

**Datasheet for #sbcw27910 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.

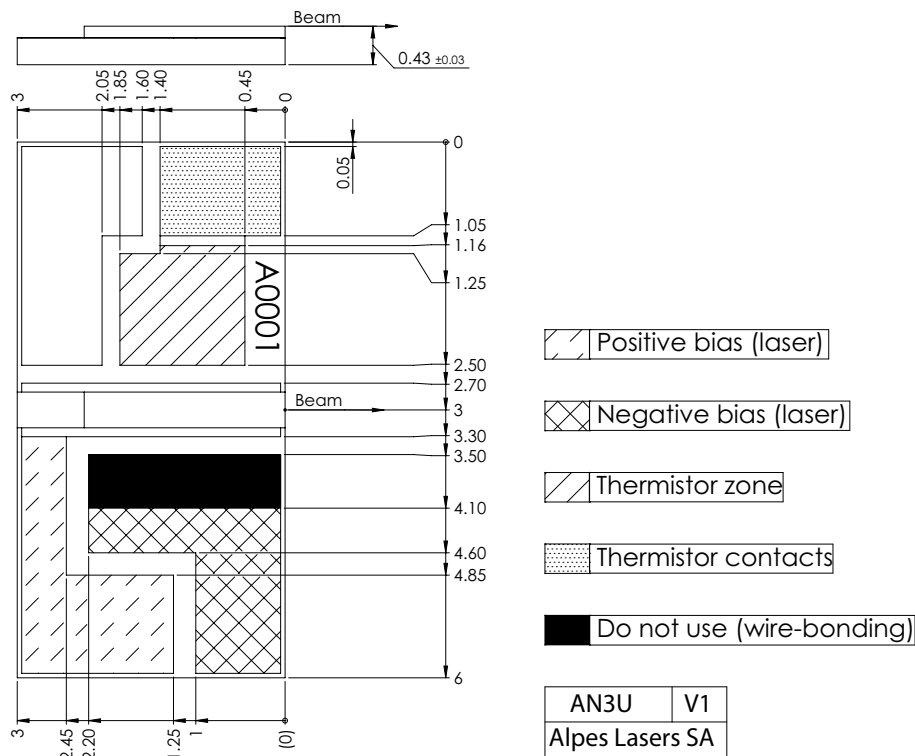


Figure 1: Mechanical and electrical interface for #sbcw27910 DN (please note that AlN submount numbering is A0VPZ)

