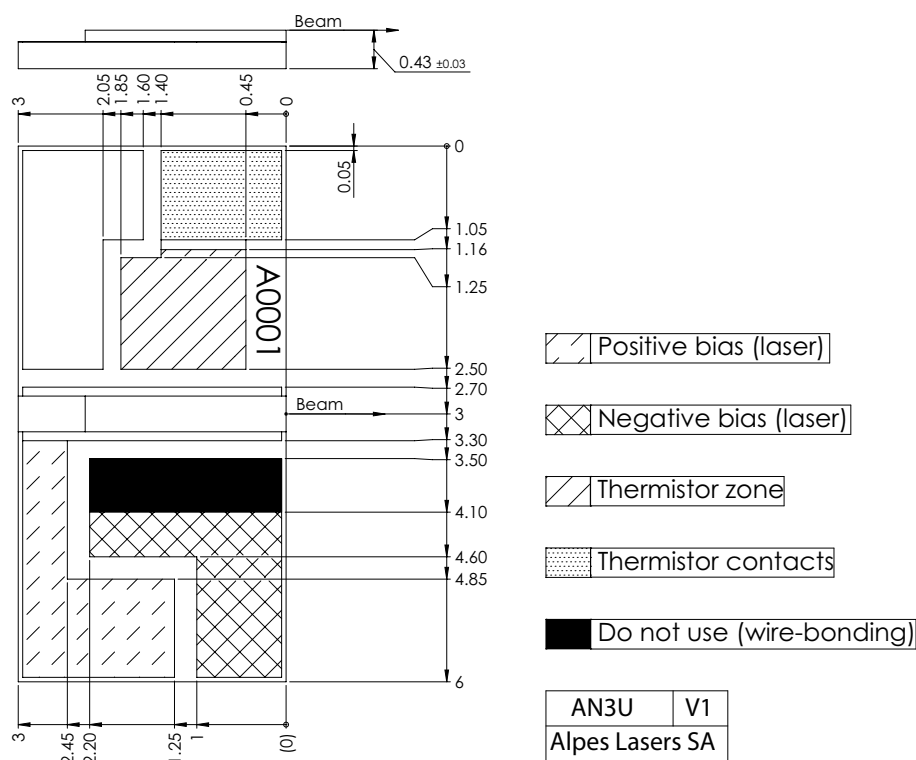


Figure 1: Mechanical and electrical interface for #sbcw27101 DN (please note that AlN submount numbering is A0UE6)

