

**Datasheet for #sbcw13854 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 #sbcw13854 DN (please note that AlN submount numbering is A0GJP)

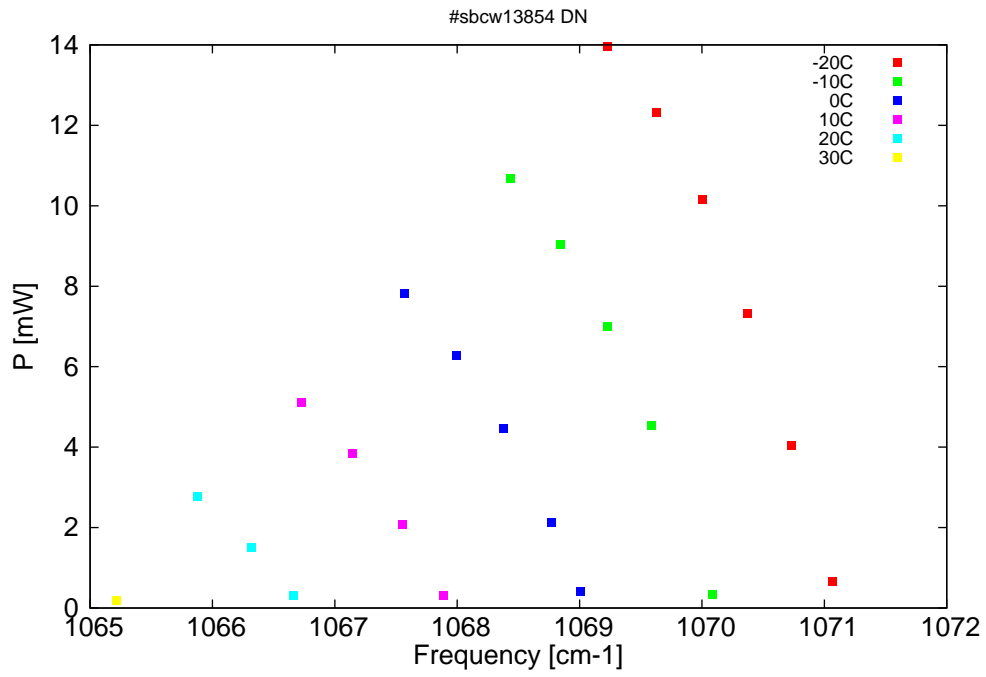


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

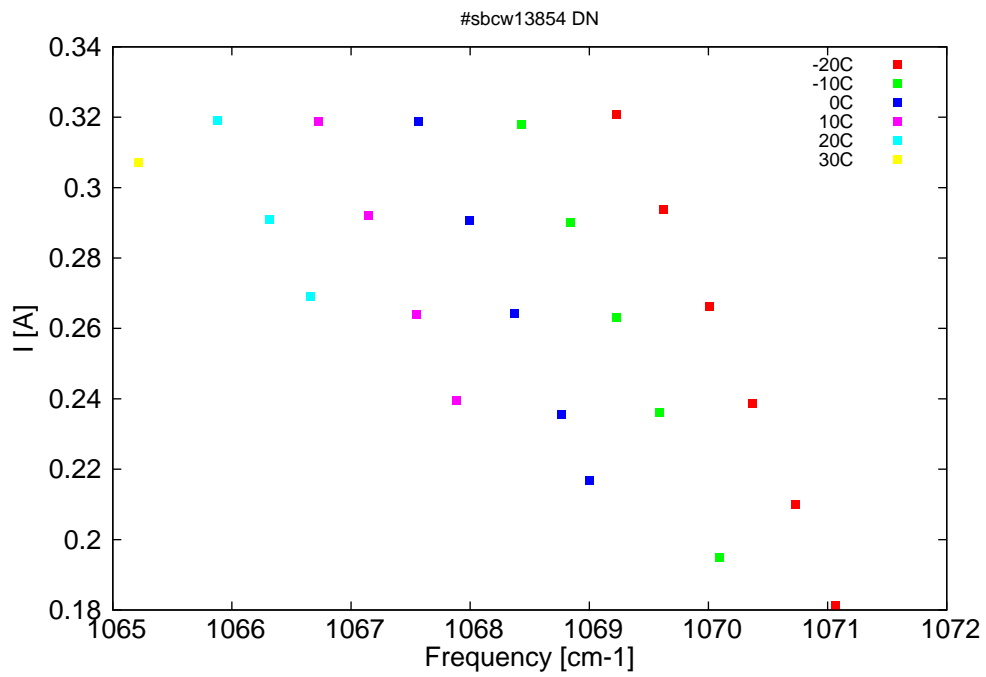


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9336.5	1071.1	0.7	-20	11.22	0.181
9339.4	1070.7	4	-20	11.66	0.21
9342.6	1070.4	7.3	-20	12.09	0.239
9345.7	1070	10.1	-20	12.47	0.266
9349.1	1069.6	12.3	-20	12.85	0.294
9352.5	1069.2	14	-20	13.2	0.321
9345	1070.1	0.3	-10	11.27	0.195
9349.4	1069.6	4.5	-10	11.88	0.236
9352.5	1069.2	7	-10	12.27	0.263
9355.9	1068.8	9	-10	12.64	0.29
9359.5	1068.4	10.7	-10	12.99	0.318
