

**Datasheet for #sbcw2848 DN**

Recommendations:

Please read the starter kit user manual, if available, and have a look at the FAQ at <http://www.alpe lasers.ch/alfa q.pdf>

**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 use with a power-supply ILX Lightwave LDX-3232 or equivalent.

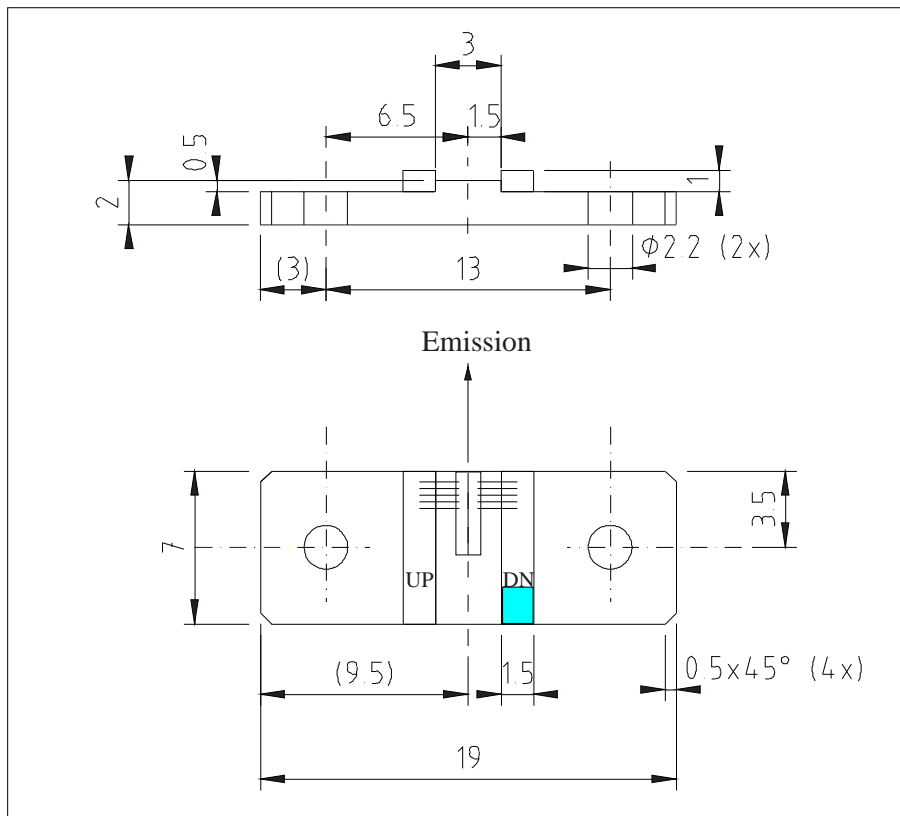


Figure 1: Support mounting for #sbcw2848 DN (please note that the laser is connected to the DN pad drawn in blue)

