

**Datasheet for #sbcw13686 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.

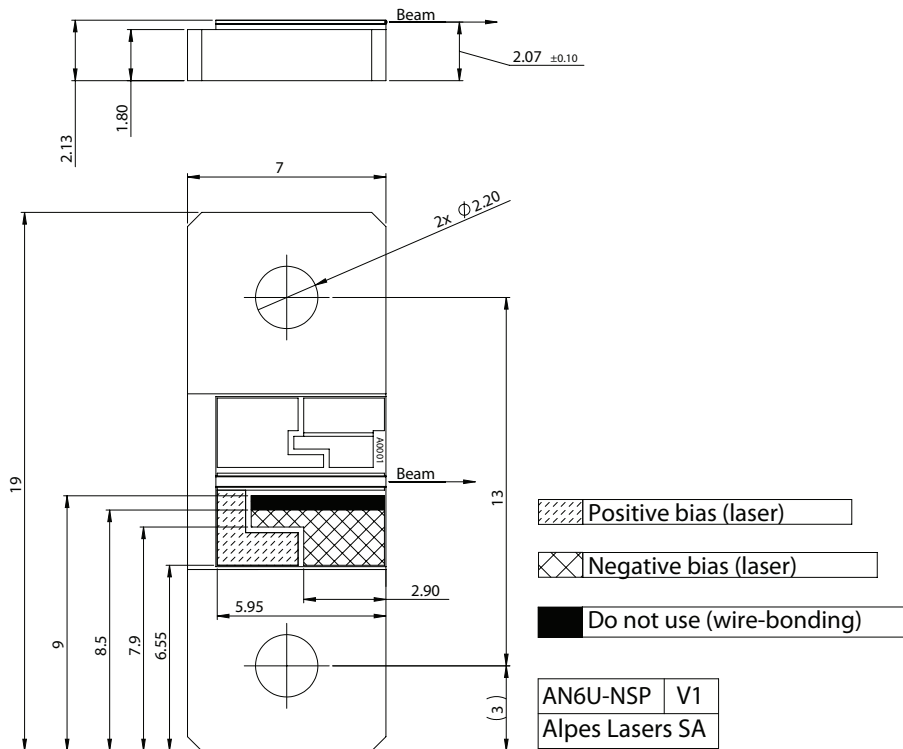


Figure 1: Mechanical and electrical interface for #sbcw13686 DN

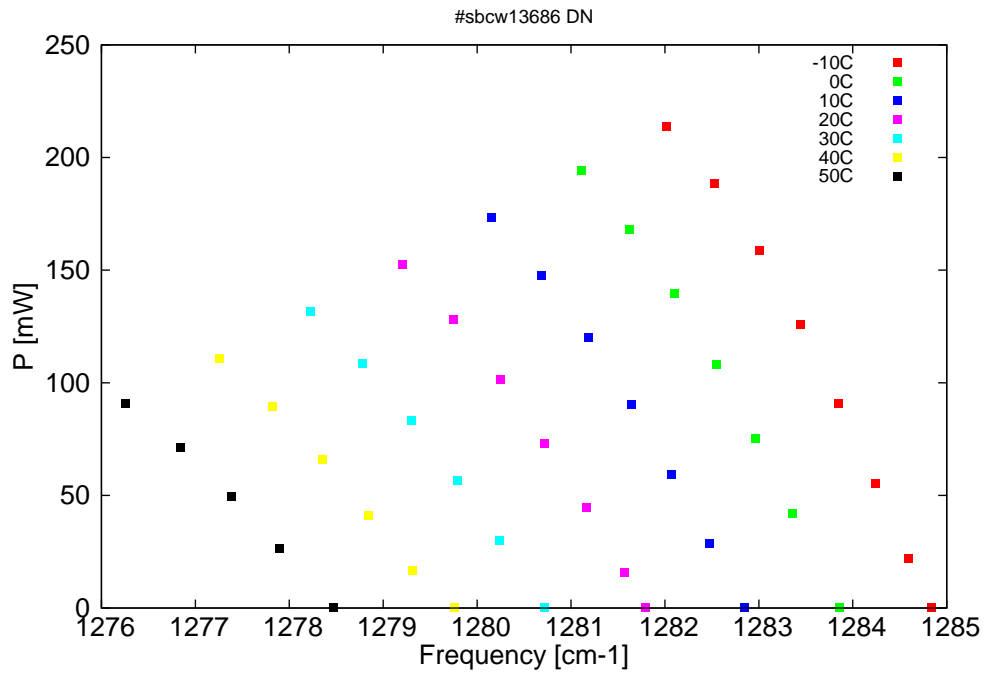


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

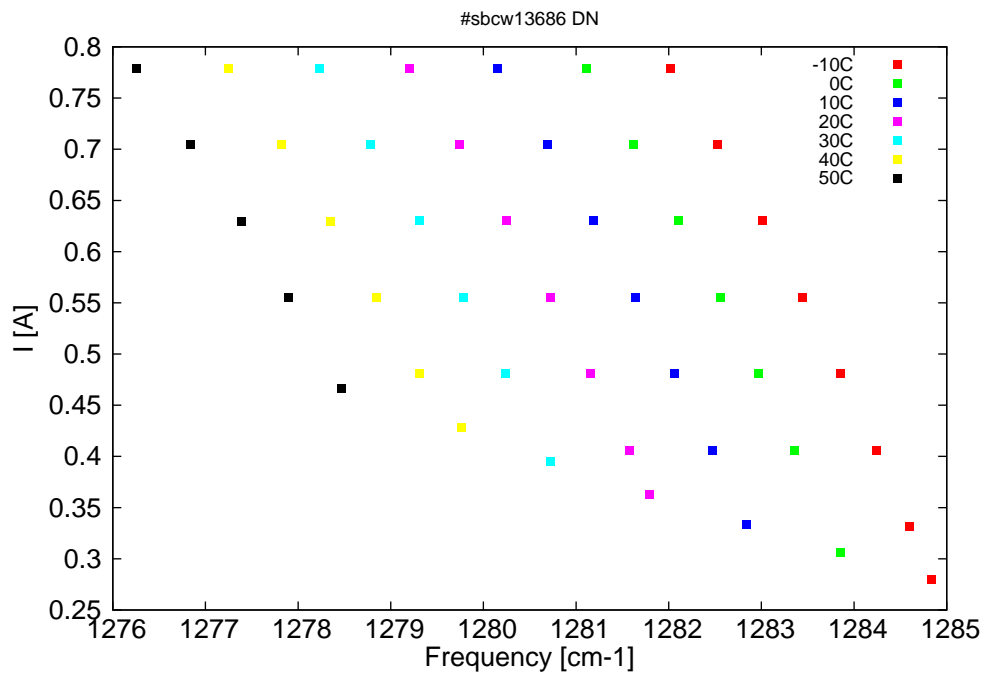


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7783.1	1284.8	0.3	-10	8	0.28
7784.6	1284.6	21.8	-10	8.21	0.331
7786.7	1284.2	55.4	-10	8.48	0.406
7789.1	1283.9	90.7	-10	8.74	0.481
7791.5	1283.4	125.8	-10	8.98	0.555
7794.2	1283	158.7	-10	9.22	0.63
7797.1	1282.5	188.5	-10	9.46	0.705
7800.2	1282	214	-10	9.7	0.779
7789	1283.9	0.4	0	7.95	0.306
7792.1	1283.4	41.9	0	8.34	0.406
