

**Datasheet for #sbcw20714 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**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 #sbcw20714 DN (please note that AlN submount numbering is A0T0N)

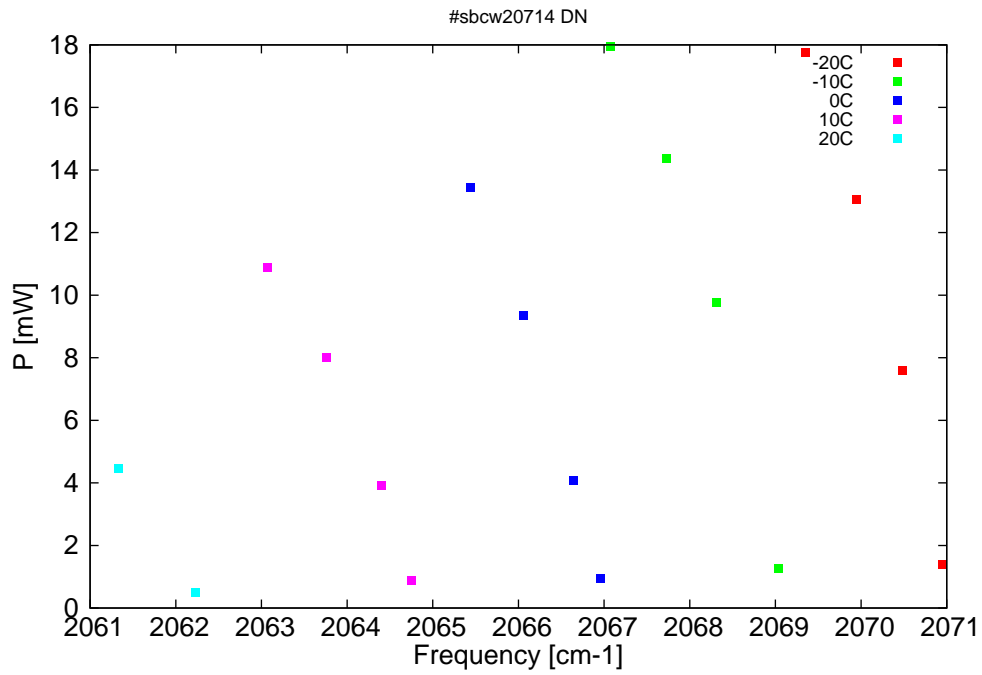


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

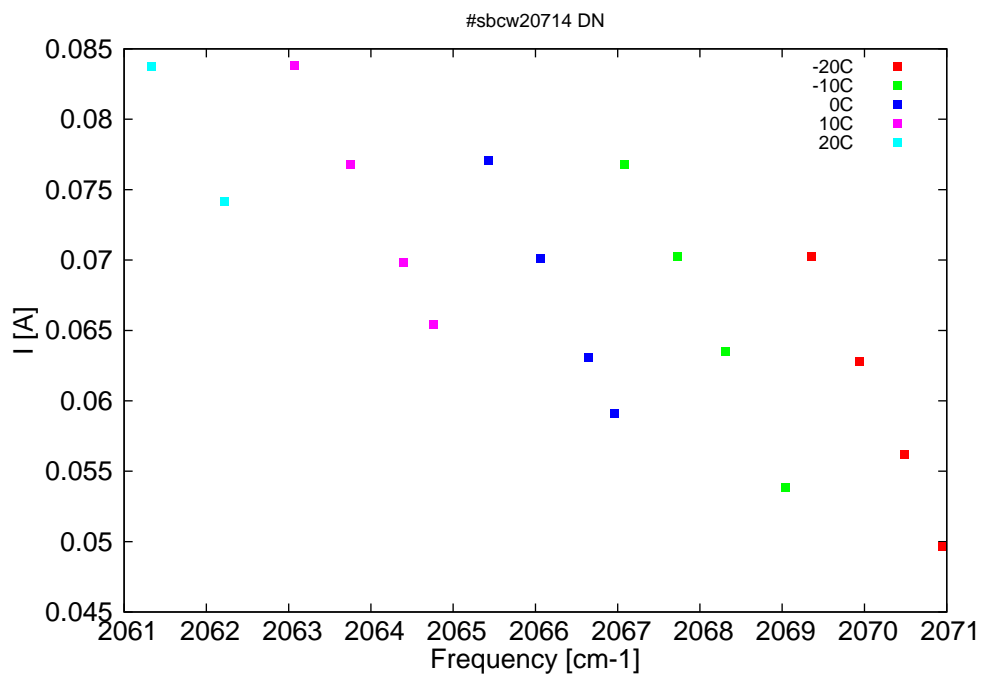


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4828.7	2071	1.4	-20	12.94	0.05
4829.8	2070.5	7.6	-20	13.31	0.056
4831	2069.9	13.1	-20	13.72	0.063
4832.4	2069.4	17.8	-20	14.16	0.07
4833.2	2069	1.3	-10	12.94	0.054
4834.9	2068.3	9.8	-10	13.45	0.063
4836.2	2067.7	14.4	-10	13.84	0.07
4837.7	2067.1	17.9	-10	14.27	0.077