9354.5	1069	0.4	0	11.44	0.217
9356.6	1068.8	2.1	0	11.71	0.236
9360	1068.4	4.5	0	12.12	0.264
9363.3	1068	6.3	0	12.46	0.291
9367.1	1067.6	7.8	0	12.83	0.319
9364.3	1067.9	0.3	10	11.6	0.239
9367.2	1067.5	2.1	10	11.93	0.264
9370.8	1067.1	3.8	10	12.3	0.292
9374.5	1066.7	5.1	10	12.64	0.319
9375	1066.7	0.3	20	11.84	0.269
9378.1	1066.3	1.5	20	12.12	0.291
9381.9	1065.9	2.8	20	12.48	0.319
9387.8	1065.2	0.2	30	12.17	0.307

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

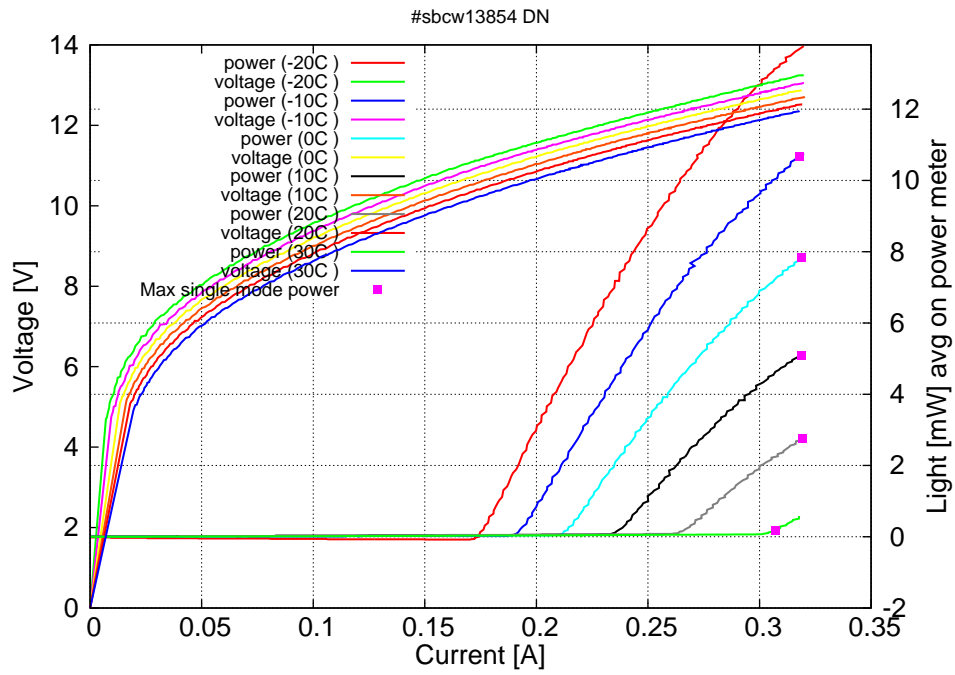


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.17A$  /  $V_{th}=11.1V$  (2-wires measurements). Maximum operation current: 0.32A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

