

**Datasheet for #sbcw27919 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.

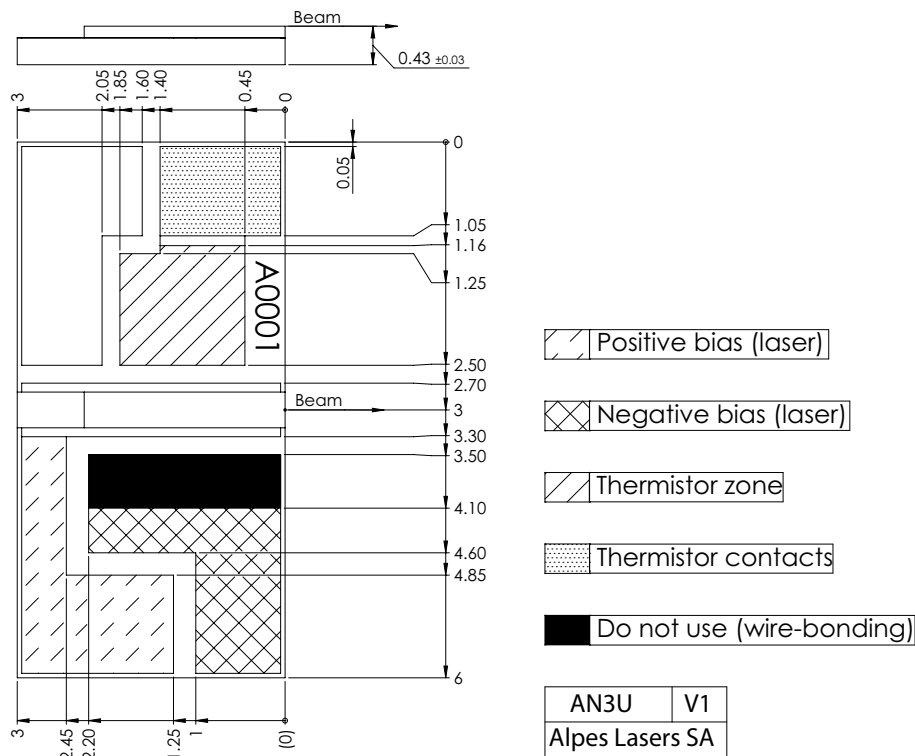


Figure 1: Mechanical and electrical interface for #sbcw27919 DN (please note that AlN submount numbering is A0V45)

