

**Datasheet for #sbcw27907 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 #sbcw27907 DN (please note that AlN submount numbering is A0V3R)

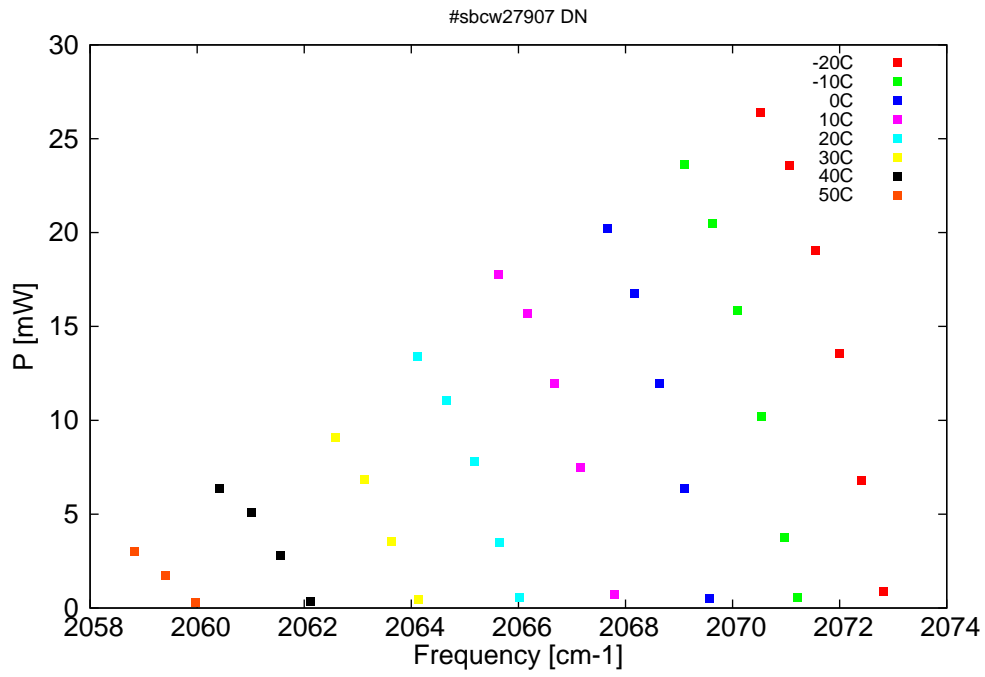


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

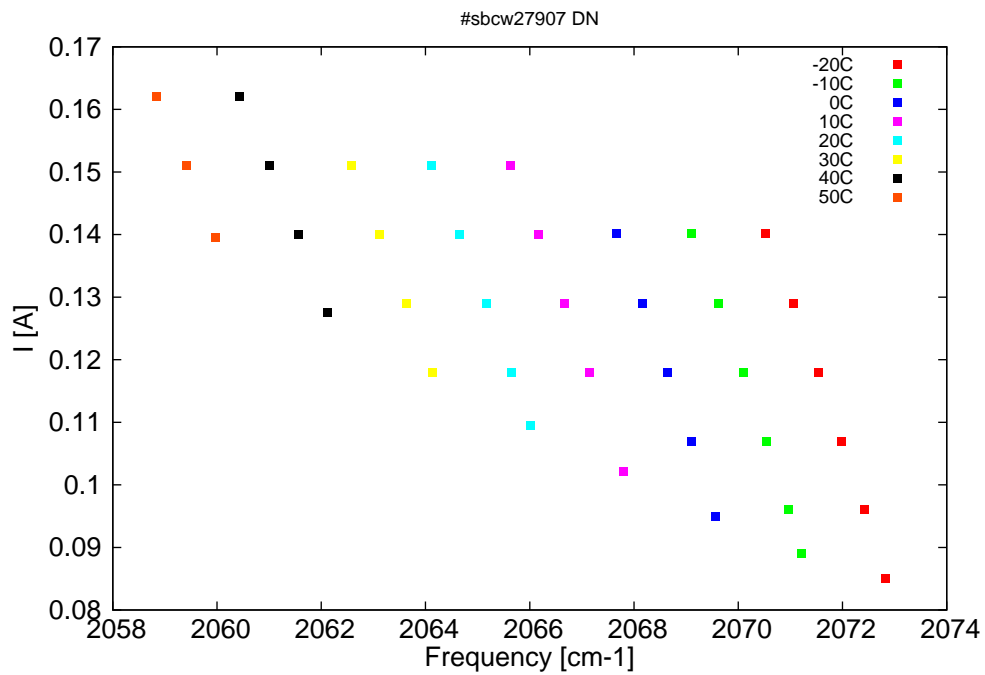


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4824.3	2072.8	0.9	-20	13.19	0.085
4825.3	2072.4	6.8	-20	13.51	0.096
4826.3	2072	13.5	-20	13.85	0.107
4827.3	2071.5	19	-20	14.2	0.118
4828.5	2071.1	23.6	-20	14.57	0.129
4829.7	2070.5	26.4	-20	14.98	0.14
4828.1	2071.2	0.6	-10	13.12	0.089
4828.7	2071	3.7	-10	13.31	0.096
4829.6	2070.5	10.2	-10	13.63	0.107
4830.7	2070.1	15.9	-10	13.95	0.118
4831.8	2069.6	20.5	-10	14.29	0.129
4833	2069.1	23.6	-10	14.66	0.14
4831.9	2069.6	0.5	0	13.11	0.095
4833	2069.1	6.4	0	13.42	0.107
4834.1	2068.6	12	0	13.73	0.118
4835.2	2068.2	16.7	0	14.05	0.129
4836.4	2067.7	20.2	0	14.39	0.14
4836.1	2067.8	0.7	10	13.13	0.102
4837.6	2067.2	7.5	10	13.53	0.118
