

**Datasheet for #sbcw13845 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 #sbcw13845 DN (please note that AlN submount numbering is A0GHM)

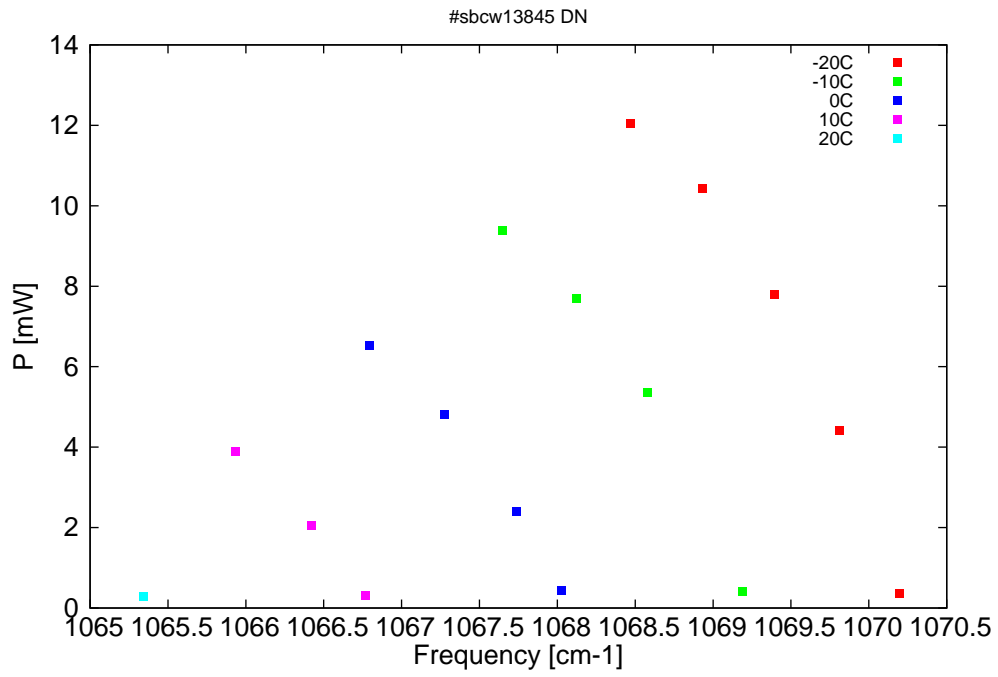


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

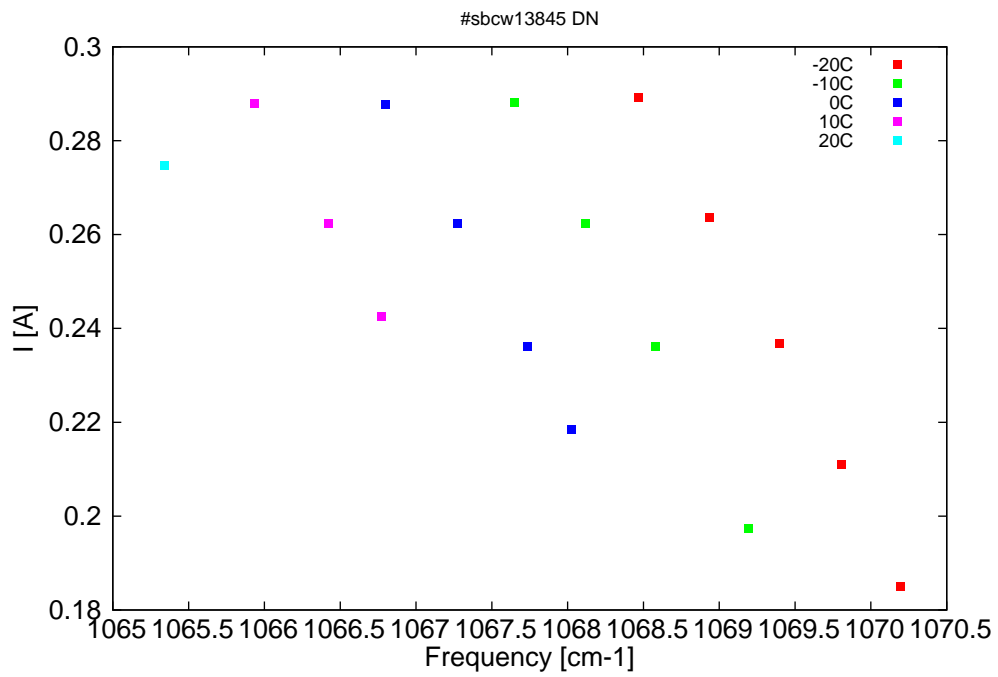


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9344.1	1070.2	0.4	-20	11.85	0.185
9347.5	1069.8	4.4	-20	12.3	0.211
9351.1	1069.4	7.8	-20	12.73	0.237
9355.1	1068.9	10.4	-20	13.15	0.264
9359.2	1068.5	12	-20	13.53	0.289
9352.9	1069.2	0.4	-10	11.87	0.197
9358.2	1068.6	5.3	-10	12.51	0.236
