

**Datasheet for #sbcw24870 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 #sbcw24870 DN

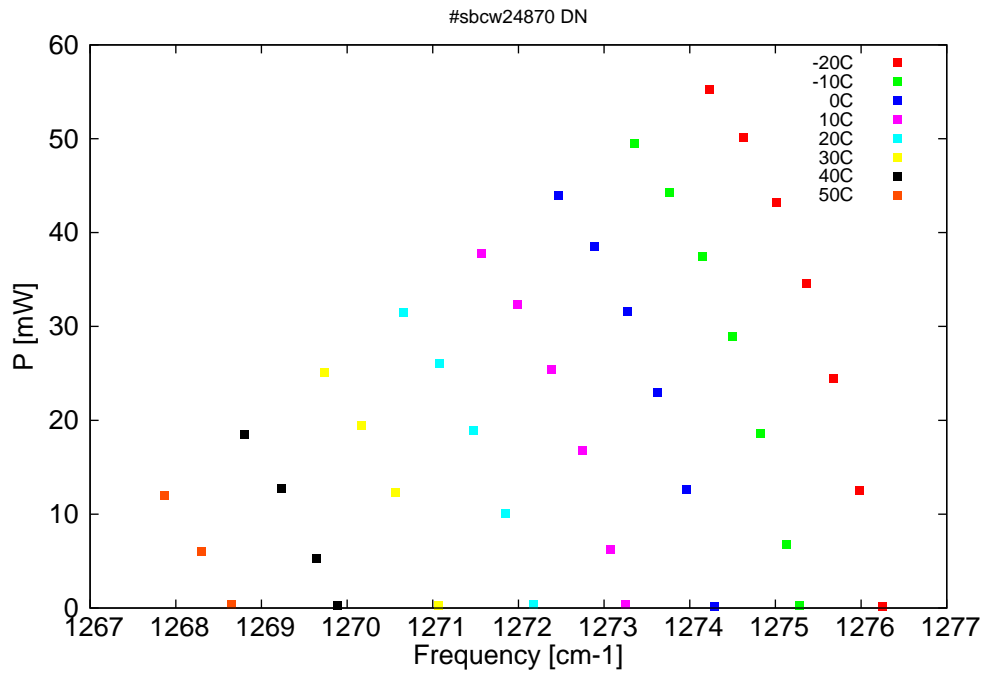


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

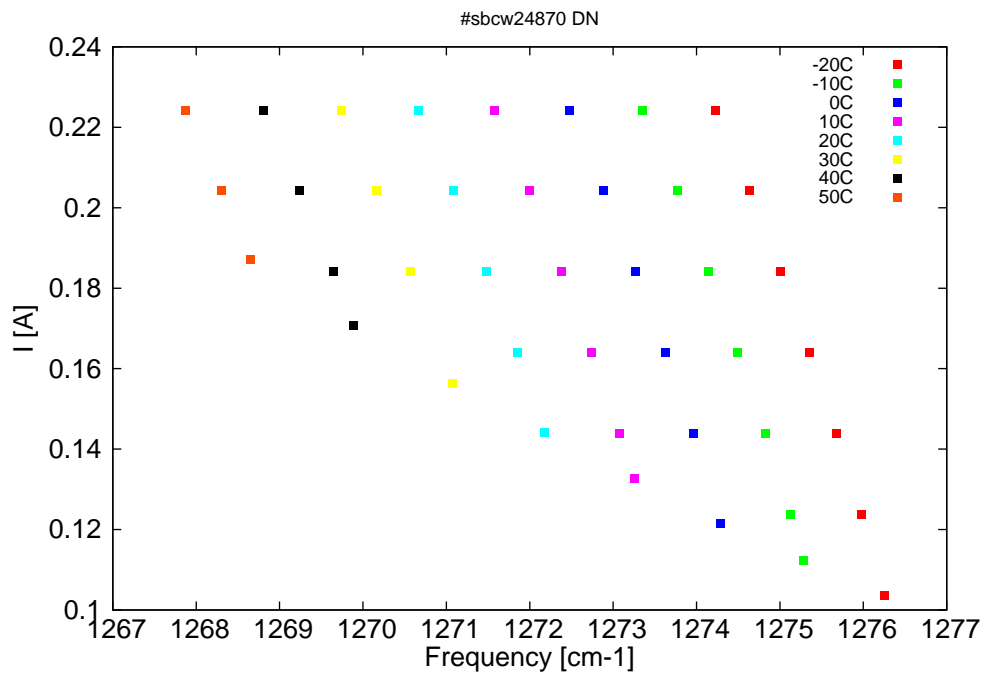


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7835.4	1276.3	0.2	-20	8.55	0.104
7837.1	1276	12.5	-20	8.86	0.124
7839	1275.7	24.5	-20	9.15	0.144
7840.9	1275.4	34.5	-20	9.44	0.164
7843.1	1275	43.2	-20	9.72	0.184
7845.4	1274.6	50.1	-20	10	0.204
7847.9	1274.2	55.3	-20	10.28	0.224
7841.4	1275.3	0.3	-10	8.56	0.112
7842.4	1275.1	6.7	-10	8.73	0.124
7844.2	1274.8	18.6	-10	9.02	0.144
7846.2	1274.5	28.9	-10	9.31	0.164
7848.4	1274.1	37.4	-10	9.58	0.184
7850.7	1273.8	44.2	-10	9.86	0.204
7853.3	1273.4	49.5	-10	10.13	0.224
7847.5	1274.3	0.2	0	8.58	0.122
7849.6	1274	12.6	0	8.9	0.144
7851.6	1273.6	23	0	9.17	0.164
7853.8	1273.3	31.6	0	9.45	0.184
7856.2	1272.9	38.6	0	9.72	0.204
7858.7	1272.5	43.9	0	9.99	0.224
7853.9	1273.3	0.4	10	8.62	0.133