4838.7	2066.7	12	10	13.83	0.129
4839.9	2066.2	15.7	10	14.15	0.14
4841.1	2065.6	17.8	10	14.49	0.151
4840.2	2066	0.6	20	13.15	0.109
4841.1	2065.7	3.5	20	13.35	0.118
4842.2	2065.2	7.8	20	13.63	0.129
4843.4	2064.7	11.1	20	13.93	0.14
4844.7	2064.1	13.4	20	14.25	0.151
4844.7	2064.1	0.5	30	13.23	0.118
4845.8	2063.6	3.6	30	13.48	0.129
4847	2063.1	6.8	30	13.75	0.14
4848.3	2062.6	9.1	30	14.04	0.151
4849.4	2062.1	0.4	40	13.32	0.128
4850.7	2061.6	2.8	40	13.6	0.14
4852	2061	5.1	40	13.87	0.151
4853.4	2060.4	6.4	40	14.17	0.162
4854.5	2060	0.3	50	13.44	0.14
4855.7	2059.4	1.8	50	13.7	0.151
4857.1	2058.8	3	50	13.97	0.162

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

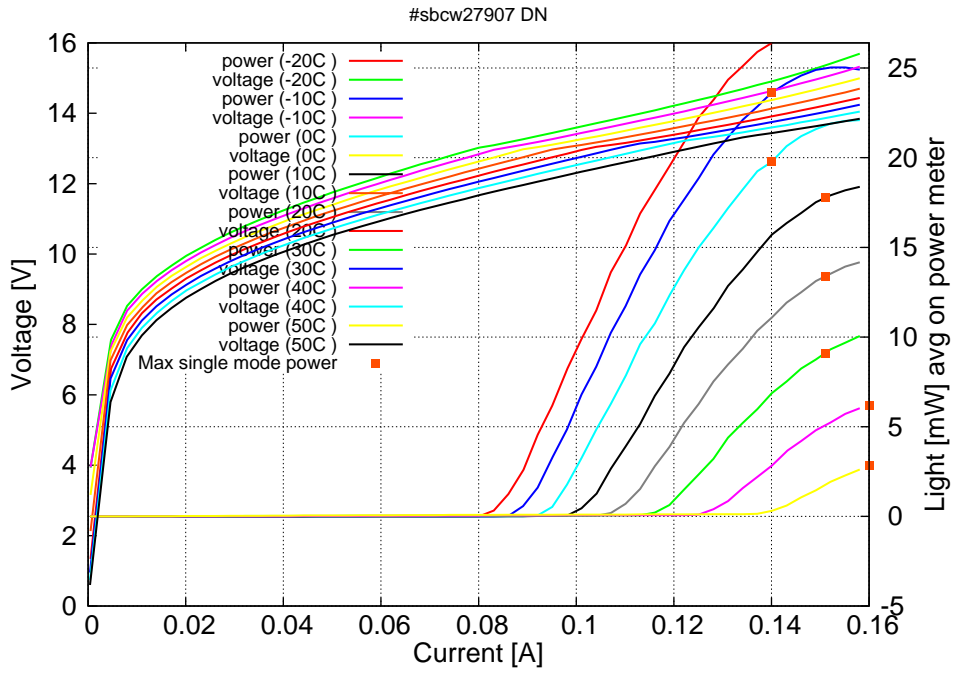


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.08A$  /  $V_{th}=13.1V$  (2-wires measurements). Maximum operation current: 0.14A between -20C and 0C, 0.15A between 10C and 30C, 0.16A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

