

**Datasheet for #sbcw17515 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 #sbcw17515 DN

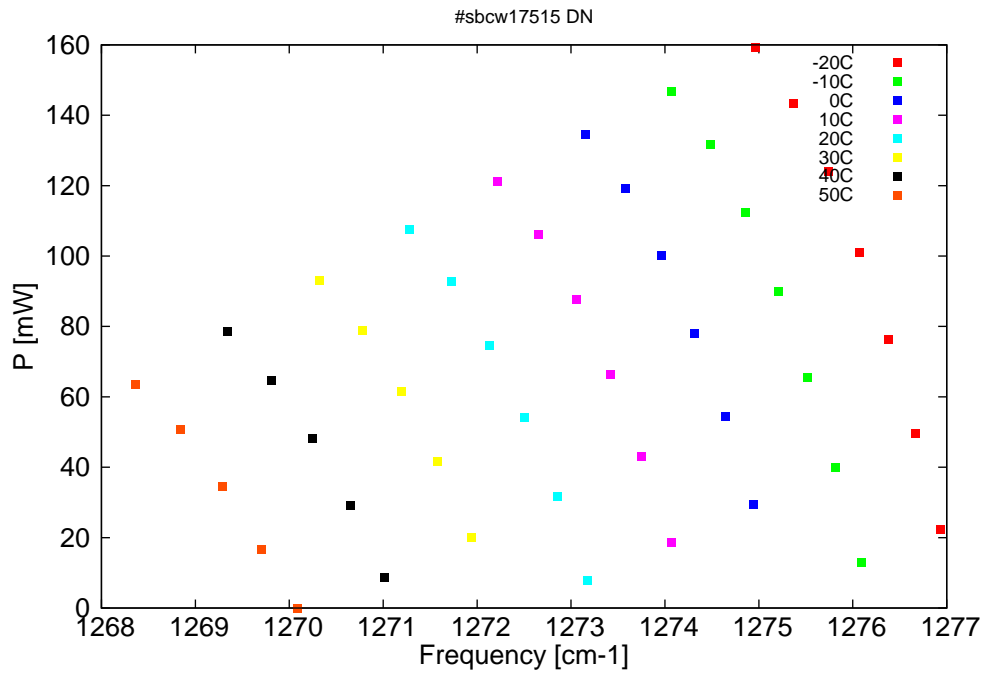


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

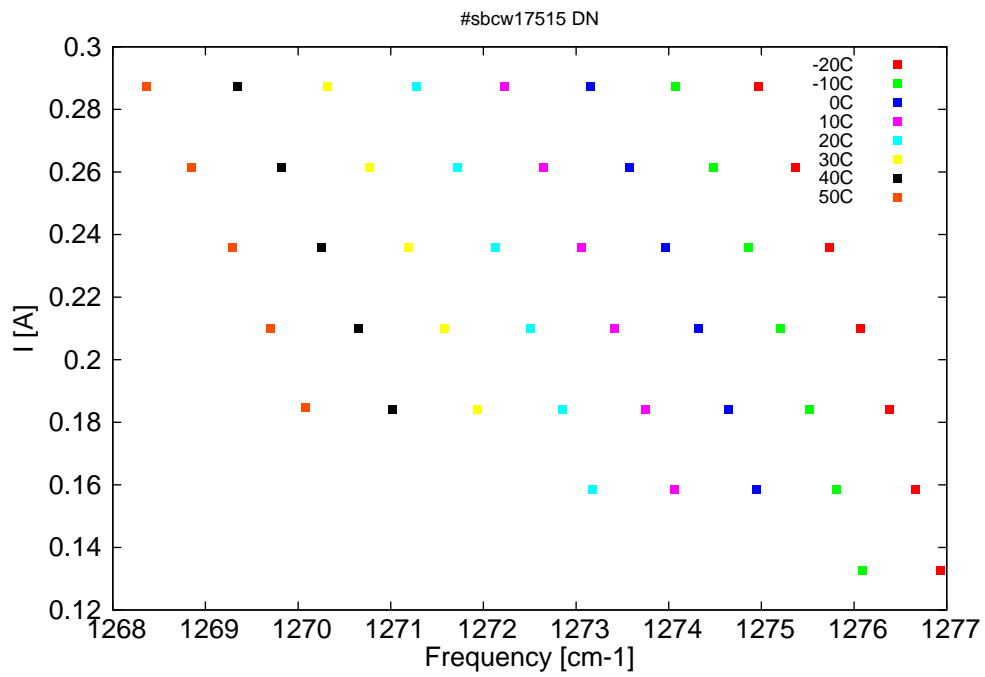


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7831.3	1276.9	22.2	-20	8.07	0.133
7832.9	1276.7	49.7	-20	8.29	0.158
7834.7	1276.4	76.2	-20	8.51	0.184
7836.5	1276.1	101	-20	8.73	0.21
7838.6	1275.7	123.9	-20	8.94	0.236
7840.9	1275.4	143.5	-20	9.16	0.262
7843.3	1275	159.1	-20	9.39	0.287
7836.4	1276.1	12.8	-10	7.99	0.133
7838.1	1275.8	39.8	-10	8.21	0.158
7839.9	1275.5	65.5	-10	8.43	0.184
7841.9	1275.2	90	-10	8.65	0.21
7844	1274.9	112.3	-10	8.86	0.236
7846.3	1274.5	131.6	-10	9.08	0.262
7848.8	1274.1	146.9	-10	9.31	0.287
7843.5	1274.9	29.4	0	8.14	0.158
7845.3	1274.6	54.3	0	8.35	0.184
7847.3	1274.3	78.1	0	8.57	0.21
7849.5	1274	100.1	0	8.79	0.236
7851.9	1273.6	119.1	0	9	0.262
7854.5	1273.2	134.5	0	9.23	0.287
7848.9	1274.1	18.6	10	8.07	0.158
7850.8	1273.8	43.2	10	8.29	0.184
7852.9	1273.4	66.3	10	8.5	0.21
7855.1	1273.1	87.6	10	8.72	0.236
