

**Datasheet for #sbcw27681 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 #sbcw27681 DN (please note that AlN submount numbering is A0WPU)

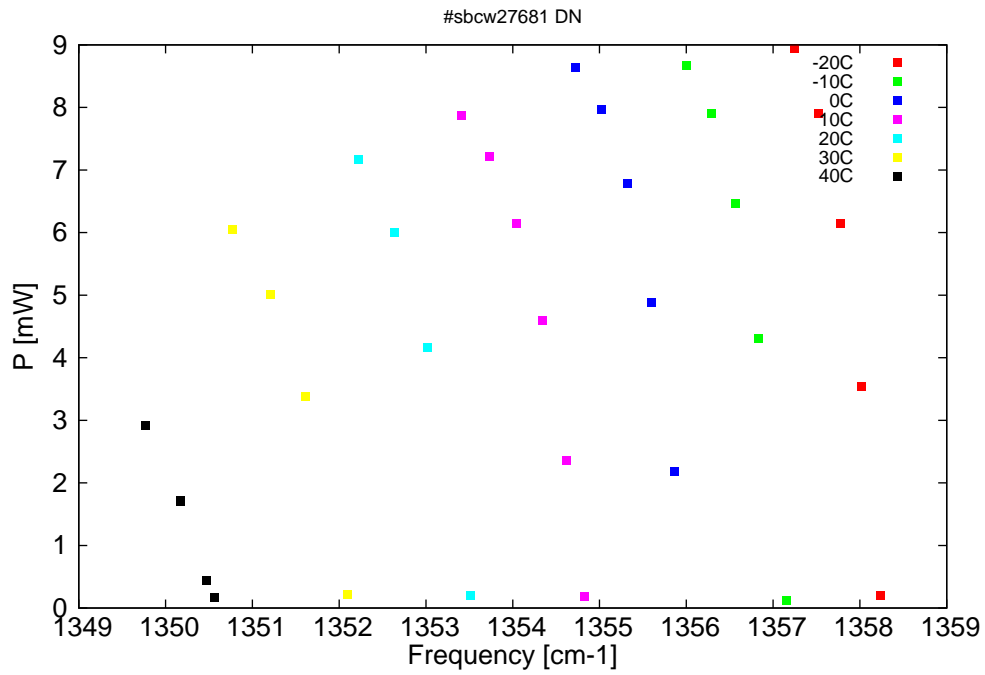


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

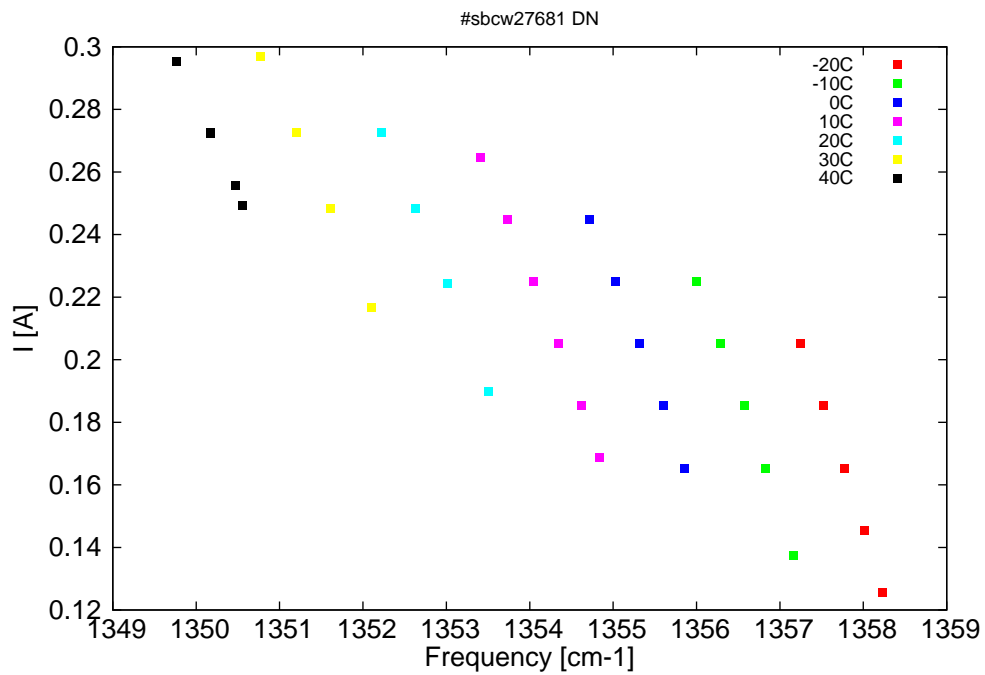


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7362.5	1358.2	0.2	-20	8.62	0.126
7363.7	1358	3.5	-20	8.84	0.145
7365	1357.8	6.2	-20	9.07	0.165
7366.4	1357.5	7.9	-20	9.29	0.185
7367.9	1357.2	8.9	-20	9.51	0.205
7368.3	1357.2	0.1	-10	8.65	0.137
7370.1	1356.8	4.3	-10	8.96	0.165
7371.5	1356.6	6.5	-10	9.17	0.185
7373	1356.3	7.9	-10	9.4	0.205
7374.6	1356	8.7	-10	9.62	0.225
7375.4	1355.9	2.2	0	8.85	0.165
7376.8	1355.6	4.9	0	9.07	0.185
7378.3	1355.3	6.8	0	9.28	0.205
7379.9	1355	8	0	9.5	0.225
7381.6	1354.7	8.6	0	9.71	0.245
7381	1354.8	0.2	10	8.79	0.169
7382.1	1354.6	2.4	10	8.96	0.185
7383.7	1354.3	4.6	10	9.17	0.205
