

Datasheet for #sbcw24844 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 #sbcw24844 DN (please note that AlN submount numbering is A0ZFU)

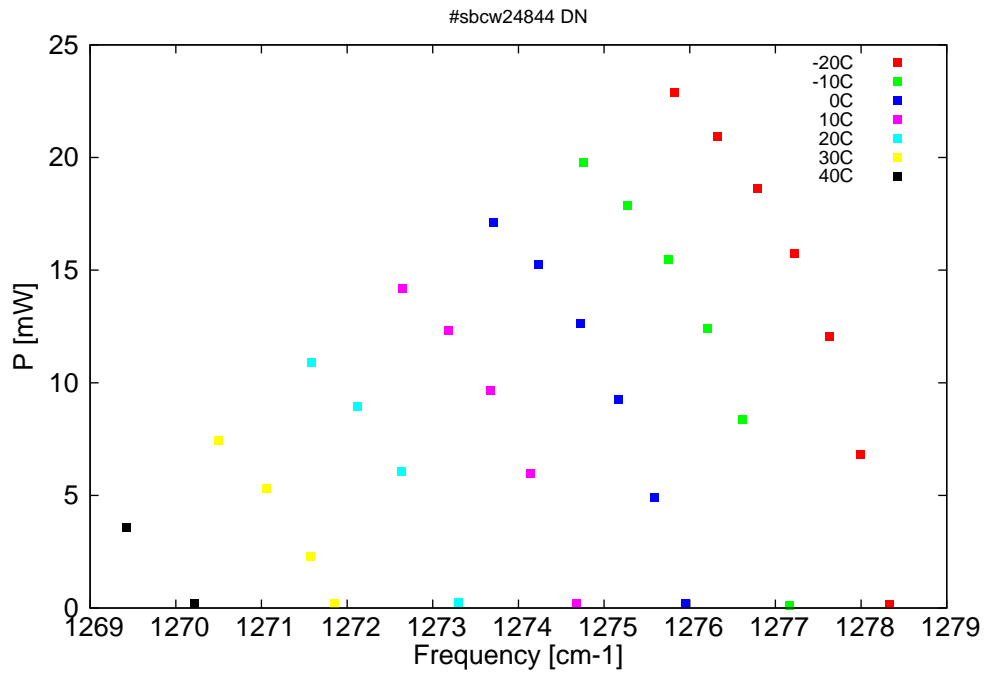


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

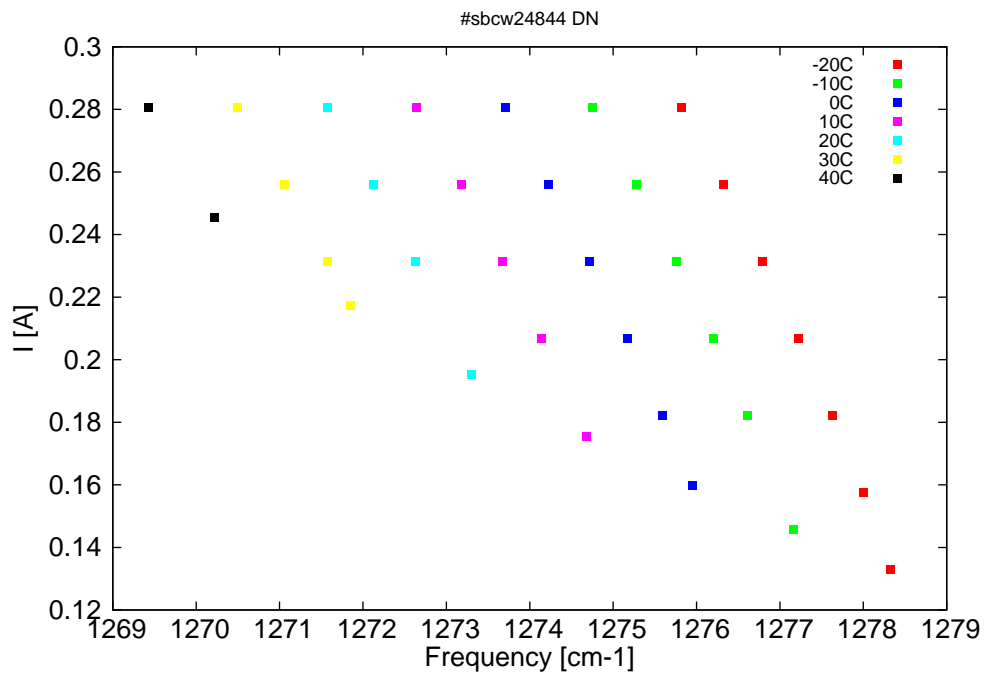


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7822.7	1278.3	0.2	-20	8.89	0.133
7824.7	1278	6.8	-20	9.2	0.158
7827	1277.6	12	-20	9.52	0.182
7829.5	1277.2	15.7	-20	9.83	0.207
7832.1	1276.8	18.6	-20	10.13	0.231
7835	1276.3	20.9	-20	10.43	0.256
7838.1	1275.8	22.9	-20	10.73	0.281
7829.9	1277.2	0.1	-10	8.91	0.146
7833.2	1276.6	8.4	-10	9.37	0.182
7835.7	1276.2	12.4	-10	9.68	0.207
7838.5	1275.8	15.5	-10	9.98	0.231
7841.4	1275.3	17.9	-10	10.28	0.256
7844.6	1274.8	19.8	-10	10.58	0.281
7837.3	1275.9	0.2	0	8.96	0.16
7839.5	1275.6	4.9	0	9.24	0.182
