

**Datasheet for #sbcw24106 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 #sbcw24106 DN (please note that AlN submount numbering is A11ZP)

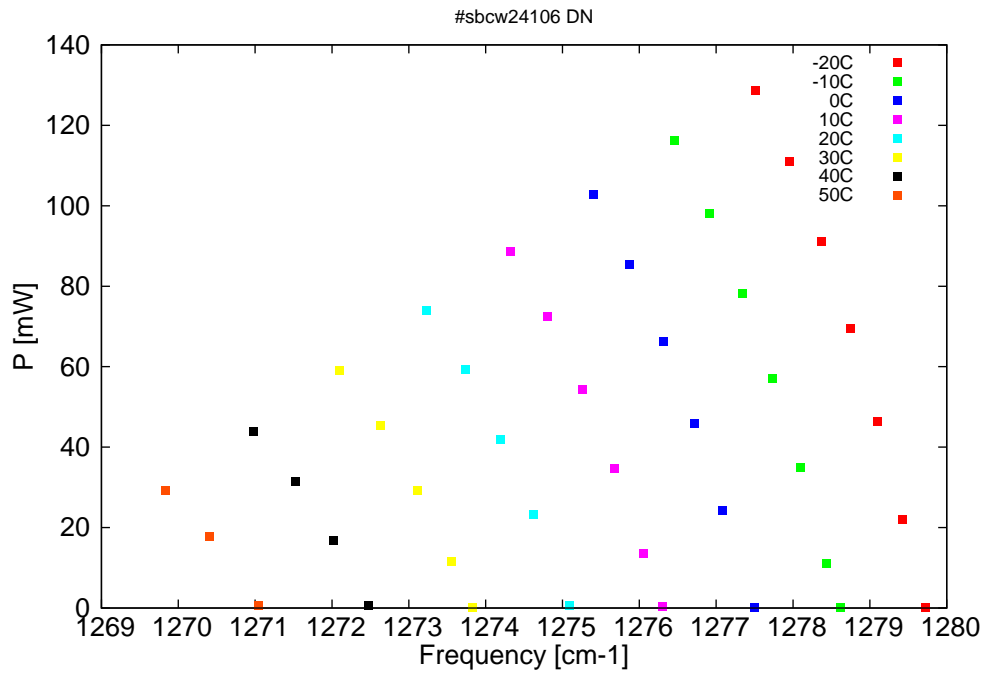


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

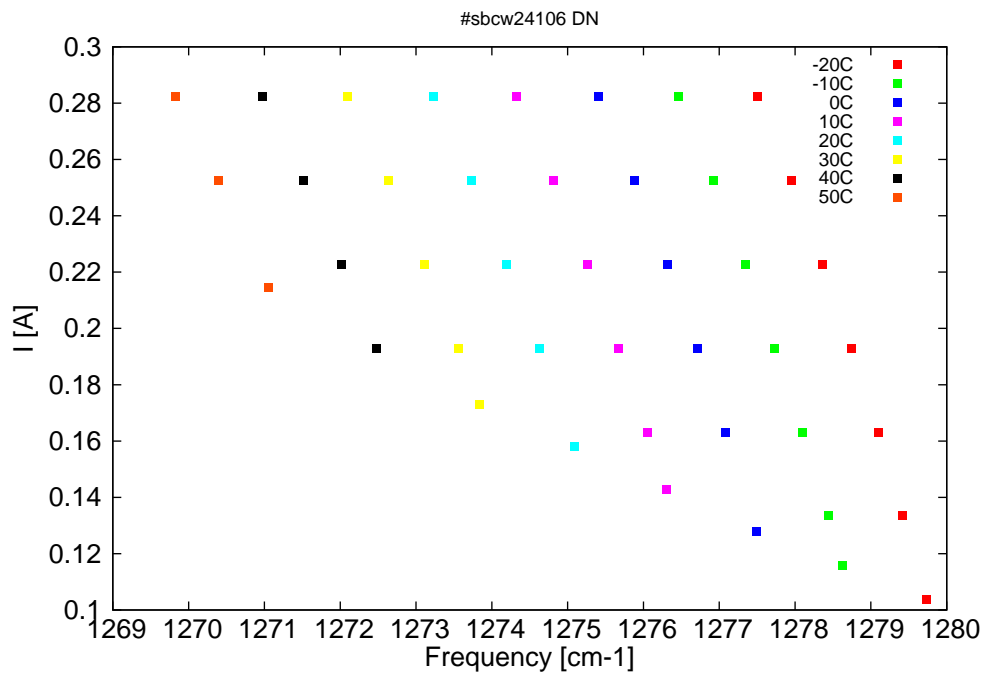


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7814.2	1279.7	0	-20	7.84	0.104
7816	1279.4	22.1	-20	8.13	0.133
7818	1279.1	46.4	-20	8.39	0.163
7820.2	1278.7	69.5	-20	8.65	0.193
7822.5	1278.4	91.2	-20	8.89	0.223
7825	1278	110.9	-20	9.14	0.253
7827.7	1277.5	128.7	-20	9.4	0.282
7820.9	1278.6	0	-10	7.84	0.116
7822.1	1278.4	11.1	-10	8	0.133
7824.1	1278.1	34.8	-10	8.27	0.163
7826.4	1277.7	57.1	-10	8.53	0.193
7828.8	1277.3	78.3	-10	8.78	0.223
7831.4	1276.9	98.1	-10	9.17	0.253
7834.2	1276.5	116.3	-10	9.33	0.282
7827.8	1277.5	0.1	0	7.83	0.128
7830.3	1277.1	24.4	0	8.15	0.163
7832.6	1276.7	45.8	0	8.39	0.193
7835.1	1276.3	66.2	0	8.64	0.223
7837.7	1275.9	85.5	0	8.89	0.253
7840.7	1275.4	102.7	0	9.13	0.282