7794.4	1283	75.2	0	8.61	0.481
7796.9	1282.6	108.2	0	8.86	0.555
7799.7	1282.1	139.6	0	9.09	0.63
7802.6	1281.6	167.8	0	9.33	0.705
7805.7	1281.1	194.2	0	9.55	0.779
7795.2	1282.8	0.4	10	7.92	0.333
7797.4	1282.5	28.6	10	8.2	0.406
7799.9	1282.1	59.4	10	8.45	0.481
7802.5	1281.6	90.6	10	8.7	0.555
7805.3	1281.2	120.1	10	8.94	0.63
7808.3	1280.7	147.8	10	9.17	0.705
7811.6	1280.2	173.4	10	9.4	0.779
7801.5	1281.8	0.3	20	7.89	0.362
7802.9	1281.6	15.9	20	8.06	0.406
7805.4	1281.2	44.5	20	8.32	0.481
7808.1	1280.7	73.2	20	8.57	0.555
7811	1280.2	101.2	20	8.81	0.63
7814.1	1279.7	128.3	20	9.04	0.705
7817.4	1279.2	152.6	20	9.27	0.779
7808.1	1280.7	0.3	30	7.89	0.395
7811.1	1280.2	29.9	30	8.2	0.481
7813.8	1279.8	56.6	30	8.44	0.555
7816.7	1279.3	83.1	30	8.69	0.63