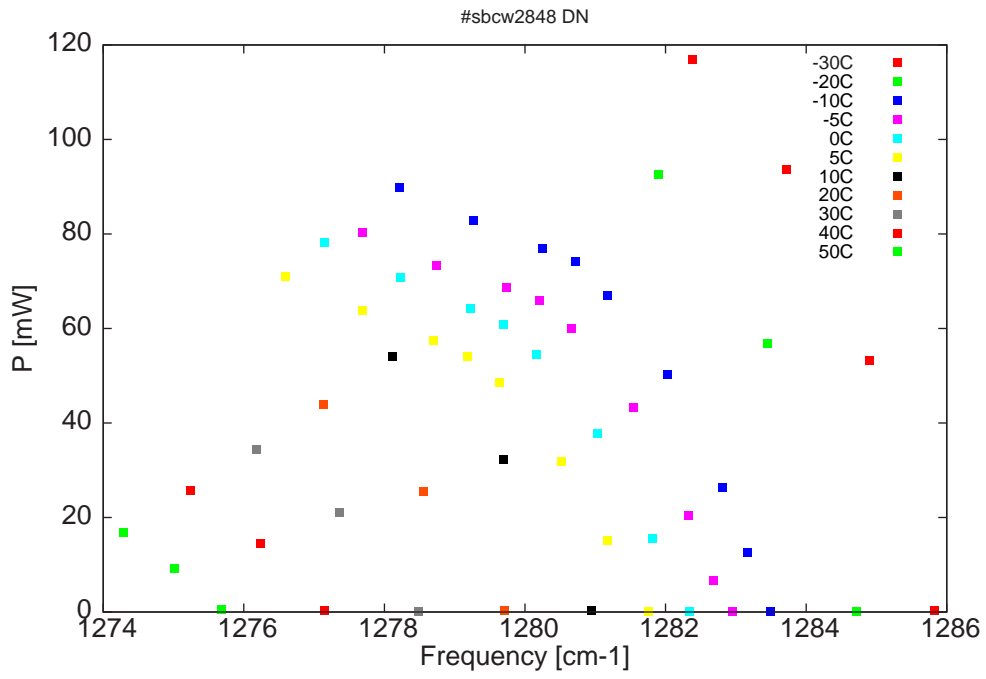


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

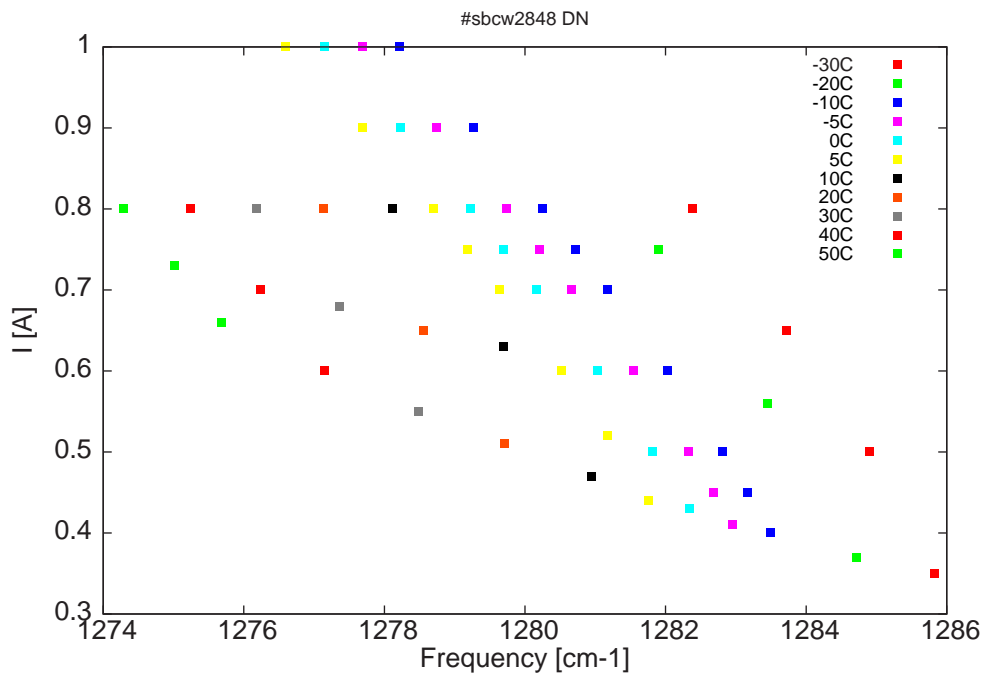


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7777.1	1285.8	0.3	-30	8.1	0.35
7782.7	1284.9	53.3	-30	8.7	0.5
7789.9	1283.7	93.7	-30	9.2	0.65
7798	1282.4	116.9	-30	9.8	0.8
7783.8	1284.7	0.1	-20	8	0.37
7791.5	1283.4	56.8	-20	8.8	0.56
7801	1281.9	92.6	-20	9.5	0.75
7791.2	1283.5	0.1	-10	8.1	0.4
7793.2	1283.2	12.6	-10	8.3	0.45
7795.4	1282.8	26.4	-10	8.5	0.5
7800.1	1282	50.3	-10	8.9	0.6
7805.4	1281.2	67.1	-10	9.2	0.7
7808.1	1280.7	74.1	-10	9.4	0.75
7811	1280.3	76.9	-10	9.6	0.8
7817	1279.3	82.9	-10	10	0.9
7823.4	1278.2	89.9	-10	10.3	1
7794.5	1283	0.1	-5	8	0.41
7796.2	1282.7	6.6	-5	8.2	0.45
7798.3	1282.3	20.5	-5	8.4	0.5
7803.1	1281.5	43.2	-5	8.8	0.6
7808.4	1280.7	59.9	-5	9.2	0.7
7811.2	1280.2	65.8	-5	9.4	0.75
7814.1	1279.7	68.7	-5	9.5	0.8
7820.2	1278.7	73.3	-5	9.9	0.9
7826.7	1277.7	80.4	-5	10.3	1
7798.3	1282.3	0.1	0	8.1	0.43
7801.4	1281.8	15.5	0	8.4	0.5
7806.2	1281	37.7	0	8.8	0.6
7811.5	1280.2	54.6	0	9.1	0.7
7814.3	1279.7	60.9	0	9.3	0.75
7817.2	1279.2	64.3	0	9.5	0.8
7823.4	1278.2	70.9	0	9.9	0.9
7830	1277.1	78.1	0	10.2	1
7801.8	1281.8	0.1	5	8.1	0.44
7805.4	1281.2	15.1	5	8.4	0.52
7809.3	1280.5	31.8	5	8.7	0.6
7814.7	1279.6	48.5	5	9.1	0.7
7817.5	1279.2	54.1	5	9.3	0.75
7820.4	1278.7	57.4	5	9.5	0.8
7826.7	1277.7	63.7	5	9.8	0.9
7833.3	1276.6	71	5	10.2	1
7806.8	1280.9	0.2	10	8.2	0.47
7814.4	1279.7	32.3	10	8.8	0.63
7824	1278.1	54	10	9.5	0.8
7814.3	1279.7	0.4	20	8.3	0.51
7821.3	1278.6	25.4	20	8.8	0.65
7830	1277.1	43.9	20	9.4	0.8
7821.8	1278.5	0.1	30	8.4	0.55
7828.7	1277.4	21	30	8.9	0.68

