

**Datasheet for #sbcw27914 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 #sbcw27914 DN (please note that AlN submount numbering is A0V3G)

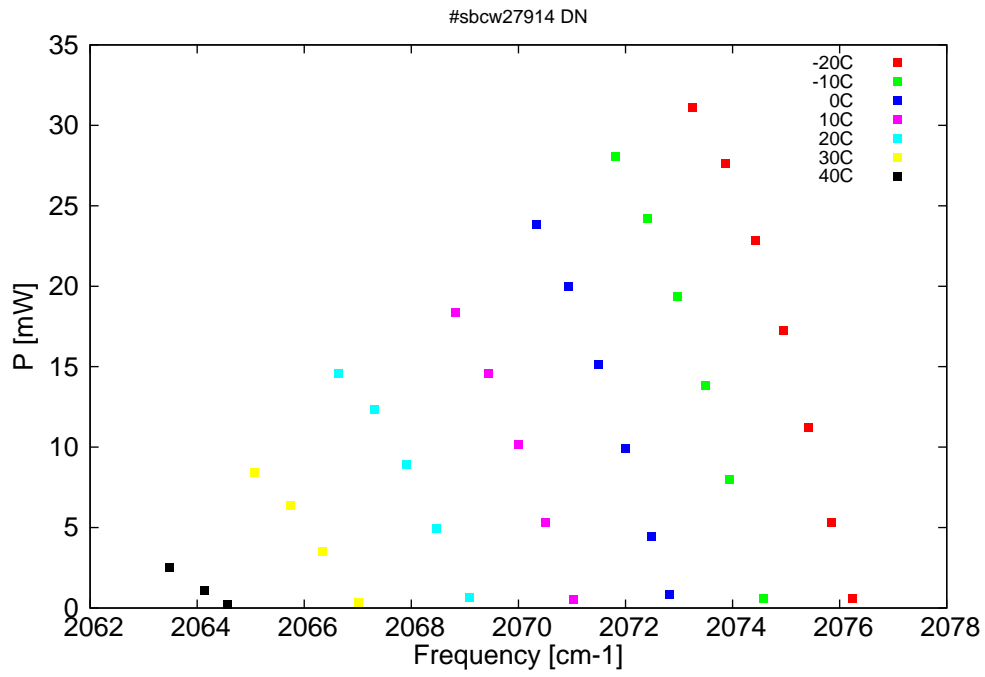


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

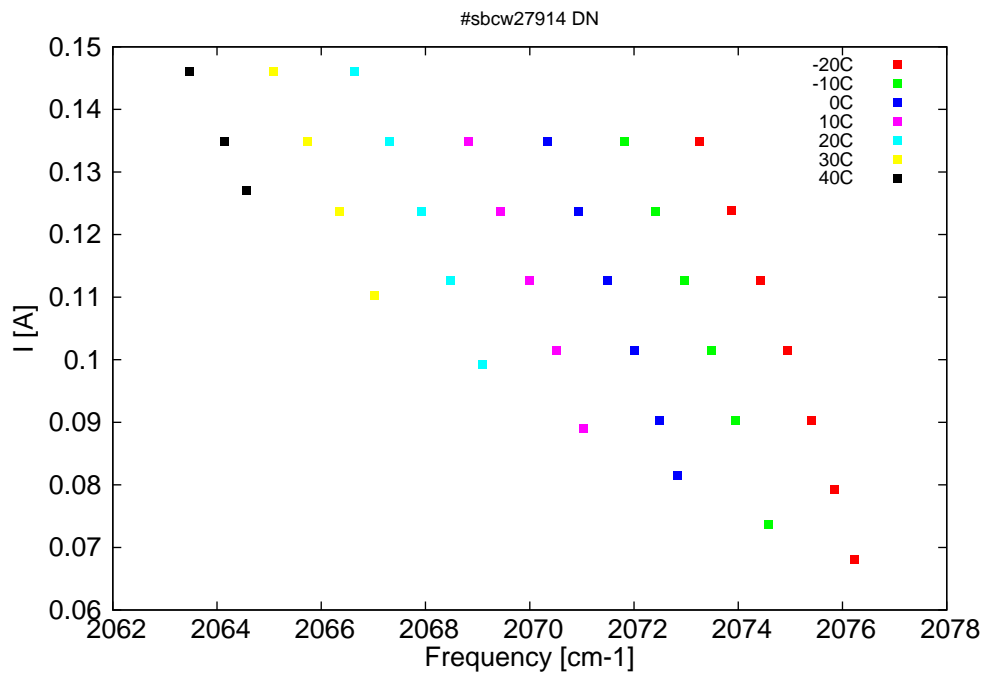


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4816.4	2076.2	0.6	-20	12.95	0.068
4817.3	2075.8	5.3	-20	13.32	0.079
4818.3	2075.4	11.2	-20	13.7	0.09
4819.4	2074.9	17.2	-20	14.1	0.102
4820.6	2074.4	22.8	-20	14.53	0.113
4821.9	2073.9	27.6	-20	15	0.124
4823.3	2073.3	31.1	-20	15.56	0.135
4820.3	2074.6	0.6	-10	12.96	0.074
4821.7	2074	8	-10	13.5	0.09
4822.8	2073.5	13.8	-10	13.88	0.102
4824	2073	19.4	-10	14.28	0.113
4825.3	2072.4	24.2	-10	14.71	0.124
4826.7	2071.8	28.1	-10	15.2	0.135
4824.3	2072.8	0.9	0	13.05	0.082
4825.1	2072.5	4.4	0	13.32	0.09
4826.2	2072	9.9	0	13.68	0.102
4827.4	2071.5	15.2	0	14.05	0.113
4828.7	2070.9	20	0	14.46	0.124