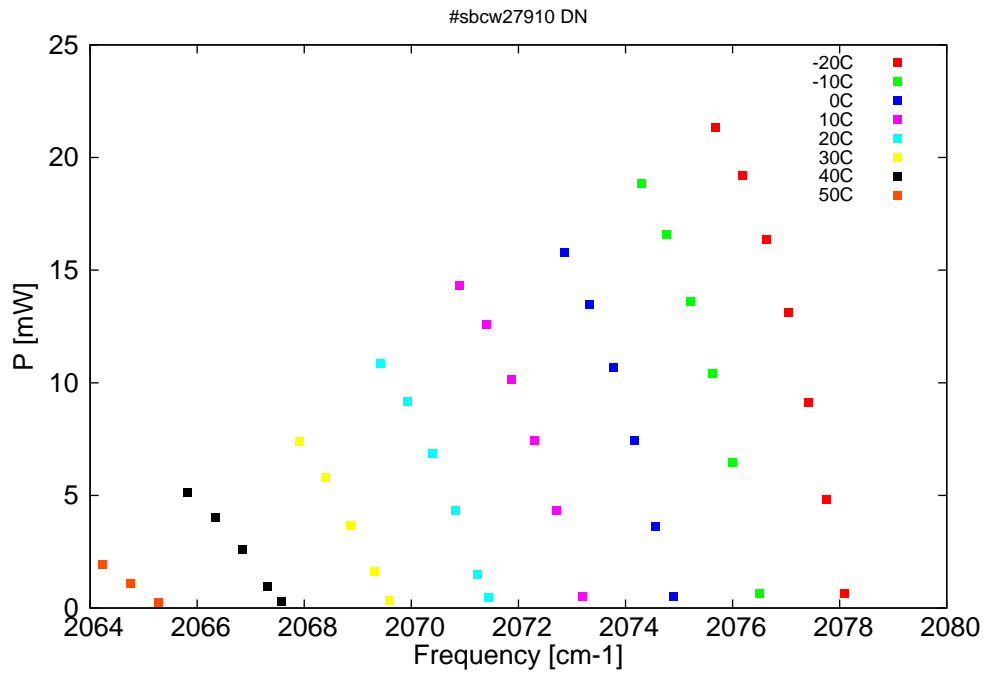


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

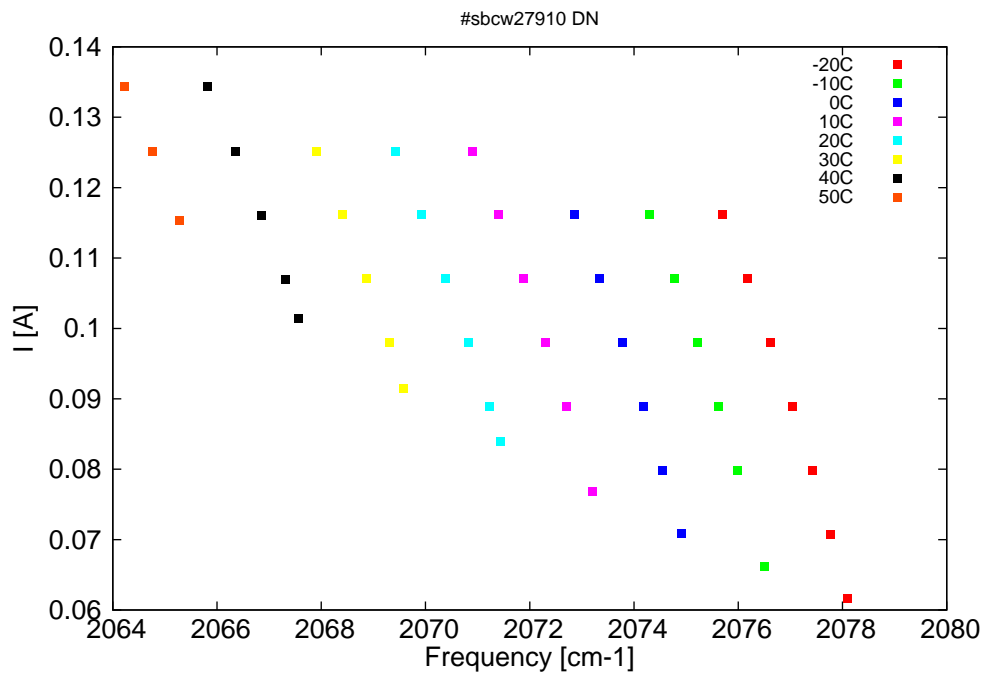


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4812.1	2078.1	0.6	-20	13.43	0.062
4812.9	2077.8	4.8	-20	13.81	0.071
4813.7	2077.4	9.1	-20	14.2	0.08
4814.5	2077	13.1	-20	14.6	0.089
4815.5	2076.6	16.4	-20	15.03	0.098
4816.5	2076.2	19.2	-20	15.5	0.107
4817.7	2075.7	21.3	-20	16.05	0.116
4815.8	2076.5	0.6	-10	13.39	0.066
4817	2076	6.4	-10	13.93	0.08
4817.8	2075.6	10.4	-10	14.31	0.089
4818.8	2075.2	13.6	-10	14.71	0.098
4819.8	2074.8	16.6	-10	15.13	0.107
4820.9	2074.3	18.8	-10	15.61	0.116
4819.5	2074.9	0.5	0	13.36	0.071
4820.3	2074.6	3.6	0	13.7	0.08
4821.2	2074.2	7.4	0	14.05	0.089
4822.1	2073.8	10.7	0	14.42	0.098
4823.1	2073.3	13.5	0	14.81	0.107
4824.3	2072.9	15.8	0	15.24	0.116
4823.5	2073.2	0.5	10	13.4	0.077
4824.6	2072.7	4.4	10	13.82	0.089
4825.5	2072.3	7.4	10	14.18	0.098
4826.6	2071.9	10.2	10	14.54	0.107
4827.6	2071.4	12.6	10	14.93	0.116
