

**Datasheet for #sbcw27911 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.

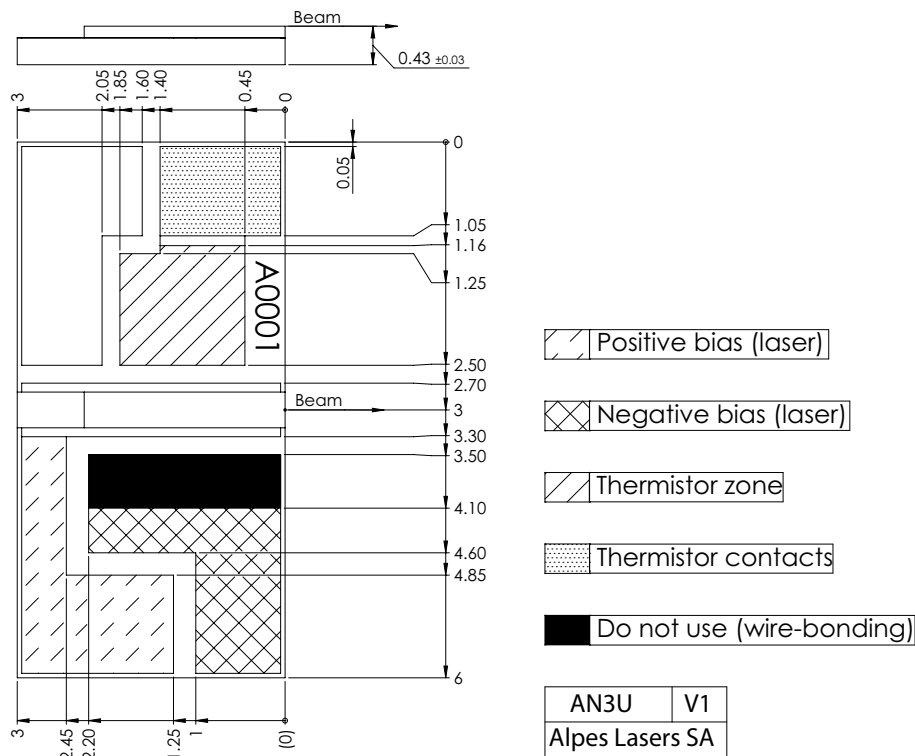


Figure 1: Mechanical and electrical interface for #sbcw27911 DN (please note that AlN submount numbering is A0VRP)