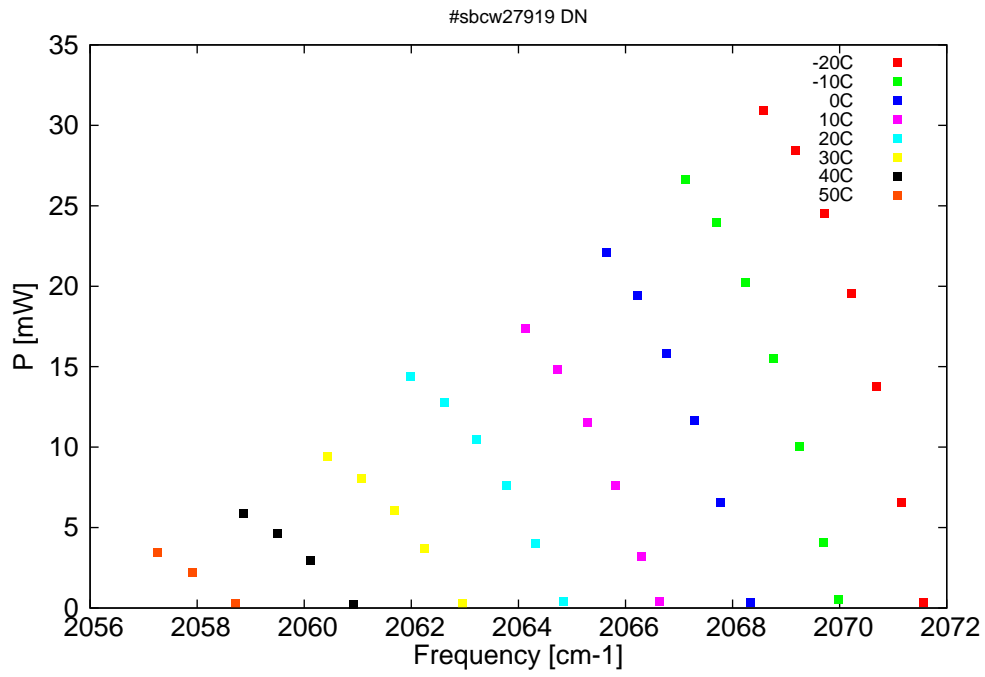


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

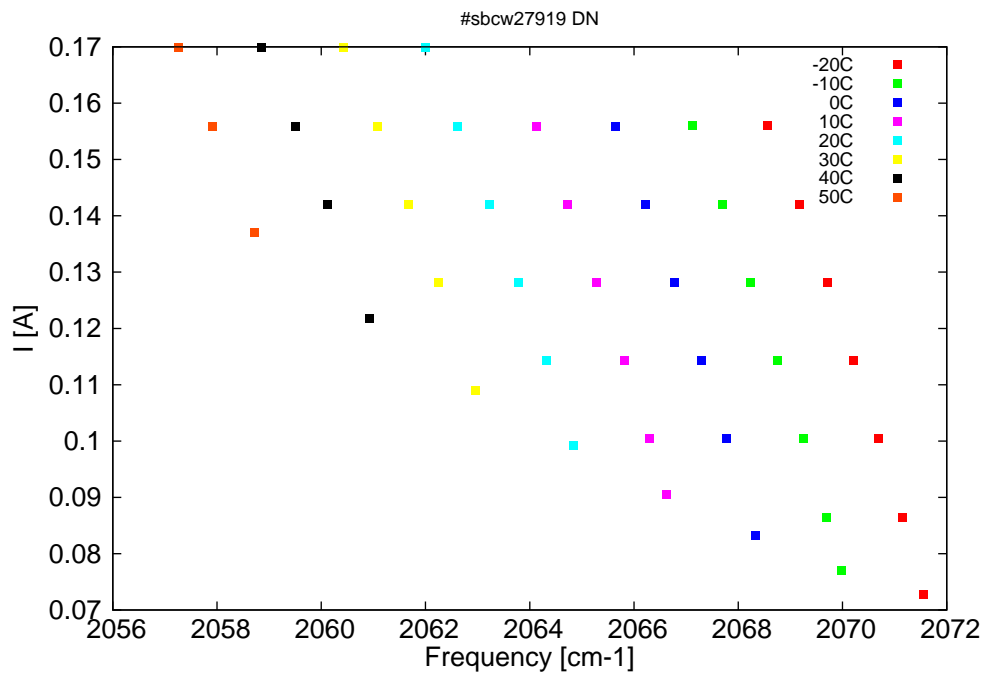


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4827.3	2071.6	0.4	-20	12.07	0.073
4828.2	2071.1	6.6	-20	12.43	0.087
4829.3	2070.7	13.8	-20	12.79	0.1
4830.4	2070.2	19.5	-20	13.15	0.114
4831.6	2069.7	24.5	-20	13.51	0.128
4832.9	2069.2	28.4	-20	13.88	0.142
4834.3	2068.6	30.9	-20	14.3	0.156
4830.9	2070	0.5	-10	12.01	0.077
4831.6	2069.7	4	-10	12.25	0.087
4832.7	2069.2	10	-10	12.59	0.1
4833.8	2068.8	15.5	-10	12.94	0.114
4835	2068.2	20.2	-10	13.28	0.128
4836.3	2067.7	23.9	-10	13.63	0.142
4837.7	2067.1	26.6	-10	14.01	0.156
4834.8	2068.3	0.4	0	12.02	0.083
4836.1	2067.8	6.5	0	12.42	0.1
4837.2	2067.3	11.7	0	12.75	0.114
4838.5	2066.8	15.8	0	13.08	0.128
4839.8	2066.2	19.4	0	13.41	0.142
4841.1	2065.6	22.1	0	13.77	0.156
4838.8	2066.6	0.4	10	12.05	0.091
4839.6	2066.3	3.2	10	12.27	0.1
4840.7	2065.8	7.6	10	12.58	0.114
