

**Datasheet for #sbcw22841 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.

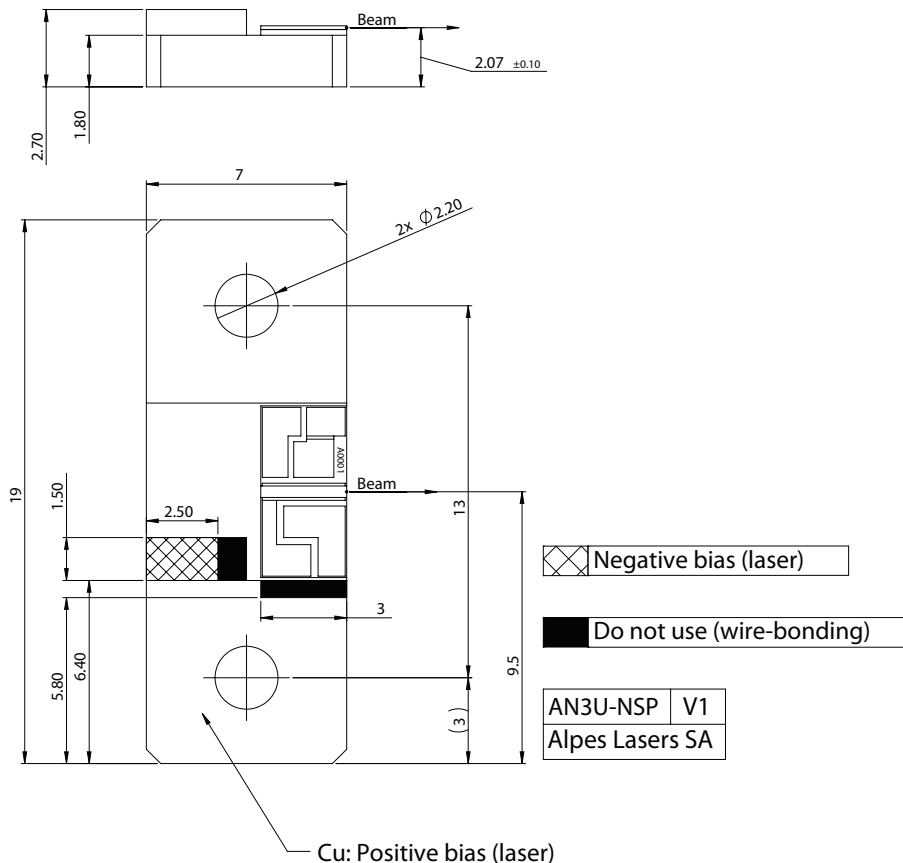


Figure 1: Mechanical and electrical interface for #sbcw22841 DN

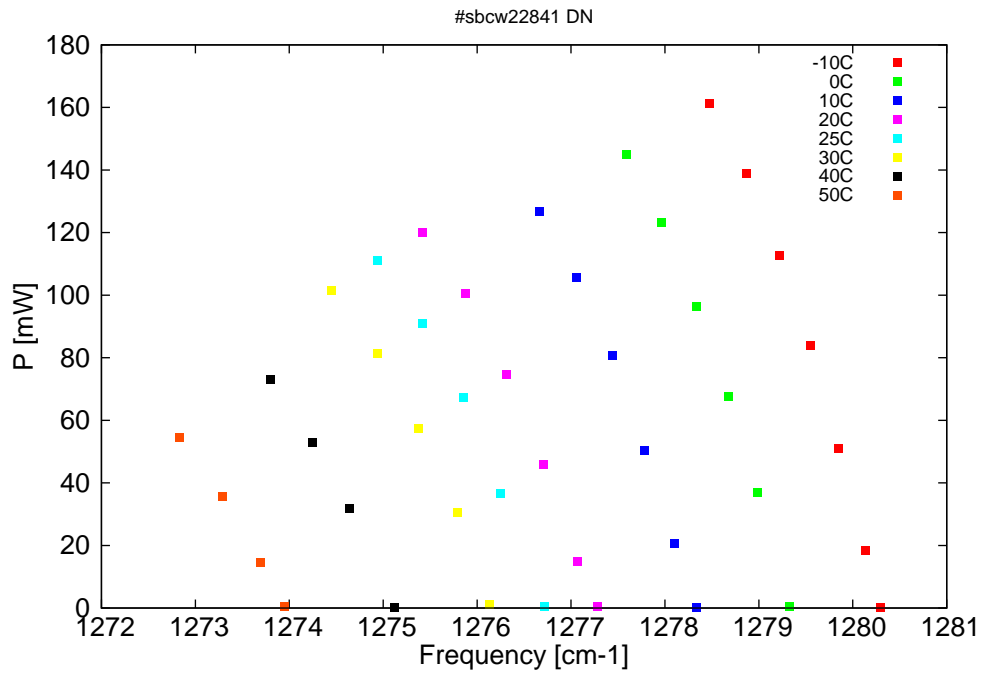


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

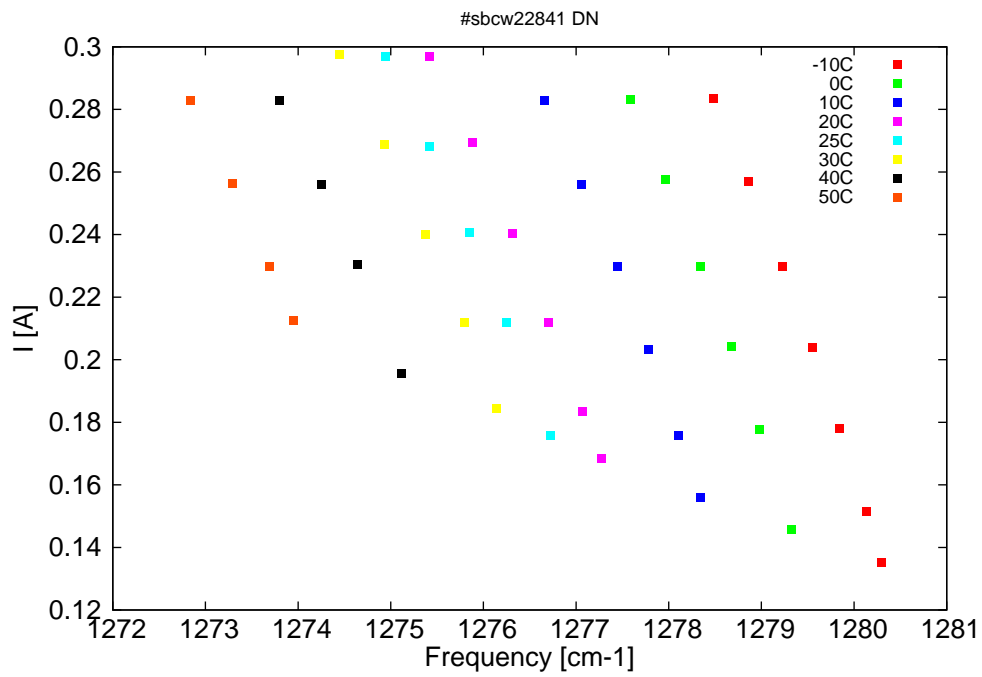


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7810.7	1280.3	0.2	-10	8.38	0.135
7811.7	1280.1	18.4	-10	8.54	0.151
7813.4	1279.8	51.2	-10	8.78	0.178
7815.2	1279.6	83.9	-10	8.99	0.204
7817.2	1279.2	112.6	-10	9.21	0.23
7819.4	1278.9	138.9	-10	9.43	0.257
7821.8	1278.5	161.3	-10	9.65	0.284
7816.6	1279.3	0.6	0	8.33	0.146
7818.7	1279	37	0	8.62	0.178