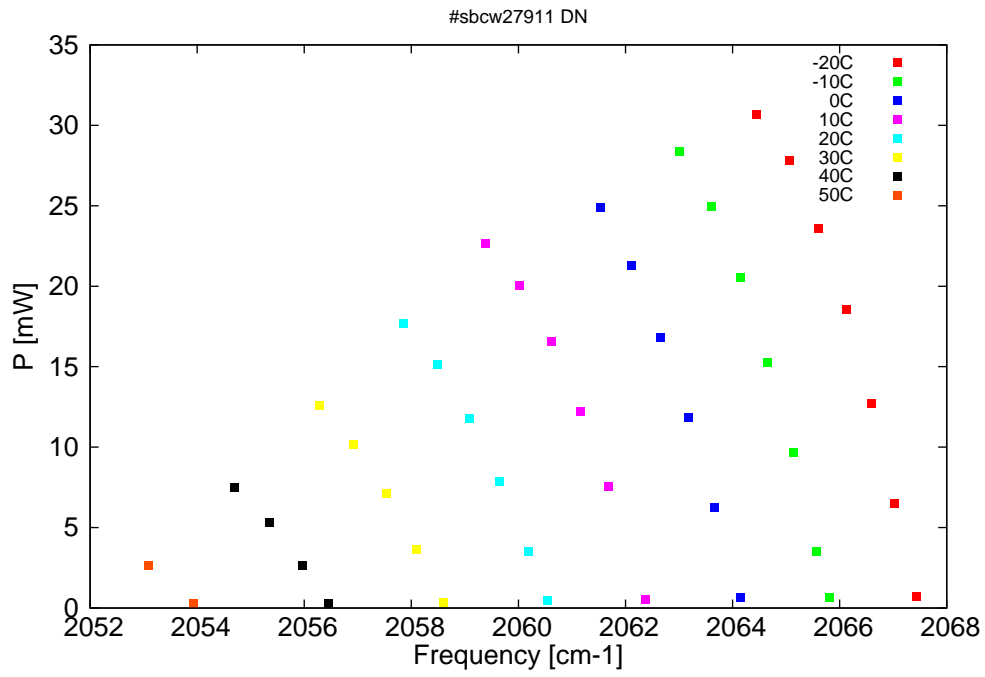


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

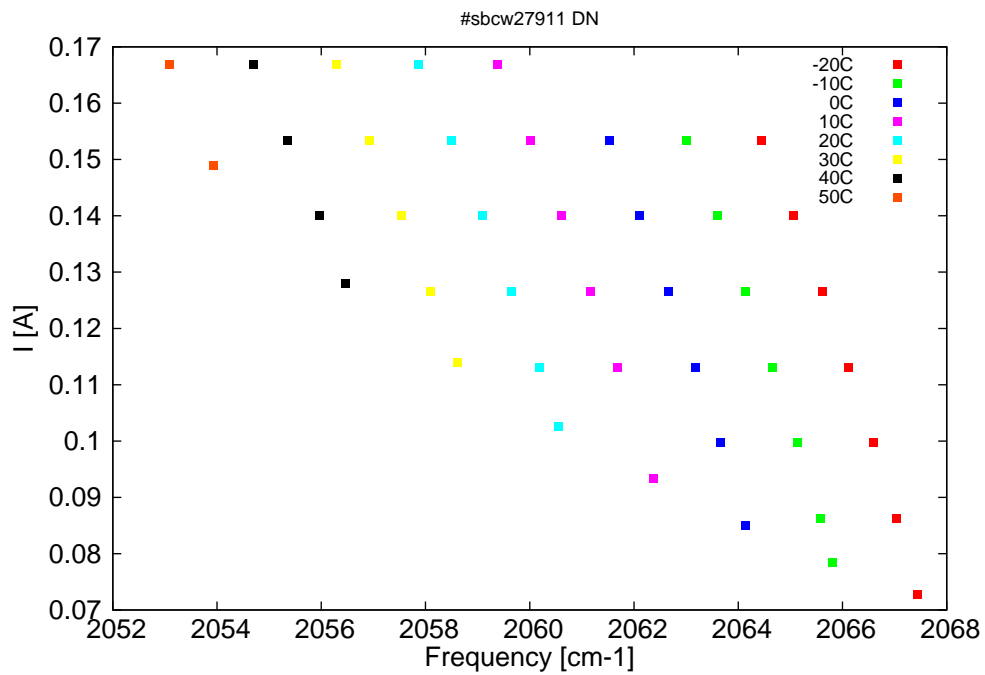


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4836.9	2067.4	0.7	-20	11.95	0.073
4837.9	2067	6.5	-20	12.33	0.086
4838.9	2066.6	12.7	-20	12.7	0.1
4840	2066.1	18.5	-20	13.08	0.113
4841.2	2065.6	23.6	-20	13.46	0.127
4842.5	2065.1	27.8	-20	13.87	0.14
4843.9	2064.5	30.7	-20	14.32	0.153
4840.7	2065.8	0.7	-10	11.95	0.078
4841.3	2065.6	3.5	-10	12.15	0.086
4842.3	2065.1	9.7	-10	12.51	0.1
4843.4	2064.7	15.3	-10	12.87	0.113
4844.6	2064.1	20.6	-10	13.23	0.127
4845.9	2063.6	24.9	-10	13.62	0.14
4847.3	2063	28.4	-10	14.02	0.153
4844.6	2064.1	0.6	0	11.98	0.085
4845.8	2063.7	6.3	0	12.35	0.1
4846.9	2063.2	11.9	0	12.69	0.113
4848.1	2062.7	16.8	0	13.04	0.127
4849.4	2062.1	21.3	0	13.39	0.14
4850.8	2061.5	24.9	0	13.77	0.153
4848.8	2062.4	0.5	10	12.06	0.093
4850.4	2061.7	7.6	10	12.54	0.113
4851.6	2061.2	12.2	10	12.87	0.127
