

**Datasheet for #sbcw27921 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.

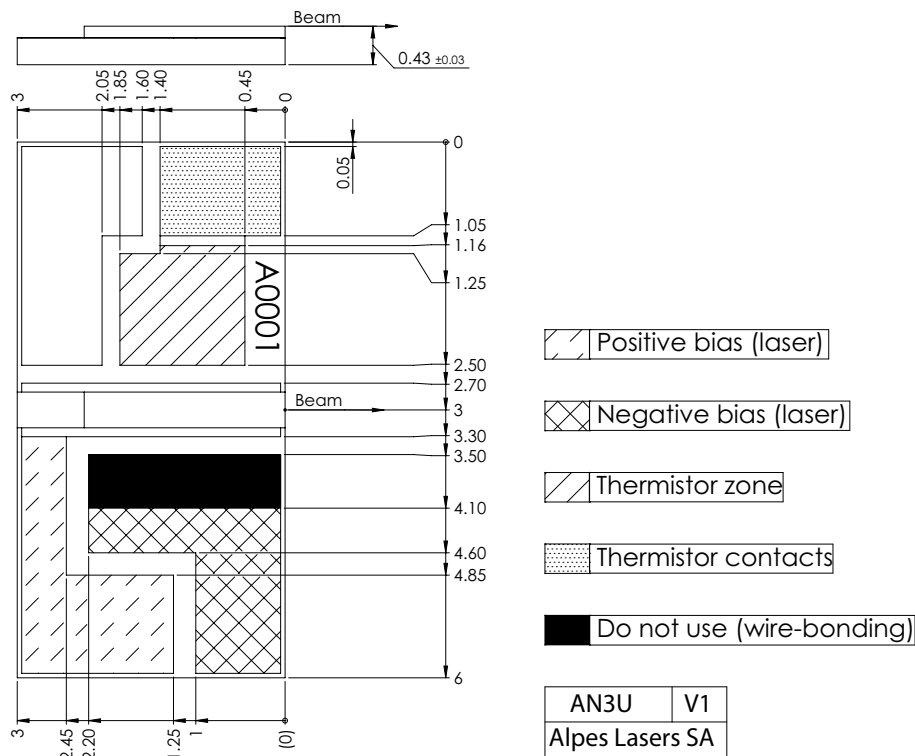


Figure 1: Mechanical and electrical interface for #sbcw27921 DN (please note that AlN submount numbering is A0UN5)