7820.6	1278.7	67.5	0	8.85	0.204
7822.6	1278.3	96.3	0	9.06	0.23
7824.9	1278	123.2	0	9.29	0.258
7827.3	1277.6	144.9	0	9.5	0.283
7822.6	1278.3	0.2	10	8.29	0.156
7824.1	1278.1	20.7	10	8.47	0.176
7826.1	1277.8	50.3	10	8.71	0.203
7828.1	1277.4	80.6	10	8.93	0.23
7830.5	1277.1	105.6	10	9.14	0.256
7832.9	1276.7	126.8	10	9.37	0.283
7829.1	1277.3	0.5	20	8.28	0.169
7830.4	1277.1	14.9	20	8.41	0.183
7832.7	1276.7	45.9	20	8.66	0.212
7835.1	1276.3	74.8	20	8.89	0.24
7837.7	1275.9	100.4	20	9.13	0.27
7840.6	1275.4	120.1	20	9.36	0.297
7832.6	1276.7	0.4	25	8.28	0.176
7835.5	1276.2	36.6	25	8.6	0.212
7837.9	1275.9	67.2	25	8.83	0.241
7840.5	1275.4	90.9	25	9.07	0.268
7843.5	1274.9	111.1	25	9.3	0.297
7836.2	1276.1	1.2	30	8.3	0.184
7838.3	1275.8	30.5	30	8.53	0.212
7840.8	1275.4	57.2	30	8.77	0.24
7843.5	1274.9	81.3	30	9.01	0.269
7846.5	1274.5	101.4	30	9.25	0.298
7842.4	1275.1	0.3	40	8.29	0.196
7845.3	1274.6	31.8	40	8.59	0.231
7847.8	1274.2	52.8	40	8.8	0.256
7850.5	1273.8	72.9	40	9.02	0.283
7849.6	1273.9	0.4	50	8.34	0.212
7851.2	1273.7	14.5	50	8.49	0.23
7853.7	1273.3	35.7	50	8.71	0.256
7856.5	1272.8	54.5	50	8.92	0.283

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

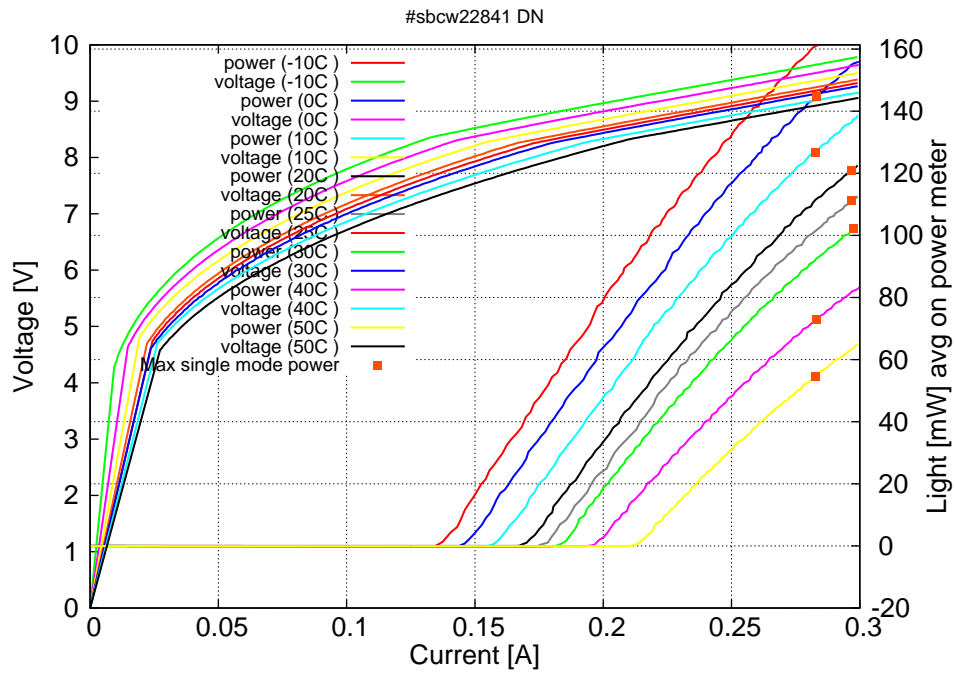


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.13A$  /  $V_{th}=8.4V$  (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

