

**Datasheet for #sbcw13847 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.

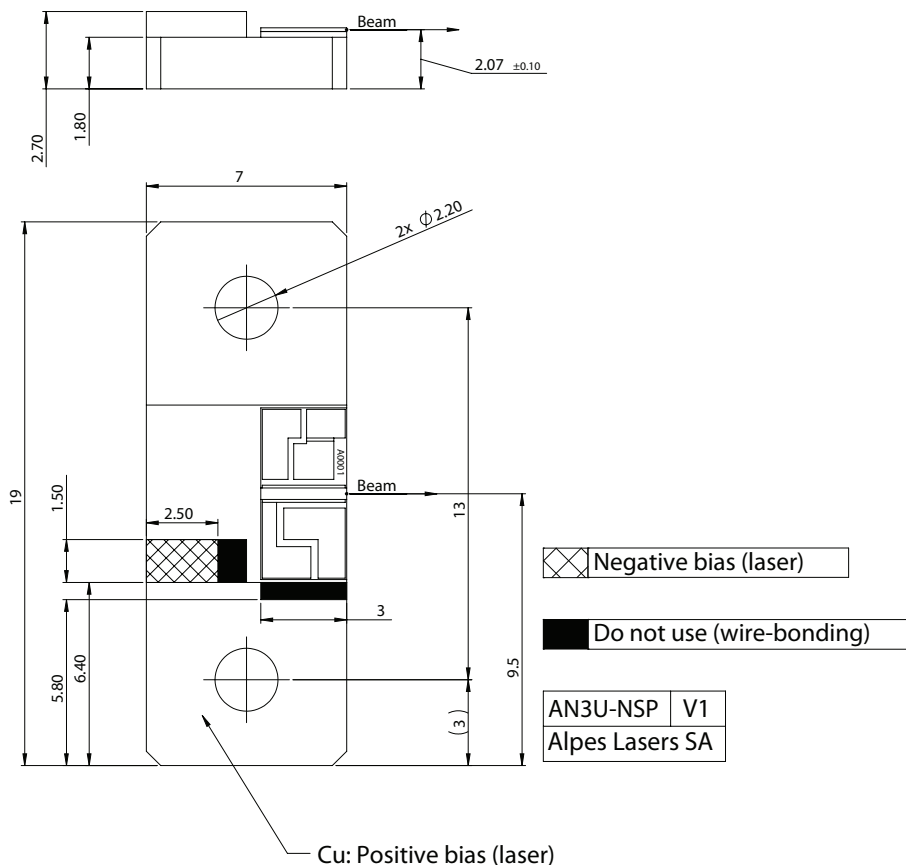


Figure 1: Mechanical and electrical interface for #sbcw13847 DN

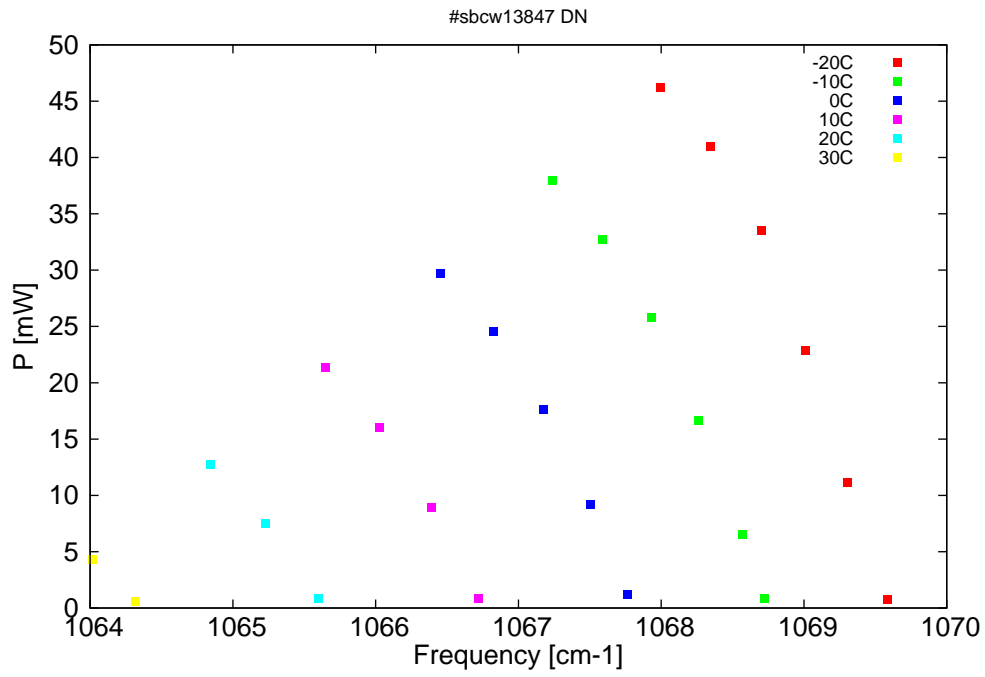


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

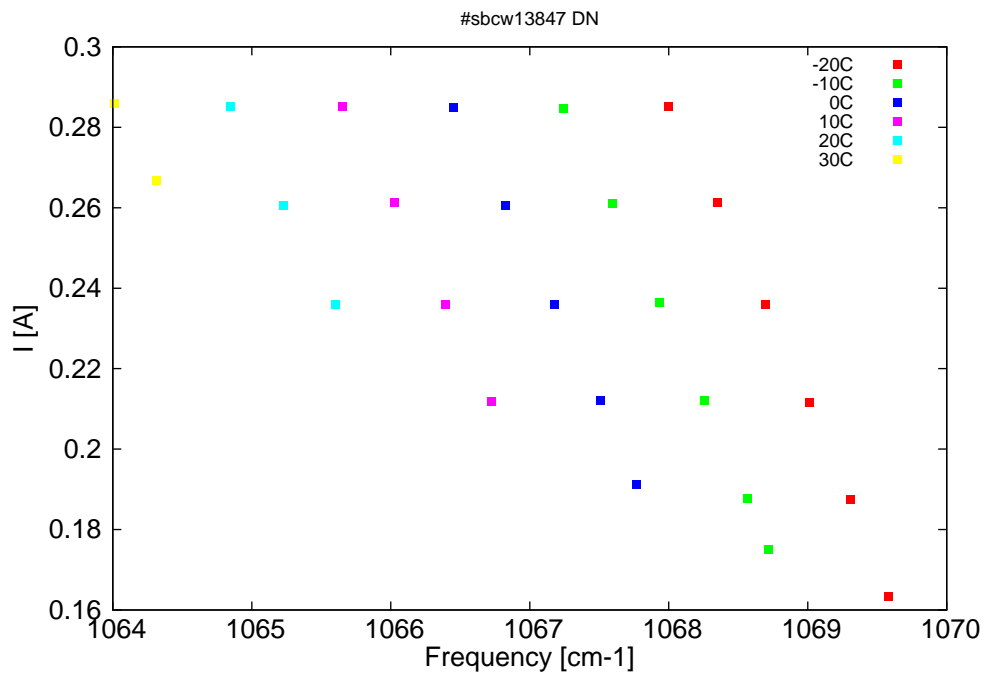


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9349.4	1069.6	0.8	-20	10.76	0.163
9351.8	1069.3	11.1	-20	11.14	0.187
9354.4	1069	22.9	-20	11.5	0.212
9357.2	1068.7	33.5	-20	11.84	0.236
9360.2	1068.3	41	-20	12.18	0.261
9363.3	1068	46.3	-20	12.5	0.285
9357	1068.7	0.9	-10	10.81	0.175
9358.3	1068.6	6.5	-10	11.01	0.188
9361	1068.3	16.7	-10	11.37	0.212
9363.9	1067.9	25.8	-10	11.72	0.236
