

**Datasheet for #sbcw20751 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 #sbcw20751 DN (please note that AlN submount numbering is A0NHC)

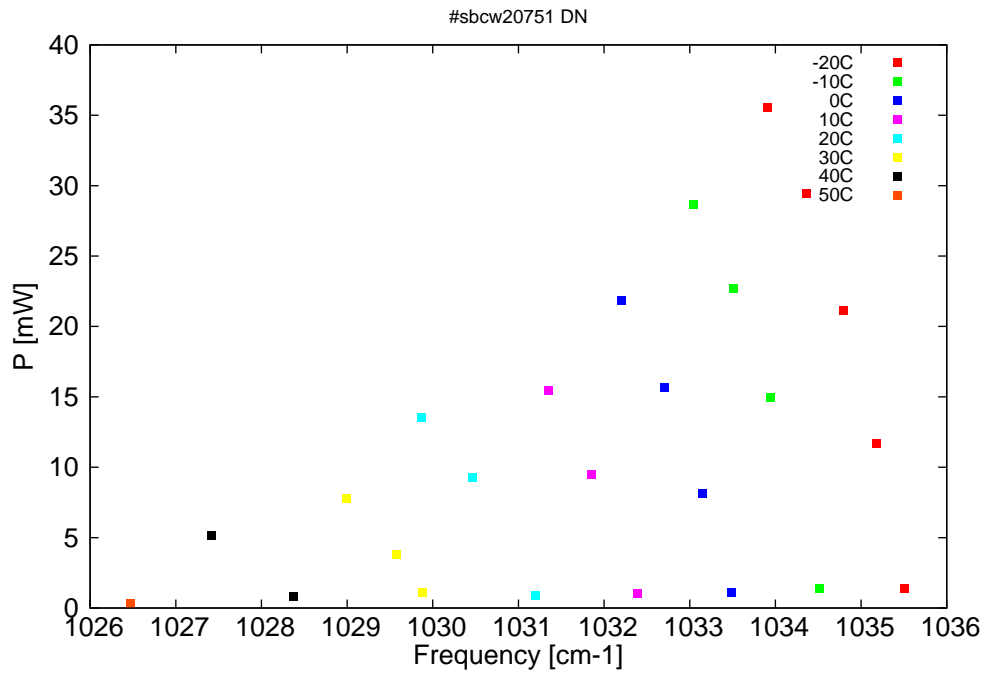


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

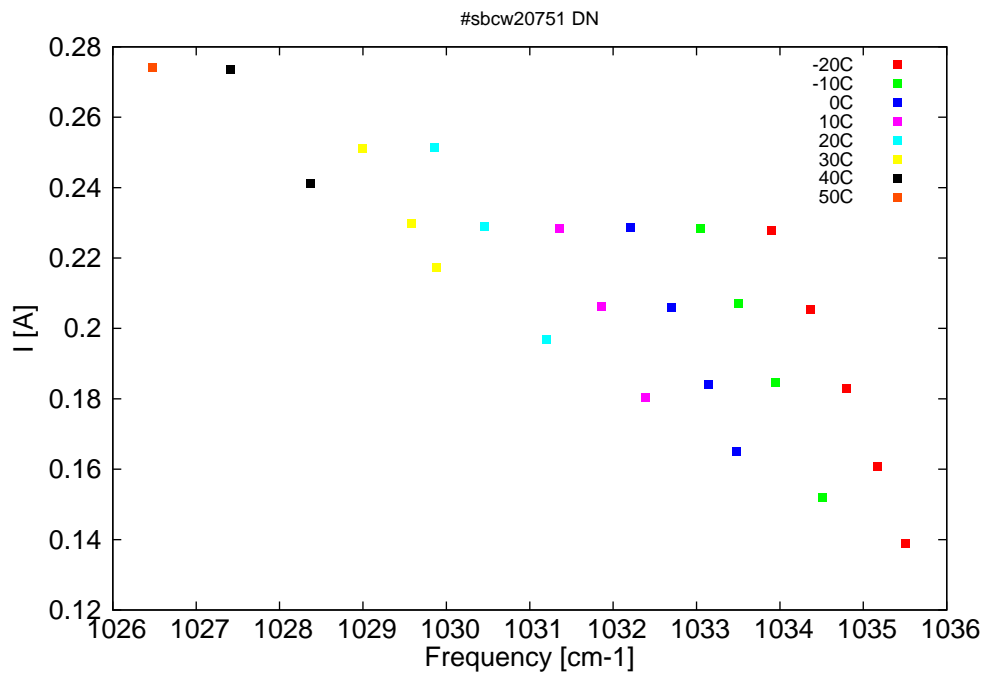


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9657.1	1035.5	1.4	-20	9.71	0.139
9660.2	1035.2	11.7	-20	10.11	0.161
9663.8	1034.8	21.1	-20	10.51	0.183
9667.7	1034.4	29.5	-20	10.93	0.205
9672.1	1033.9	35.5	-20	11.35	0.228
9666.4	1034.5	1.4	-10	9.85	0.152
9671.7	1033.9	15	-10	10.45	0.185
9675.8	1033.5	22.7	-10	10.86	0.207
9680.1	1033	28.6	-10	11.26	0.228
9676	1033.5	1.1	0	10	0.165
9679.2	1033.1	8.1	0	10.34	0.184
9683.3	1032.7	15.7	0	10.74	0.206