4852.9	2060.6	16.6	10	13.21	0.14
4854.3	2060	20.1	10	13.57	0.153
4855.8	2059.4	22.7	10	13.94	0.167
4853.1	2060.5	0.5	20	12.17	0.103
4853.9	2060.2	3.5	20	12.41	0.113
4855.2	2059.7	7.9	20	12.73	0.127
4856.5	2059.1	11.8	20	13.05	0.14
4857.9	2058.5	15.1	20	13.39	0.153
4859.4	2057.9	17.7	20	13.74	0.167
4857.7	2058.6	0.4	30	12.33	0.114
4858.8	2058.1	3.6	30	12.6	0.127
4860.2	2057.5	7.1	30	12.92	0.14
4861.6	2056.9	10.2	30	13.23	0.153
4863.1	2056.3	12.6	30	13.57	0.167
4862.7	2056.5	0.3	40	12.53	0.128
4863.9	2056	2.6	40	12.79	0.14
4865.4	2055.3	5.3	40	13.09	0.153
4866.9	2054.7	7.5	40	13.4	0.167
4868.7	2053.9	0.3	50	12.89	0.149
4870.7	2053.1	2.6	50	13.28	0.167

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

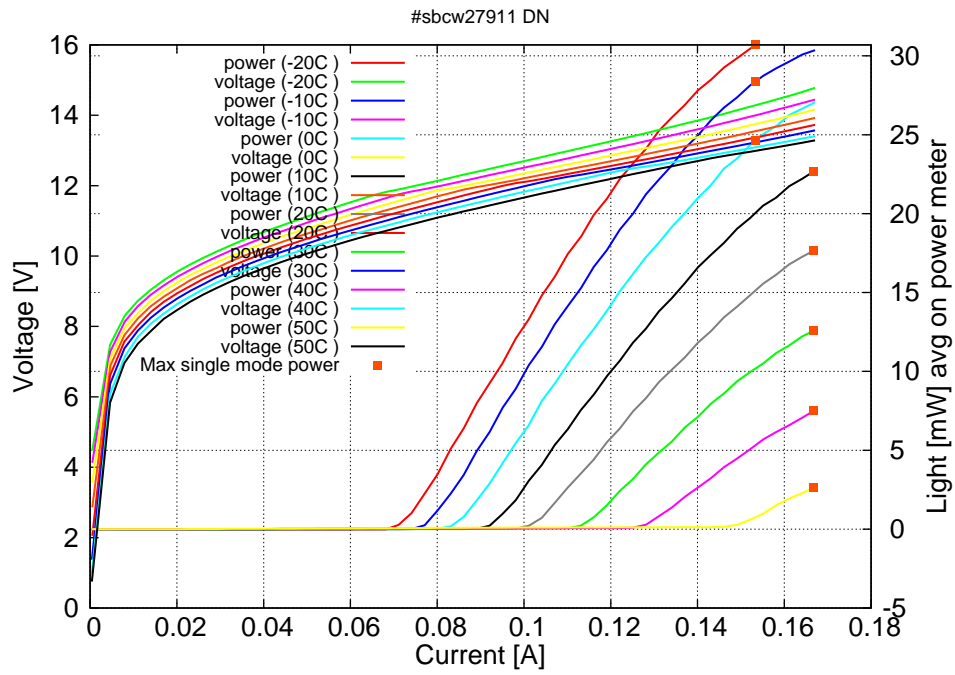


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=11.9V$  (2-wires measurements). Maximum operation current: 0.155A between -20C and 0C, 0.17A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