7842.1	1275.2	9.2	0	9.54	0.207
7844.9	1274.7	12.6	0	9.83	0.231
7847.9	1274.2	15.3	0	10.13	0.256
7851.1	1273.7	17.1	0	10.42	0.281
7845.1	1274.7	0.2	10	9.04	0.176
7848.4	1274.1	6	10	9.41	0.207
7851.3	1273.7	9.6	10	9.7	0.231
7854.4	1273.2	12.3	10	9.99	0.256
7857.6	1272.6	14.2	10	10.28	0.281
7853.6	1273.3	0.2	20	9.16	0.195
7857.7	1272.6	6.1	20	9.58	0.231
7860.9	1272.1	8.9	20	9.86	0.256
7864.2	1271.6	10.9	20	10.15	0.281
7862.6	1271.8	0.2	30	9.3	0.217
7864.3	1271.6	2.3	30	9.47	0.231
7867.5	1271.1	5.3	30	9.74	0.256
7870.9	1270.5	7.4	30	10.02	0.281
7872.7	1270.2	0.2	40	9.51	0.246
7877.6	1269.4	3.6	40	9.91	0.281

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

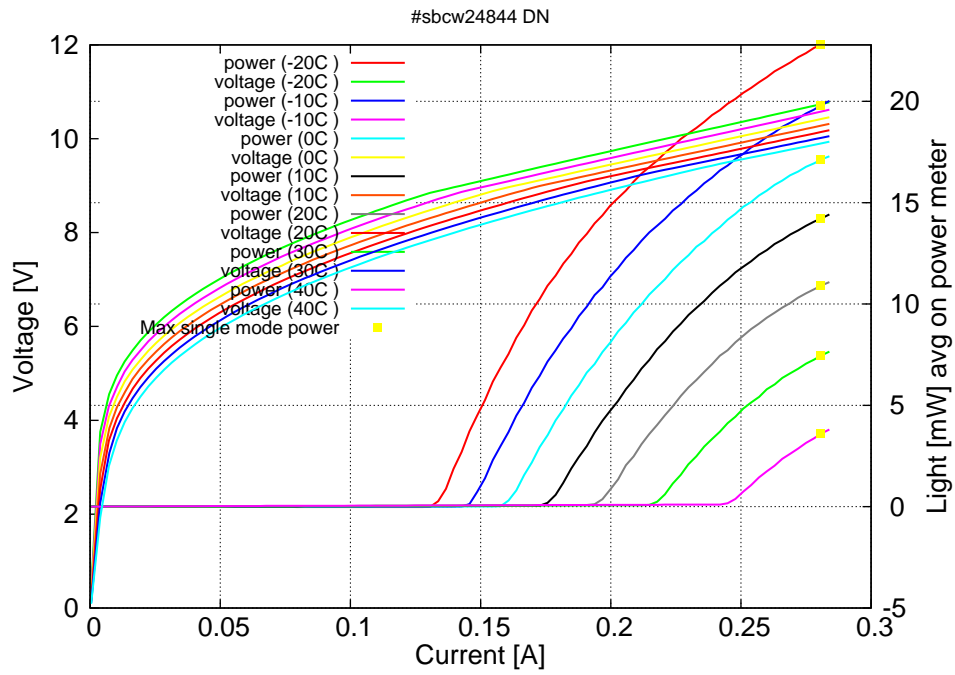


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.285A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