4838	2067	1	0	13.02	0.059
4838.8	2066.6	4.1	0	13.22	0.063
4840.1	2066.1	9.3	0	13.58	0.07
4841.6	2065.4	13.4	0	13.96	0.077
4843.2	2064.8	0.9	10	13.16	0.065
4844	2064.4	3.9	10	13.37	0.07
4845.5	2063.8	8	10	13.72	0.077
4847.1	2063.1	10.9	10	14.1	0.084
4849.1	2062.2	0.5	20	13.45	0.074
4851.2	2061.3	4.4	20	13.9	0.084

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

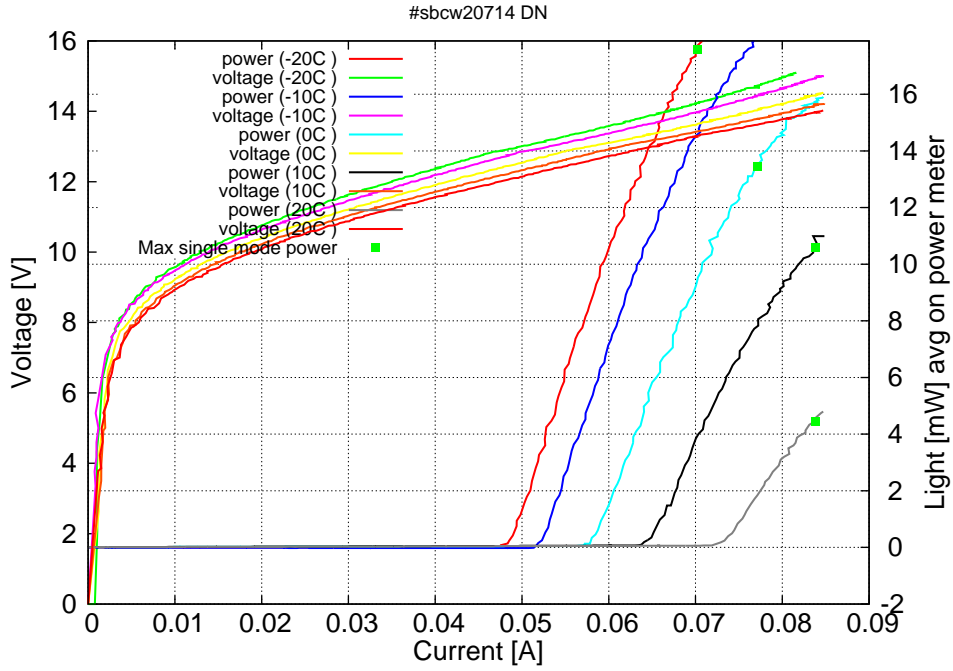


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.05A$  /  $V_{th}=12.9V$  (2-wires measurements). Maximum operation current: 0.07A at -20C, 0.08A between -10C and 0C, 0.085A between 10C and 20C

Figure 3: spectra at different temperatures for various DC currents