9362.2	1068.1	7.7	-10	12.92	0.262
9366.4	1067.6	9.4	-10	13.3	0.288
9363.1	1068	0.4	0	12.04	0.218
9365.6	1067.7	2.4	0	12.32	0.236
9369.7	1067.3	4.8	0	12.73	0.262
9373.9	1066.8	6.5	0	13.1	0.288
9374.1	1066.8	0.3	10	12.24	0.243
9377.1	1066.4	2	10	12.54	0.262
9381.5	1065.9	3.9	10	12.91	0.288
9386.6	1065.3	0.3	20	12.54	0.275

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

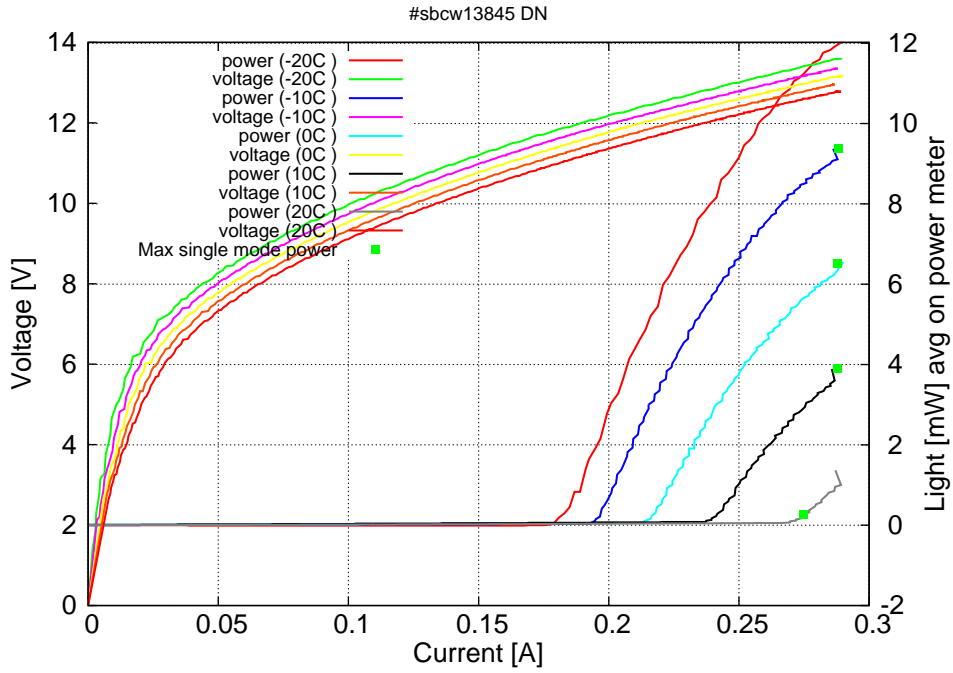


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.18A$  /  $V_{th}=11.9V$  (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