7385.3	1354	6.1	10	9.38	0.225
7387	1353.7	7.2	10	9.59	0.245
7388.8	1353.4	7.9	10	9.8	0.265
7388.2	1353.5	0.2	20	8.92	0.19
7390.9	1353	4.2	20	9.28	0.224
7393	1352.6	6	20	9.52	0.248
7395.2	1352.2	7.2	20	9.77	0.273
7395.9	1352.1	0.2	30	9.09	0.217
7398.6	1351.6	3.4	30	9.42	0.248
7400.8	1351.2	5	30	9.66	0.273
7403.2	1350.8	6.1	30	9.9	0.297
7404.3	1350.6	0.2	40	9.32	0.249
7404.8	1350.5	0.4	40	9.38	0.256
7406.4	1350.2	1.7	40	9.54	0.272
7406.4	1350.2	1.7	40	9.55	0.273
7408.7	1349.8	2.9	40	9.76	0.295

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

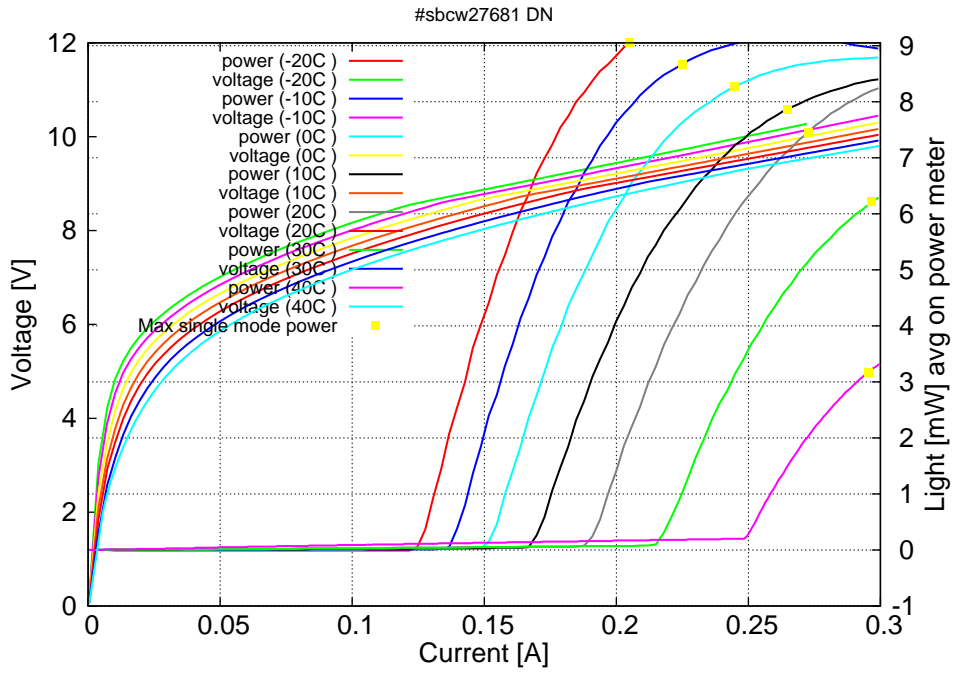


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12A$  /  $V_{th}=8.6V$  (2-wires measurements). Maximum operation current: 0.205A at -20C, 0.225A at -10C, 0.245A at 0C, 0.265A at 10C, 0.275A at 20C, 0.30A between 30C and 40C.

Figure 3: spectra at different temperatures for various DC currents

