

**Datasheet for #sbcw19753 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

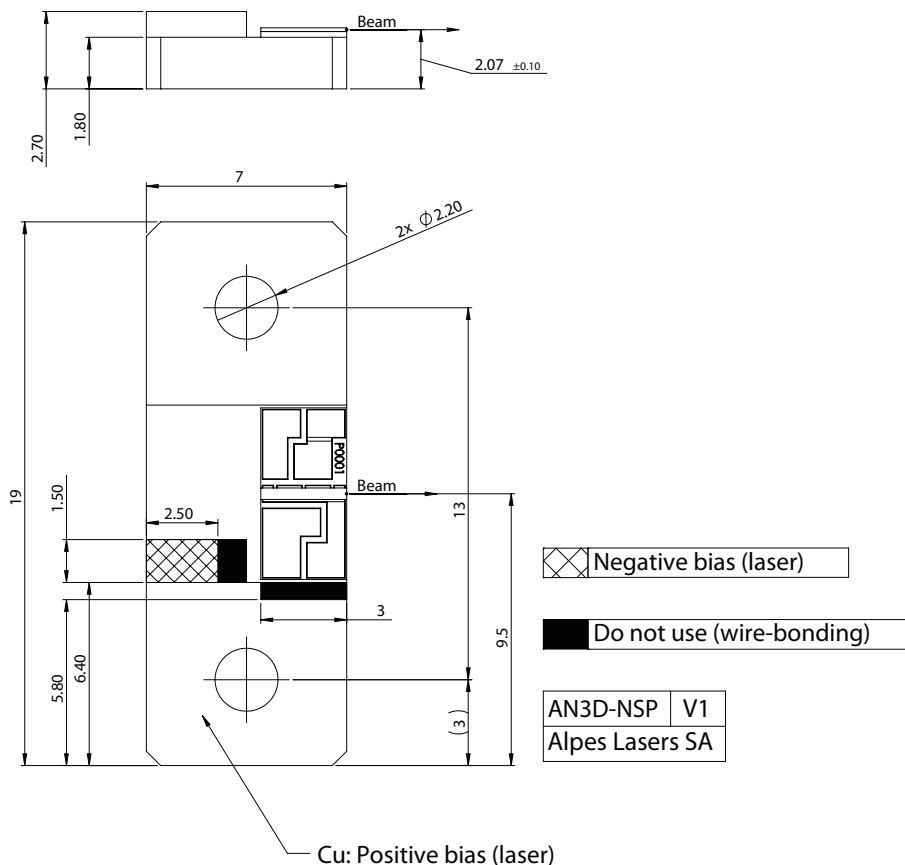


Figure 1: Mechanical and electrical interface for #sbcw19753 DN

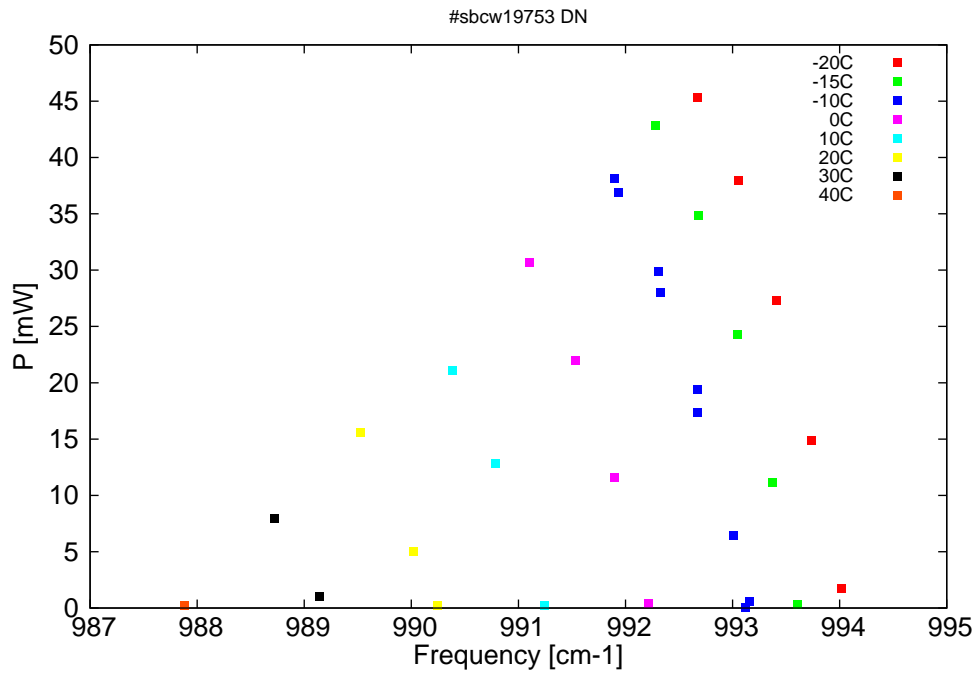


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

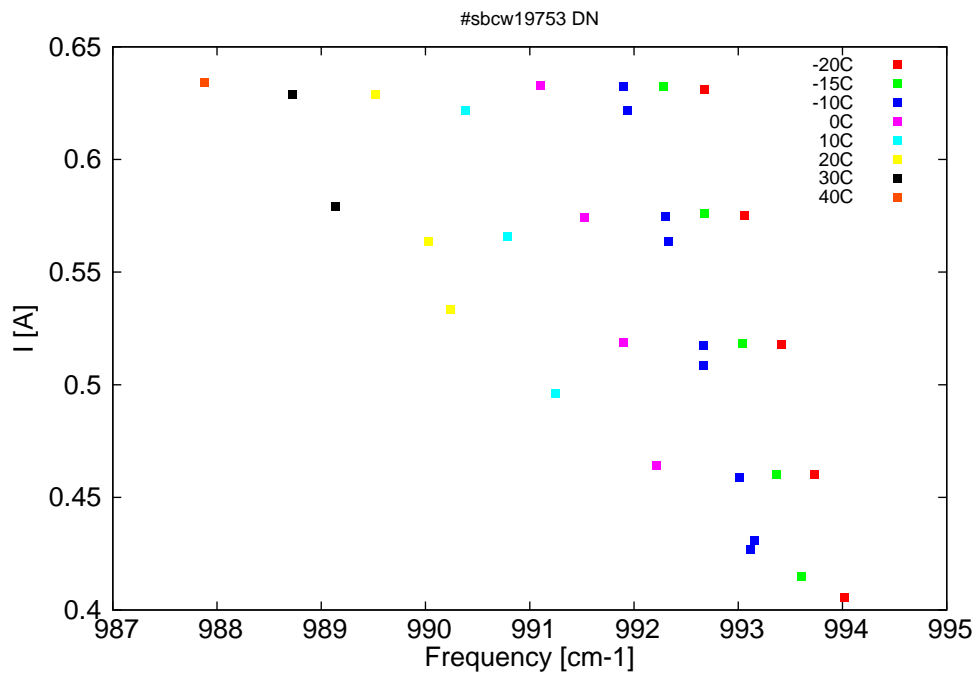


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10060.2	994	1.8	-20	8.14	0.405
10063	993.7	14.9	-20	8.37	0.46
10066.3	993.4	27.3	-20	8.64	0.518
10069.9	993.1	38	-20	8.91	0.575
10073.8	992.7	45.4	-20	9.2	0.631
10064.3	993.6	0.3	-15	8.16	0.415
10066.7	993.4	11.2	-15	8.37	0.46
10070.1	993	24.3	-15	8.63	0.518
10073.7	992.7	34.8	-15	8.91	0.576
10077.8	992.3	42.9	-15	9.21	0.633
10069.3	993.1	0	-10	8.17	0.427
10068.9	993.2	0.5	-10	8.23	0.431
10070.4	993	6.4	-10	8.35	0.459
10073.8	992.7	17.4	-10	8.53	0.508