4830.1	2070.3	23.8	0	14.91	0.135
4828.5	2071	0.5	10	13.13	0.089
4829.7	2070.5	5.3	10	13.5	0.102
4830.9	2070	10.2	10	13.85	0.113
4832.2	2069.4	14.6	10	14.24	0.124
4833.7	2068.8	18.3	10	14.66	0.135
4833	2069.1	0.6	20	13.3	0.099
4834.5	2068.5	4.9	20	13.69	0.113
4835.8	2067.9	8.9	20	14.04	0.124
4837.2	2067.3	12.3	20	14.44	0.135
4838.8	2066.6	14.6	20	14.87	0.146
4837.9	2067	0.4	30	13.5	0.11
4839.5	2066.4	3.5	30	13.88	0.124
4840.9	2065.7	6.4	30	14.25	0.135
4842.4	2065.1	8.4	30	14.65	0.146
4843.6	2064.6	0.2	40	13.88	0.127
4844.6	2064.1	1.1	40	14.11	0.135
4846.2	2063.5	2.5	40	14.48	0.146

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

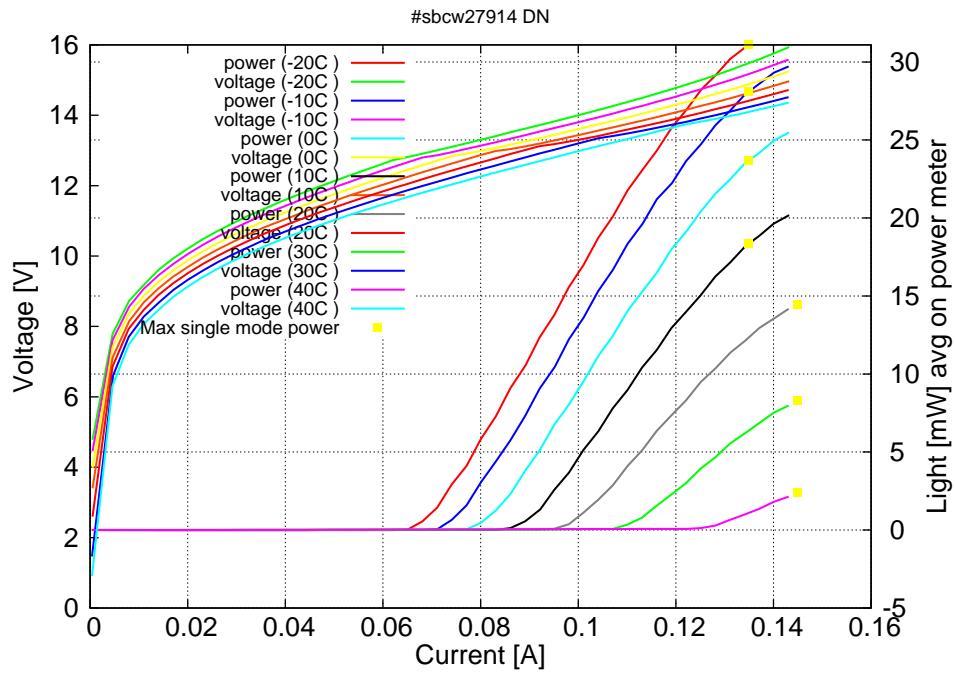


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=12.9V$  (2-wires measurements). Maximum operation current: 0.135A between -20C and 10C, 0.145A between 20C and 40C.

Figure 3: spectra at different temperatures for various DC currents