9366.9	1067.6	32.7	-10	12.05	0.261
9370	1067.2	38	-10	12.35	0.285
9365.4	1067.8	1.2	0	10.94	0.191
9367.6	1067.5	9.2	0	11.23	0.212
9370.5	1067.2	17.6	0	11.58	0.236
9373.6	1066.8	24.5	0	11.91	0.26
9376.9	1066.5	29.7	0	12.22	0.285
9374.5	1066.7	0.8	10	11.11	0.212
9377.4	1066.4	8.9	10	11.45	0.236
9380.7	1066	16	10	11.79	0.261
9383.9	1065.7	21.4	10	12.1	0.285
9384.4	1065.6	0.8	20	11.33	0.236
9387.6	1065.2	7.5	20	11.66	0.261
9391	1064.8	12.8	20	11.96	0.285
9395.7	1064.3	0.6	30	11.61	0.267
9398.4	1064	4.3	30	11.84	0.286

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

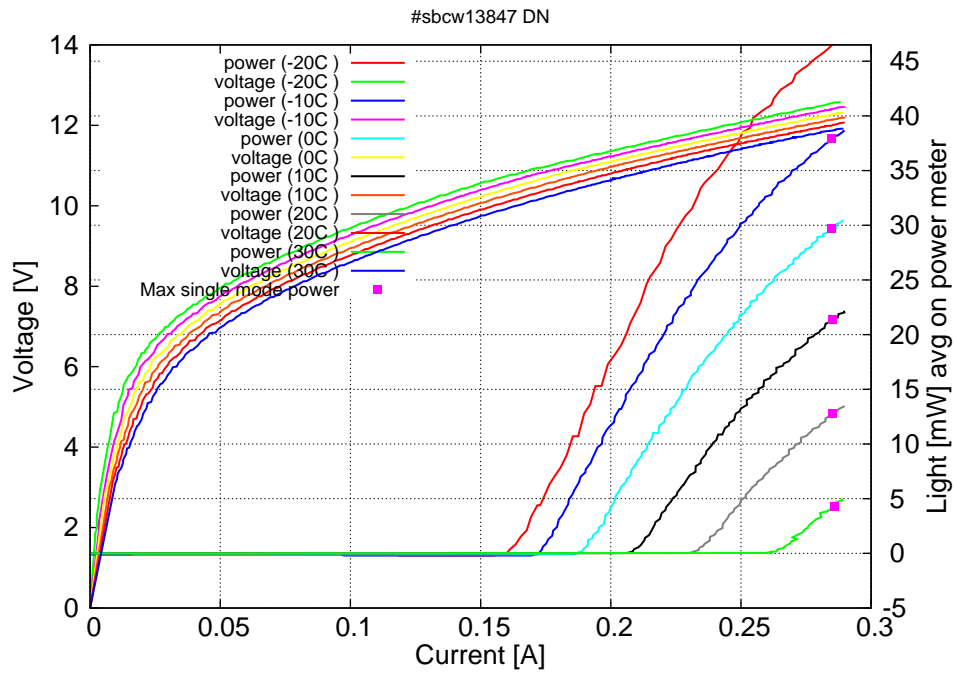


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.16A$  /  $V_{th}=10.7V$  (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