10073.8	992.7	19.4	-10	8.62	0.517
10077.3	992.3	28	-10	8.79	0.564
10077.5	992.3	29.9	-10	8.9	0.575
10081.3	991.9	36.9	-10	9.08	0.622
10081.7	991.9	38.1	-10	9.21	0.633
10078.4	992.2	0.4	0	8.37	0.464
10081.7	991.9	11.6	0	8.62	0.519
10085.4	991.5	22	0	8.9	0.574
10089.8	991.1	30.7	0	9.22	0.633
10088.3	991.2	0.2	10	8.46	0.496
10093	990.8	12.9	10	8.8	0.566
10097.1	990.4	21.1	10	9.09	0.622
10098.5	990.2	0.2	20	8.63	0.533
10100.8	990	5	20	8.79	0.564
10105.9	989.5	15.5	20	9.14	0.629
10109.8	989.1	1.1	30	8.87	0.579
10114	988.7	7.9	30	9.15	0.629
10122.7	987.9	0.2	40	9.19	0.634

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

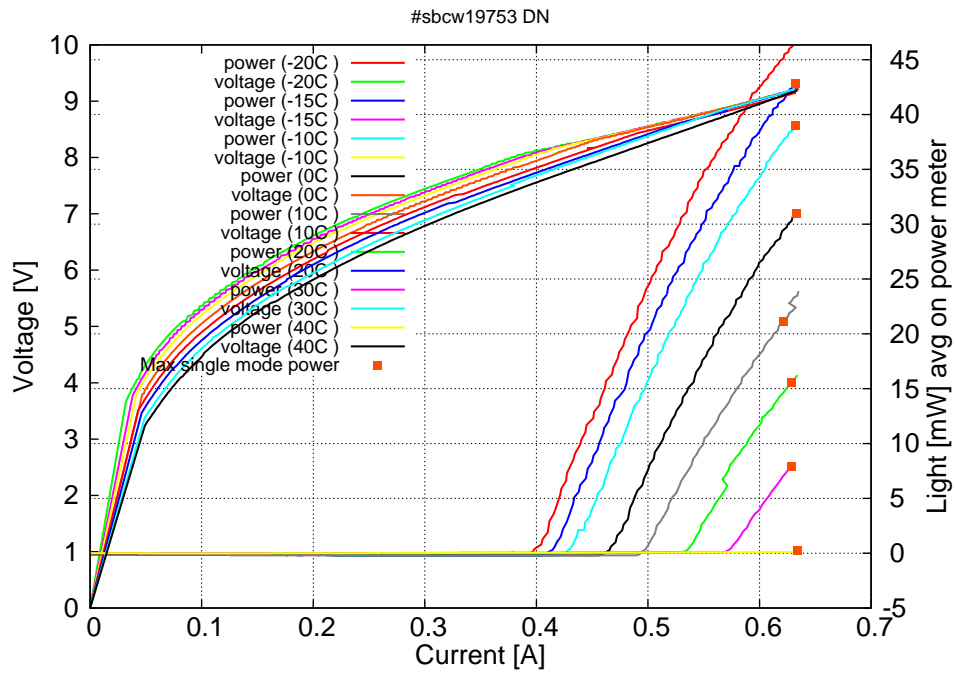


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.39A$  /  $V_{th}=8.1V$  (2-wires measurements). Maximum operation current: 0.635A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