7835.1	1276.3	0.4	10	7.85	0.143
7836.6	1276.1	13.6	10	8.03	0.163
7839	1275.7	34.6	10	8.27	0.193
7841.5	1275.3	54.2	10	8.51	0.223
7844.3	1274.8	72.6	10	8.76	0.253
7847.3	1274.3	88.7	10	9	0.282
7842.6	1275.1	0.6	20	7.89	0.158
7845.4	1274.6	23.2	20	8.19	0.193
7848.1	1274.2	41.9	20	8.43	0.223
7850.9	1273.7	59.2	20	8.67	0.253
7854.1	1273.2	74.1	20	8.92	0.282
7850.3	1273.8	0.2	30	7.94	0.173
7852	1273.6	11.5	30	8.11	0.193
7854.8	1273.1	29.2	30	8.35	0.223
7857.7	1272.6	45.4	30	8.59	0.253
7861	1272.1	59	30	8.85	0.282
7858.7	1272.5	0.6	40	8.05	0.193
7861.5	1272	16.7	40	8.29	0.223
7864.6	1271.5	31.5	40	8.54	0.253
7868	1271	43.9	40	8.79	0.282
7867.5	1271	0.7	50	8.13	0.215
7871.5	1270.4	17.9	50	8.44	0.253
7875.1	1269.8	29.2	50	8.69	0.282

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

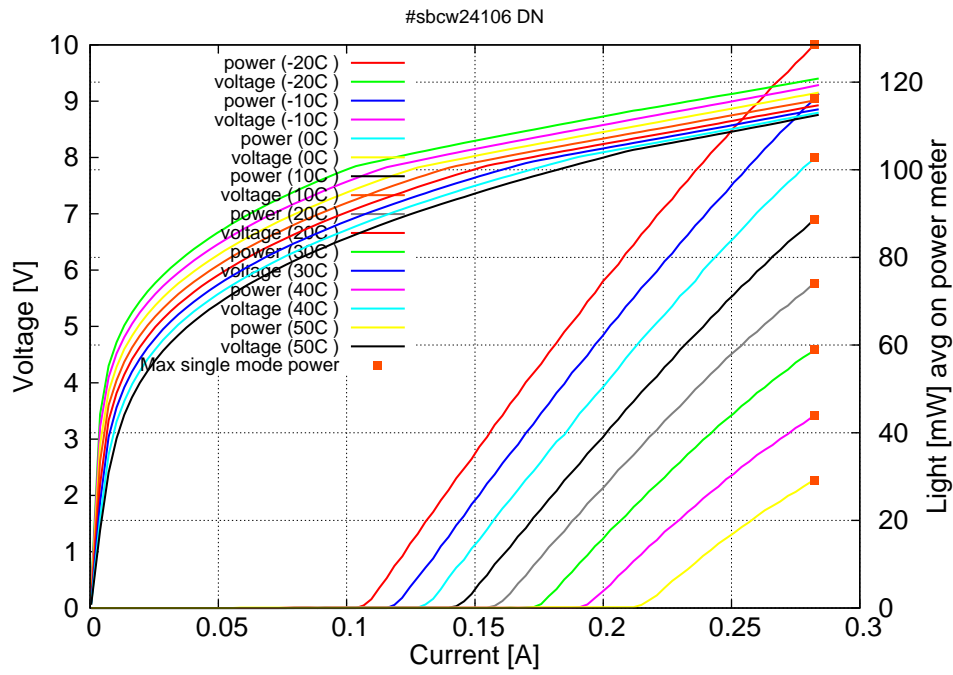


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=7.9V$  (2-wires measurements). Maximum operation current: 0.285A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