7855	1273.1	6.2	10	8.78	0.144
7857	1272.7	16.8	10	9.05	0.164
7859.3	1272.4	25.4	10	9.32	0.184
7861.7	1272	32.4	10	9.59	0.204
7864.3	1271.6	37.8	10	9.85	0.224
7860.5	1272.2	0.4	20	8.67	0.144
7862.6	1271.8	10.1	20	8.93	0.164
7864.8	1271.5	18.9	20	9.2	0.184
7867.3	1271.1	26.1	20	9.46	0.204
7869.9	1270.7	31.5	20	9.72	0.224
7867.4	1271.1	0.3	30	8.73	0.156
7870.5	1270.6	12.3	30	9.08	0.184
7873	1270.2	19.4	30	9.35	0.204
7875.6	1269.7	25.1	30	9.6	0.224
7874.7	1269.9	0.3	40	8.81	0.171
7876.2	1269.6	5.3	40	8.98	0.184
7878.7	1269.2	12.7	40	9.23	0.204
7881.4	1268.8	18.5	40	9.48	0.224
7882.4	1268.6	0.3	50	8.92	0.187
7884.6	1268.3	6	50	9.12	0.204
7887.3	1267.9	12	50	9.38	0.224

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

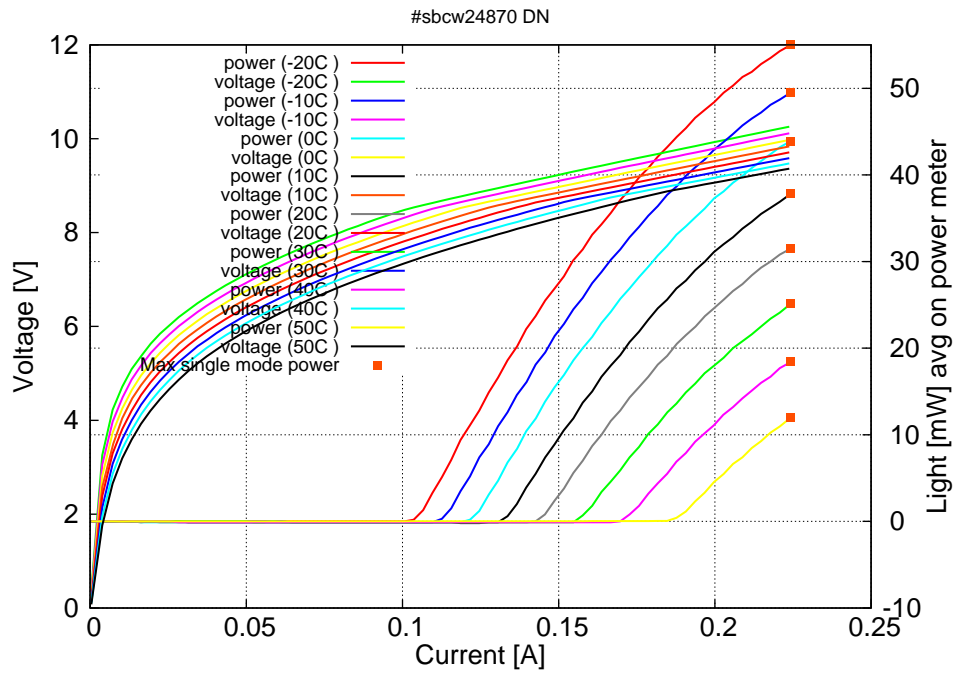


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.10A$  /  $V_{th}=8.5V$  (2-wires measurements). Maximum operation current: 0.225A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