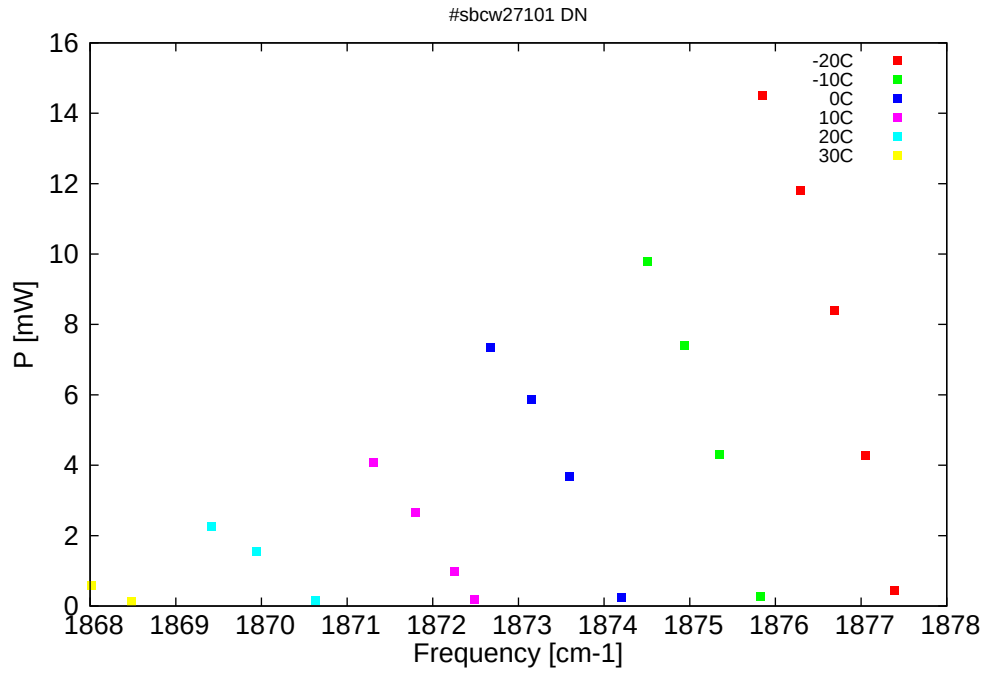


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

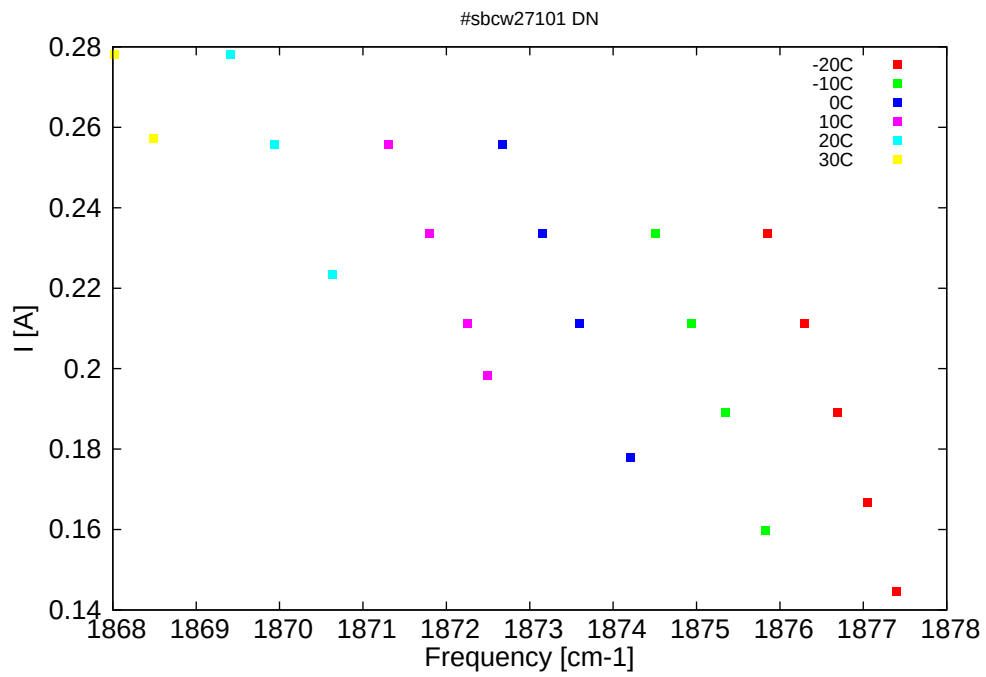


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5326.5	1877.4	0.4	-20	9.51	0.145
5327.5	1877.1	4.3	-20	9.81	0.167
5328.5	1876.7	8.4	-20	10.1	0.189
5329.7	1876.3	11.8	-20	10.4	0.211
5330.9	1875.9	14.5	-20	10.7	0.234
5331	1875.8	0.3	-10	9.64	0.16
5332.3	1875.4	4.3	-10	10.01	0.189
5333.5	1874.9	7.4	-10	10.31	0.211
5334.7	1874.5	9.8	-10	10.61	0.234
5335.6	1874.2	0.2	0	9.81	0.178
5337.3	1873.6	3.7	0	10.24	0.211
5338.6	1873.1	5.9	0	10.54	0.234
5340	1872.7	7.3	0	10.84	0.256
5340.5	1872.5	0.2	10	10.02	0.198
5341.2	1872.2	1	10	10.18	0.211
5342.5	1871.8	2.7	10	10.48	0.234
5343.9	1871.3	4.1	10	10.77	0.256
5345.8	1870.6	0.1	20	10.29	0.223
5347.8	1869.9	1.6	20	10.7	0.256
5349.3	1869.4	2.3	20	10.98	0.278
5351.9	1868.5	0.1	30	10.64	0.257
5353.3	1868	0.6	30	10.9	0.278

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

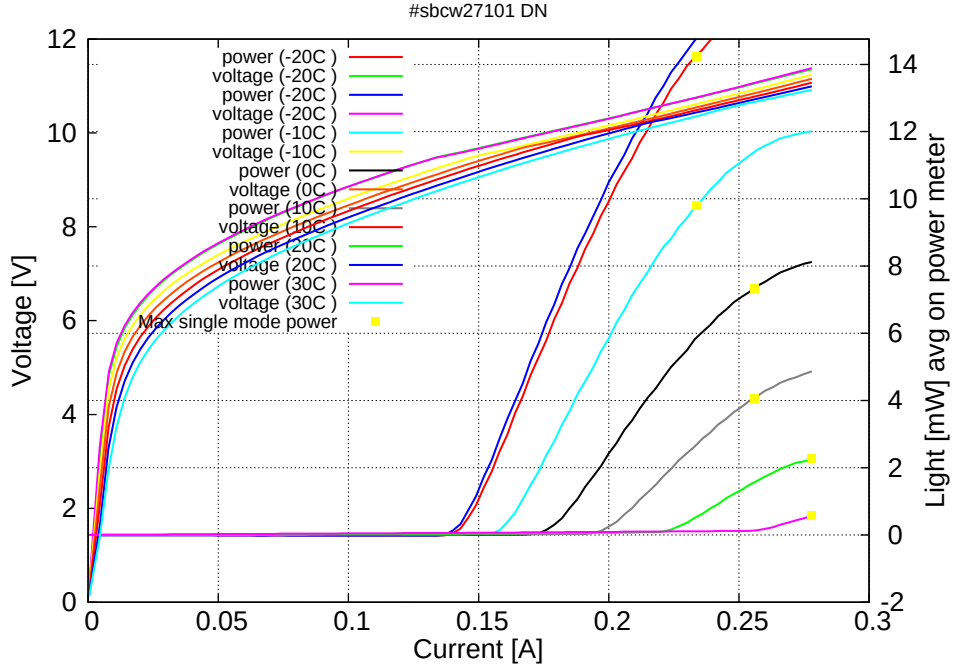


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=9.5V$ (2-wires measurements). Maximum operation current: 0.235A between -20C and -10C, 0.255A between 0C and 10C, 0.28A between 20C and 30C.

Figure 3: spectra at different temperatures for various DC currents