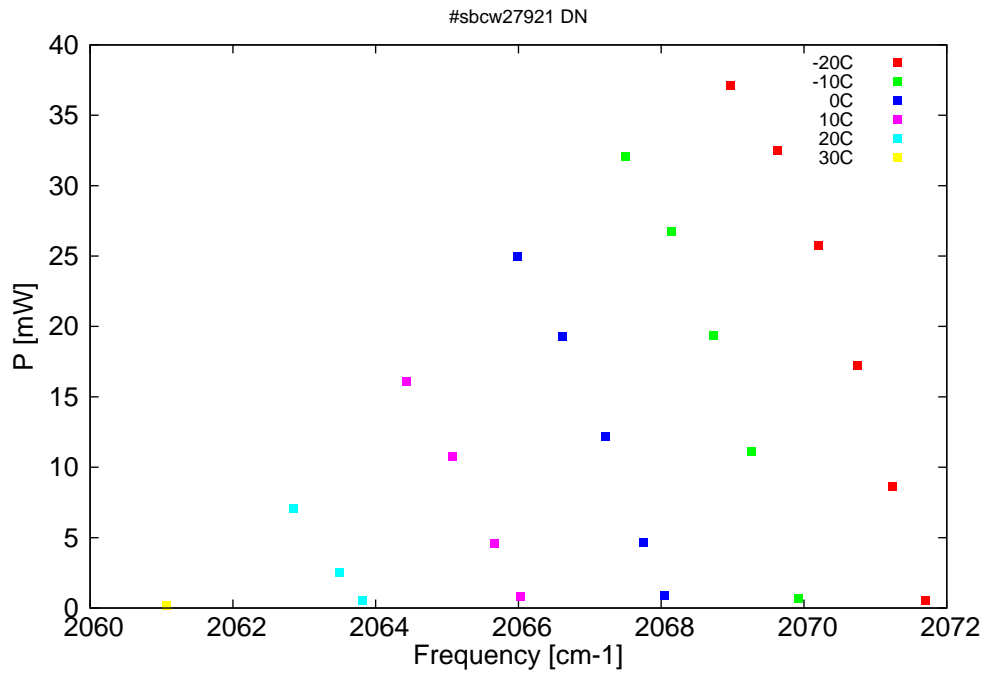


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

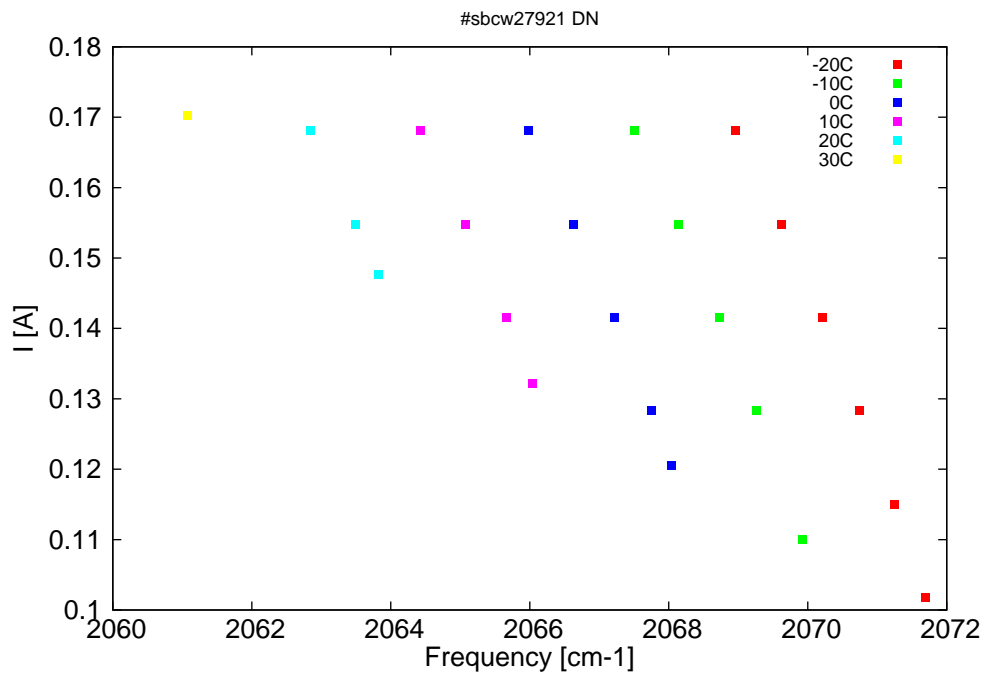


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4827	2071.7	0.5	-20	13.14	0.102
4828	2071.2	8.6	-20	13.47	0.115
4829.2	2070.7	17.2	-20	13.83	0.128
4830.4	2070.2	25.7	-20	14.21	0.142
4831.8	2069.6	32.5	-20	14.62	0.155
4833.3	2069	37.1	-20	15.11	0.168
4831.1	2069.9	0.7	-10	13.17	0.11
4832.6	2069.3	11.1	-10	13.62	0.128
4833.9	2068.7	19.3	-10	13.98	0.142
4835.2	2068.1	26.7	-10	14.36	0.155
4836.8	2067.5	32.1	-10	14.8	0.168
4835.5	2068	0.9	0	13.27	0.121
4836.2	2067.8	4.6	0	13.45	0.128
4837.4	2067.2	12.2	0	13.78	0.142
4838.8	2066.6	19.3	0	14.15	0.155
4840.3	2066	25	0	14.54	0.168
4840.2	2066	0.8	10	13.41	0.132
4841	2065.7	4.6	10	13.63	0.142
4842.4	2065.1	10.8	10	13.96	0.155
4843.9	2064.4	16.1	10	14.34	0.168
4845.4	2063.8	0.6	20	13.66	0.148
4846.1	2063.5	2.5	20	13.82	0.155
4847.7	2062.9	7	20	14.17	0.168
4851.8	2061.1	0.2	30	14.12	0.17

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

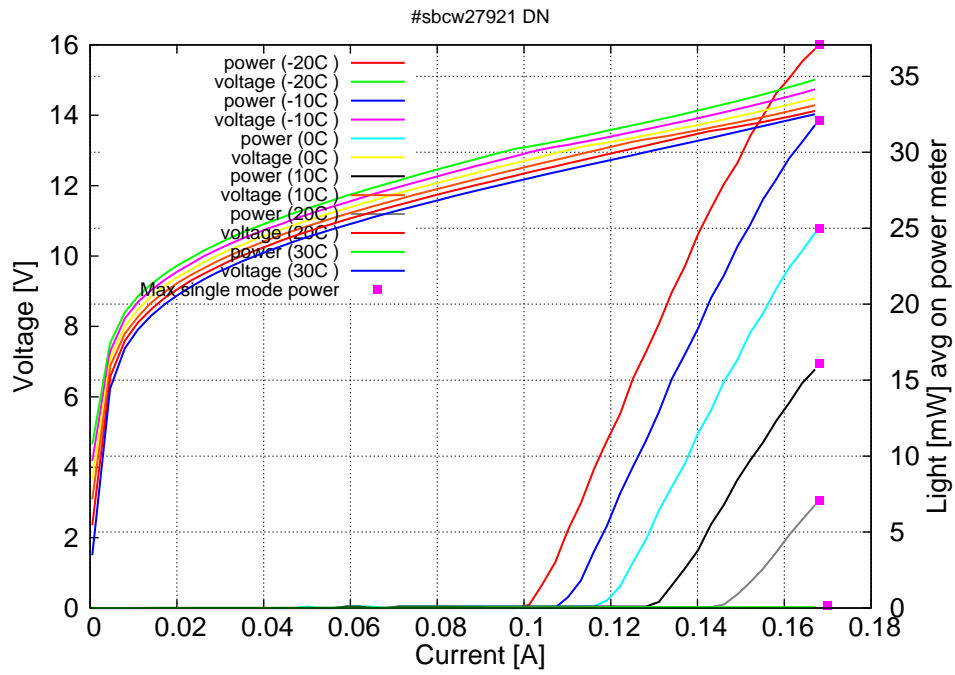


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.10A$  /  $V_{th}=13.1V$  (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