Table 1 : singlemode optical output power as function of operating parameters

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7835.9	1276.2	34.4	30	9.3	0.8
7830	1277.1	0.4	40	8.5	0.6
7835.5	1276.2	14.5	40	8.9	0.7
7841.7	1275.2	25.7	40	9.3	0.8
7839	1275.7	0.5	50	8.7	0.66
7843.1	1275	9.3	50	8.9	0.73
7847.5	1274.3	16.9	50	9.2	0.8

Table 1 : singlemode optical output power as function of operating parameters

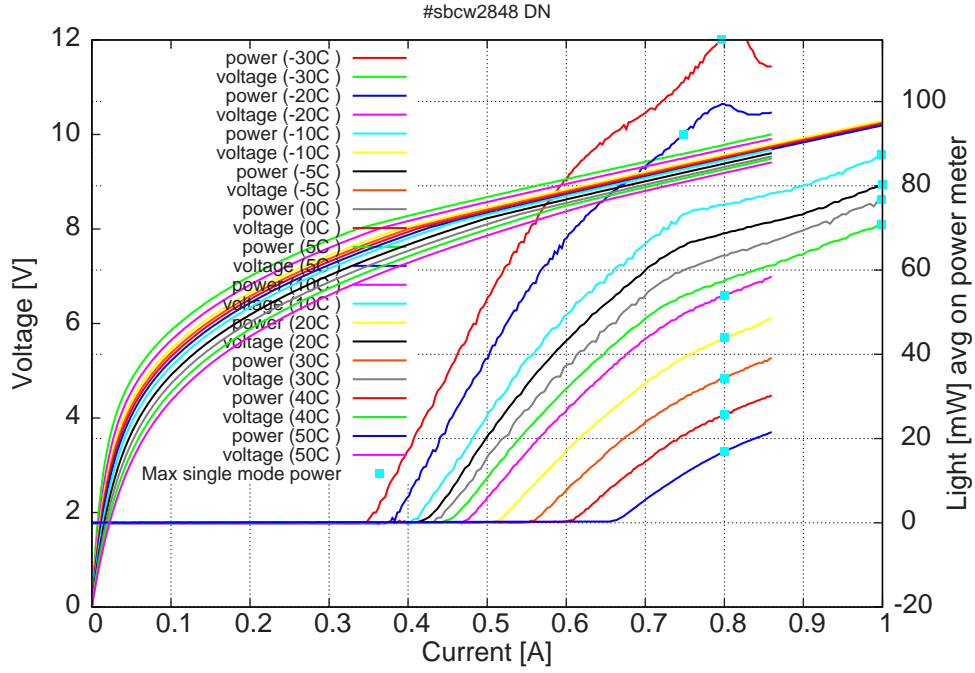


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -30C:  $I_{th}=350\text{mA}$  /  $V_{th}= 8.1\text{V}$  (2-wires measurements). Maximum operation current: 0.80A for all temperatures.

Note: possible mode jumping around 0.75A between -30C and 10C (at the kink in the LIV), not distinguishable in the spectra done.



Figure 4: spectra between 5C and 50C for various DC currents