4828.8	2070.9	14.3	10	15.36	0.125
4827.6	2071.4	0.5	20	13.48	0.084
4828	2071.2	1.5	20	13.64	0.089
4829	2070.8	4.3	20	13.96	0.098
4830	2070.4	6.9	20	14.3	0.107
4831.1	2069.9	9.2	20	14.66	0.116
4832.3	2069.4	10.9	20	15.05	0.125
4831.9	2069.6	0.3	30	13.58	0.092
4832.5	2069.3	1.6	30	13.78	0.098
4833.6	2068.9	3.7	30	14.09	0.107
4834.7	2068.4	5.8	30	14.42	0.116
4835.8	2067.9	7.4	30	14.78	0.125
4836.6	2067.6	0.3	40	13.76	0.101
4837.2	2067.3	1	40	13.93	0.107
4838.3	2066.8	2.6	40	14.23	0.116
4839.5	2066.3	4	40	14.56	0.125
4840.7	2065.8	5.1	40	14.92	0.134
4842	2065.3	0.3	50	14.08	0.115
4843.2	2064.8	1.1	50	14.39	0.125
4844.4	2064.2	1.9	50	14.71	0.134

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

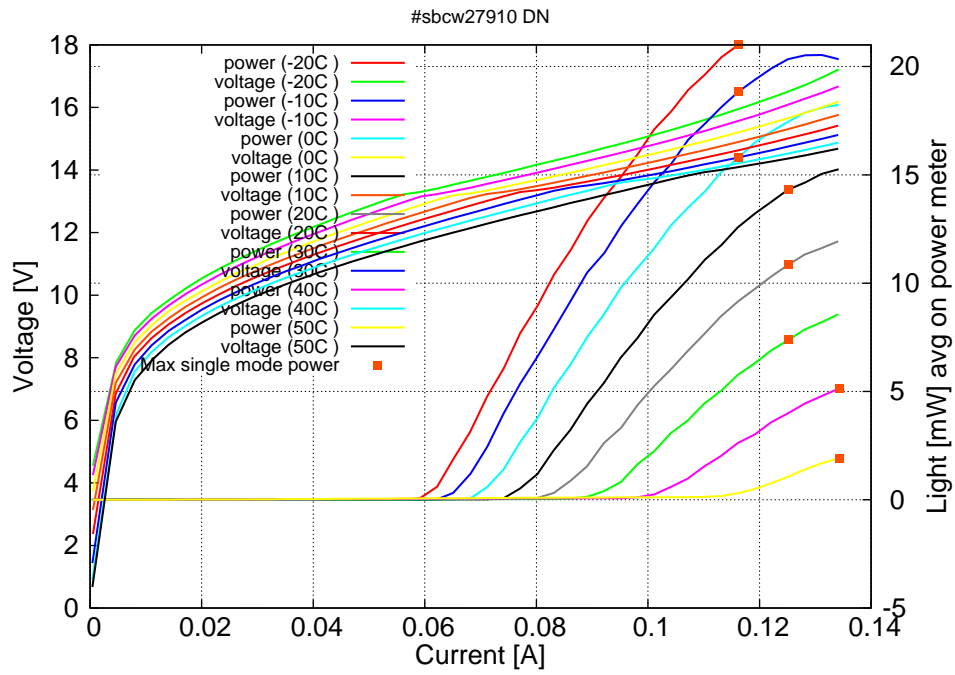


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.06A$  /  $V_{th}=13.3V$  (2-wires measurements). Maximum operation current: 0.115A between -20C and 0C, 0.125A between 10C and 30C, 0.135A between 40C and 50C.

