

Datasheet for #sbcw24852 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 #sbcw24852 DN (please note that AlN submount numbering is A0YVP)

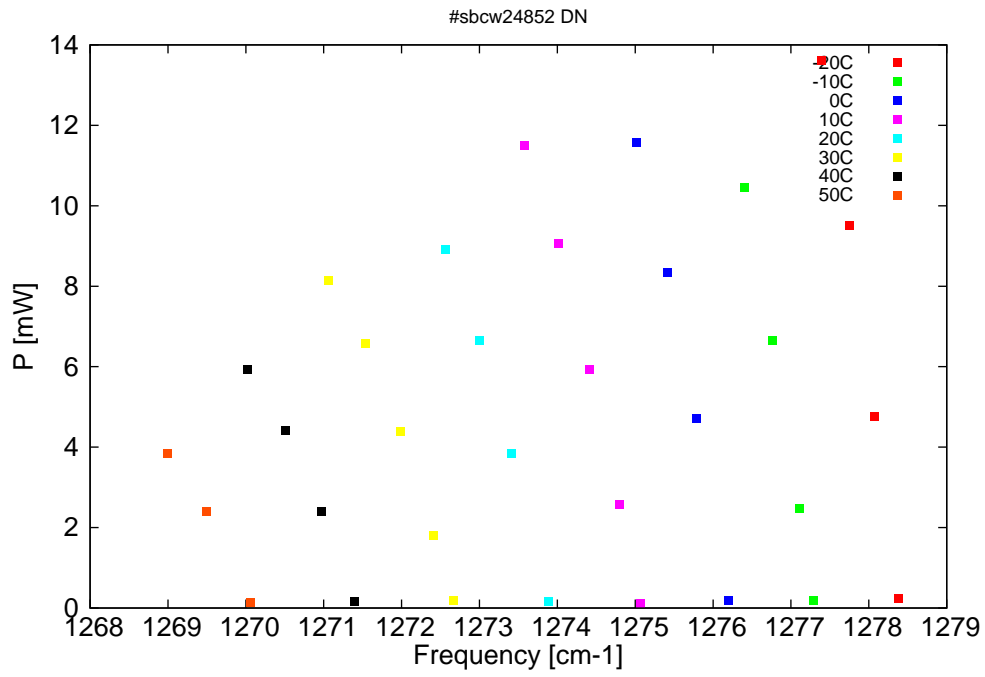


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

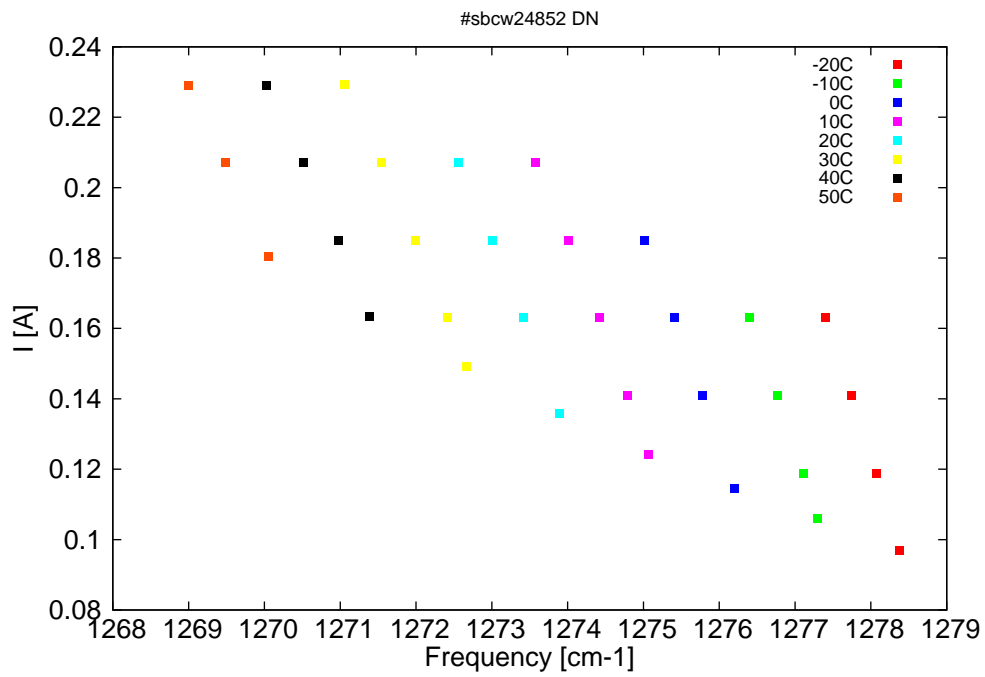


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7822.4	1278.4	0.2	-20	8.28	0.097
7824.2	1278.1	4.8	-20	8.63	0.119
7826.3	1277.7	9.5	-20	8.97	0.141
7828.4	1277.4	13.6	-20	9.3	0.163
7829	1277.3	0.2	-10	8.29	0.106
7830.2	1277.1	2.5	-10	8.49	0.119
7832.3	1276.8	6.7	-10	8.83	0.141
7834.5	1276.4	10.5	-10	9.15	0.163
7835.8	1276.2	0.2	0	8.3	0.115
7838.3	1275.8	4.7	0	8.7	0.141
7840.6	1275.4	8.3	0	9.02	0.163
7843	1275	11.6	0	9.33	0.185
7842.7	1275.1	0.1	10	8.32	0.124
7844.4	1274.8	2.6	10	8.57	0.141
7846.7	1274.4	5.9	10	8.89	0.163
7849.2	1274	9.1	10	9.2	0.185