4841.9	2065.3	11.5	10	12.9	0.128
4843.3	2064.7	14.8	10	13.22	0.142
4844.6	2064.1	17.4	10	13.55	0.156
4843	2064.8	0.4	20	12.12	0.099
4844.2	2064.3	4	20	12.44	0.114
4845.5	2063.8	7.6	20	12.74	0.128
4846.8	2063.2	10.5	20	13.05	0.142
4848.2	2062.6	12.8	20	13.37	0.156
4849.7	2062	14.4	20	13.7	0.17
4847.4	2063	0.3	30	12.21	0.109
4849.1	2062.2	3.7	30	12.6	0.128
4850.4	2061.7	6.1	30	12.89	0.142
4851.8	2061.1	8	30	13.19	0.156
4853.4	2060.4	9.4	30	13.5	0.17
4852.2	2060.9	0.2	40	12.37	0.122
4854.1	2060.1	3	40	12.76	0.142
4855.5	2059.5	4.6	40	13.04	0.156
4857.1	2058.9	5.9	40	13.34	0.17
4857.4	2058.7	0.3	50	12.57	0.137
4859.3	2057.9	2.2	50	12.92	0.156
4860.8	2057.3	3.4	50	13.2	0.17

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

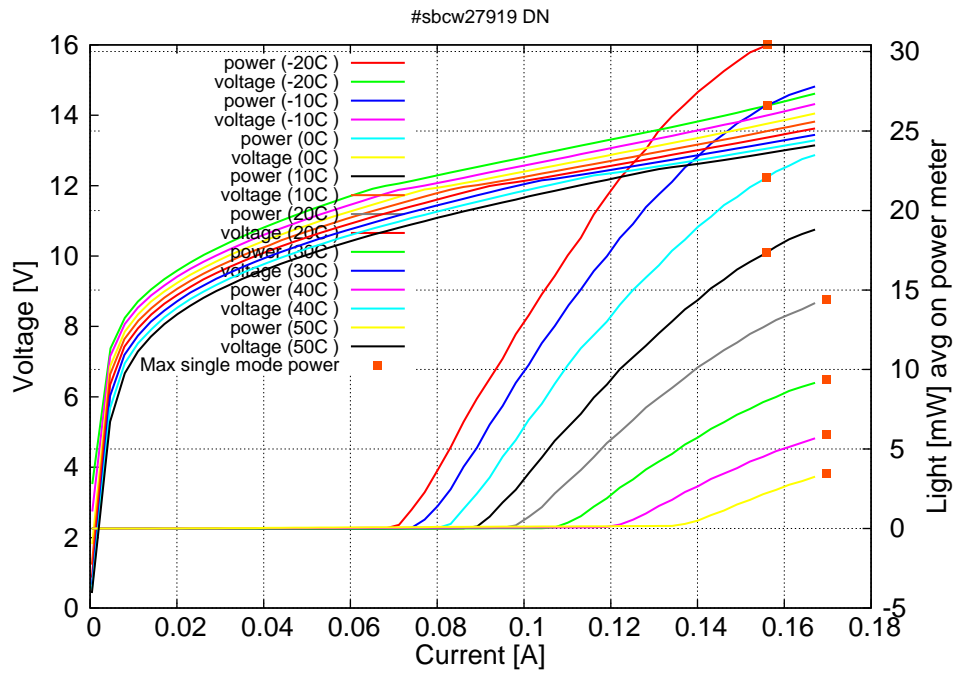


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.08A$  /  $V_{th}=12.2V$  (2-wires measurements). Maximum operation current: 0.155A between -20C and 10C, 0.17A between 20C and 50C.