7857.6	1272.7	106.2	10	8.94	0.262
7860.3	1272.2	121.3	10	9.16	0.287
7854.4	1273.2	7.8	20	8	0.158
7856.4	1272.9	31.8	20	8.22	0.184
7858.5	1272.5	54.1	20	8.44	0.21
7860.8	1272.1	74.7	20	8.66	0.236
7863.3	1271.7	92.6	20	8.87	0.262
7866.1	1271.3	107.4	20	9.1	0.287
7862	1271.9	19.9	30	8.16	0.184
7864.2	1271.6	41.7	30	8.38	0.21
7866.6	1271.2	61.6	30	8.59	0.236
7869.2	1270.8	78.9	30	8.82	0.262
7872	1270.3	93.1	30	9.04	0.287
7867.7	1271	8.6	40	8.11	0.184
7870	1270.6	29.2	40	8.32	0.21
7872.5	1270.2	48.1	40	8.54	0.236
7875.2	1269.8	64.8	40	8.77	0.262
7878.1	1269.3	78.5	40	8.99	0.287
7873.5	1270.1	0	50	8.06	0.185
7875.8	1269.7	16.6	50	8.27	0.21
7878.4	1269.3	34.7	50	8.49	0.236
7881.2	1268.8	50.7	50	8.72	0.262
7884.2	1268.4	63.6	50	8.94	0.287

*continued on next page*

Table 1:  $\lambda$ [nm]  $\nu$ [ $\text{cm}^{-1}$ ] P[mW] Temp[ $^{\circ}\text{C}$ ]  $U_{LASER}$ [V] I[A]

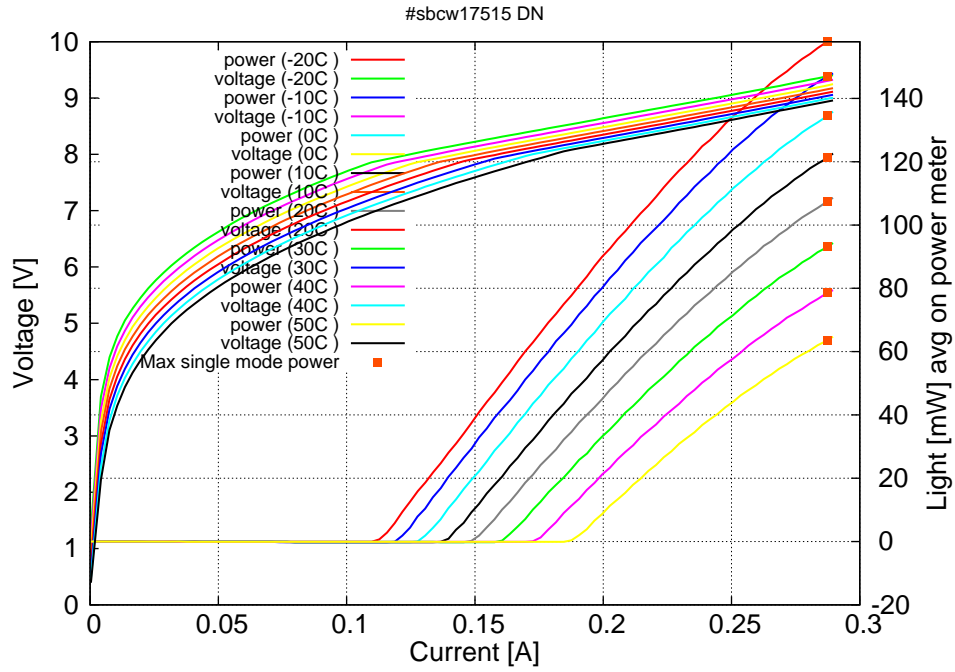


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11\text{A}$  /  $V_{th}=7.8\text{V}$  (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