9688	1032.2	21.9	0	11.16	0.229
9686.3	1032.4	1	10	10.19	0.18
9691.3	1031.9	9.5	10	10.66	0.206
9696	1031.4	15.4	10	11.08	0.229
9697.5	1031.2	0.9	20	10.43	0.197
9704.4	1030.5	9.3	20	11.02	0.229
9710	1029.9	13.5	20	11.46	0.252
9709.8	1029.9	1.1	30	10.71	0.217
9712.7	1029.6	3.8	30	10.94	0.23
9718.3	1029	7.8	30	11.35	0.251
9724.1	1028.4	0.9	40	11.06	0.241
9733.2	1027.4	5.2	40	11.7	0.274
9742.1	1026.5	0.4	50	11.61	0.274

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

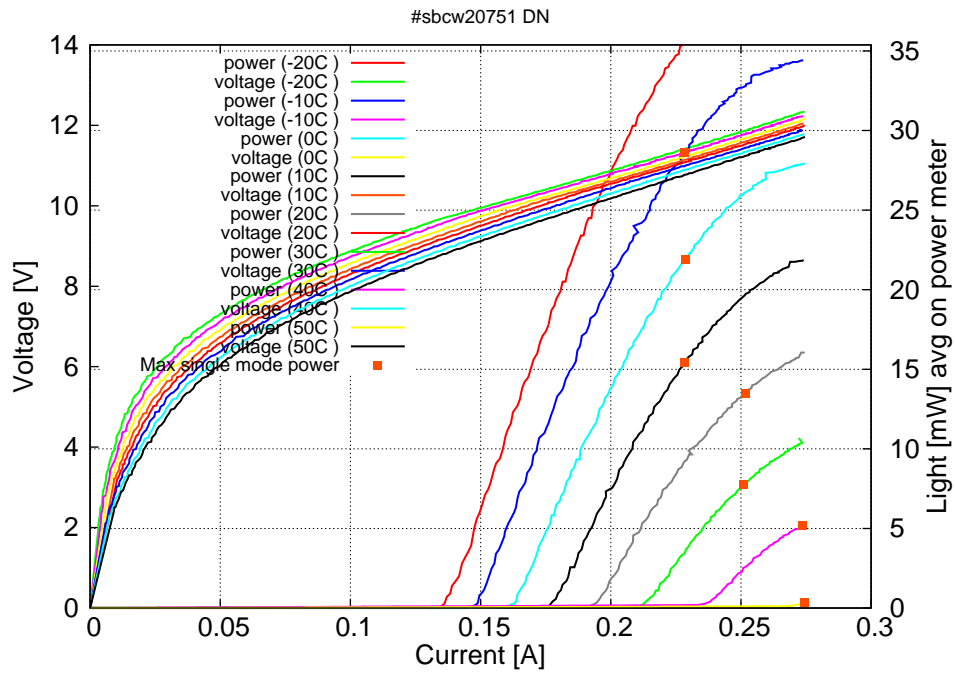


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.13A$  /  $V_{th}=9.6V$  (2-wires measurements). Maximum operation current: 0.23A between -20C and 10C, 0.255A at 20C and 30C, 0.275A at 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