7819.9	1278.8	108.6	30	8.92	0.705
7823.3	1278.2	131.5	30	9.14	0.779
7814	1279.8	0.3	40	7.9	0.429
7816.7	1279.3	16.7	40	8.08	0.481
7819.5	1278.8	41.2	40	8.33	0.555
7822.6	1278.4	65.9	40	8.58	0.63
7825.8	1277.8	89.4	40	8.81	0.705
7829.3	1277.3	110.9	40	9.04	0.779
7821.9	1278.5	0.3	50	7.92	0.466
7825.4	1277.9	26.6	50	8.23	0.555
7828.5	1277.4	49.3	50	8.47	0.63
7831.8	1276.8	71.2	50	8.71	0.705
7835.4	1276.3	90.7	50	8.94	0.779

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

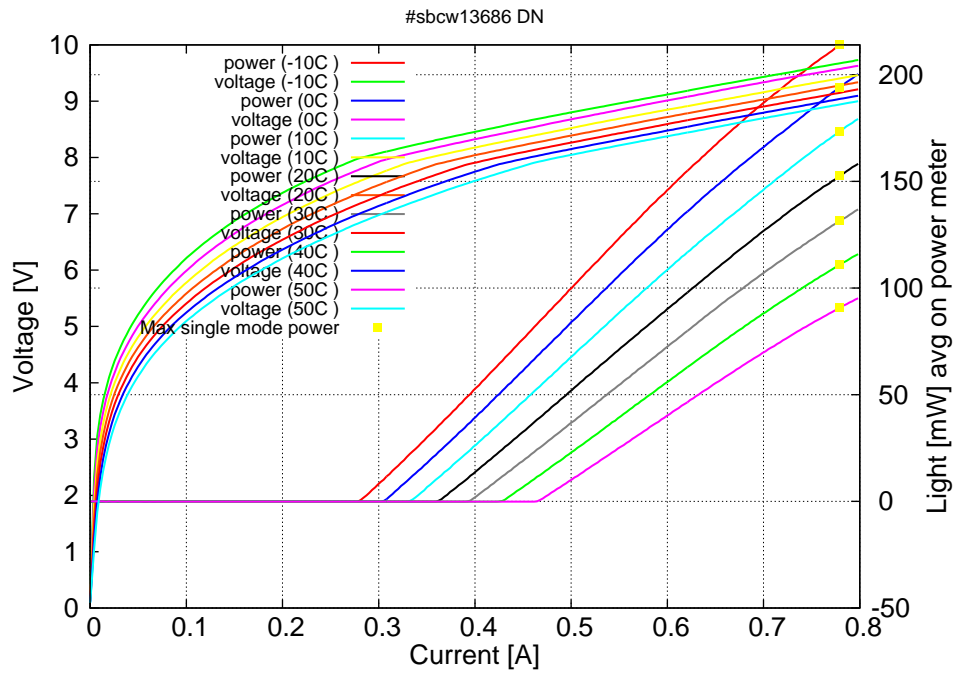


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.28A$  /  $V_{th}=8.0V$  (2-wires measurements). Maximum operation current: 0.80A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