7851.9	1273.6	11.5	10	9.51	0.207
7850	1273.9	0.2	20	8.38	0.136
7852.9	1273.4	3.8	20	8.78	0.163
7855.4	1273	6.6	20	9.08	0.185
7858.2	1272.6	8.9	20	9.39	0.207
7857.5	1272.7	0.2	30	8.47	0.149
7859.1	1272.4	1.8	30	8.66	0.163
7861.7	1272	4.4	30	8.97	0.185
7864.5	1271.5	6.6	30	9.27	0.207
7867.4	1271.1	8.2	30	9.56	0.229
7865.4	1271.4	0.2	40	8.47	0.164
7868	1271	2.4	40	8.86	0.185
7870.8	1270.5	4.4	40	9.15	0.207
7873.8	1270	5.9	40	9.45	0.229
7873.7	1270.1	0.1	50	8.56	0.18
7877.2	1269.5	2.4	50	8.9	0.207
7880.3	1269	3.8	50	9.17	0.229

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

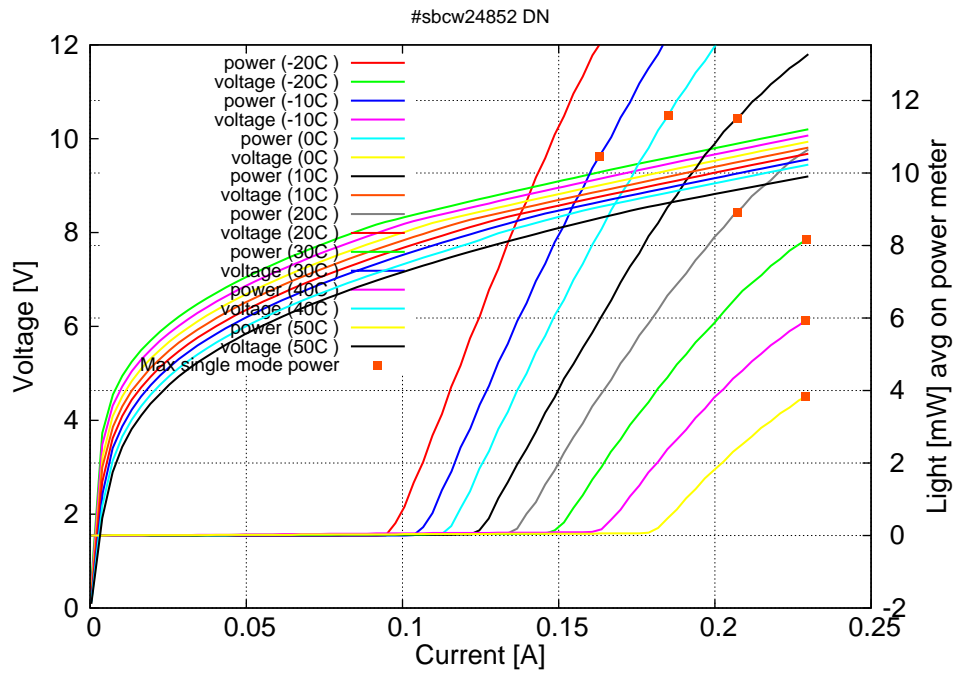


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.2V$ (2-wires measurements). Maximum operation current: 0.165A between -20C and -10C, 0.185A at 0C, 0.21A between 10C and 20C, 0.23A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

