

Datasheet for #sbcw24098 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 #sbcw24098 DN (please note that AlN submount numbering is A120G)

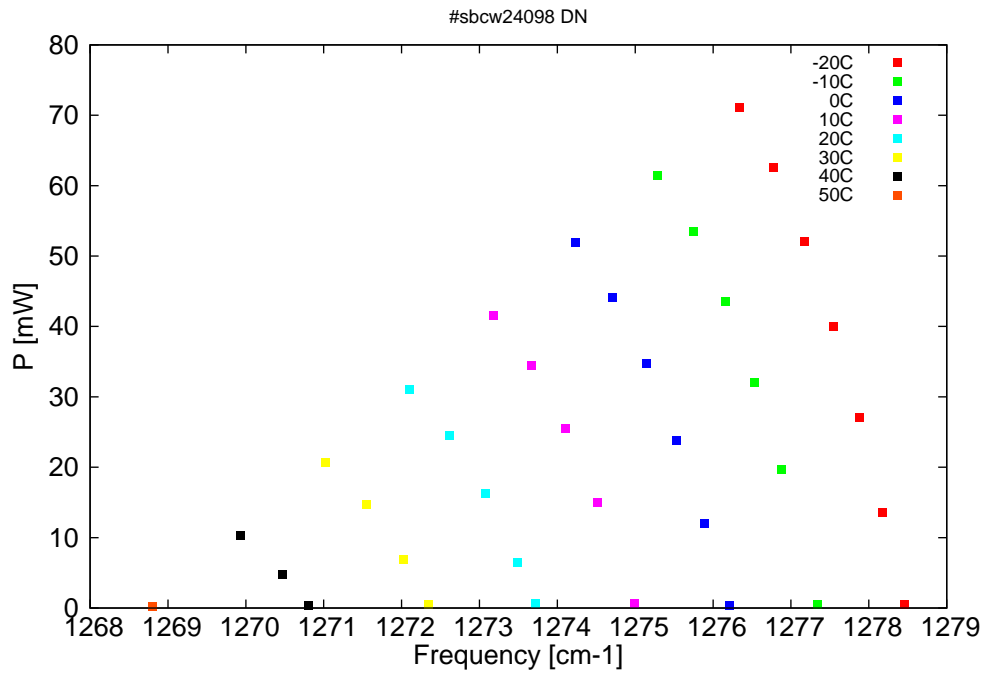


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

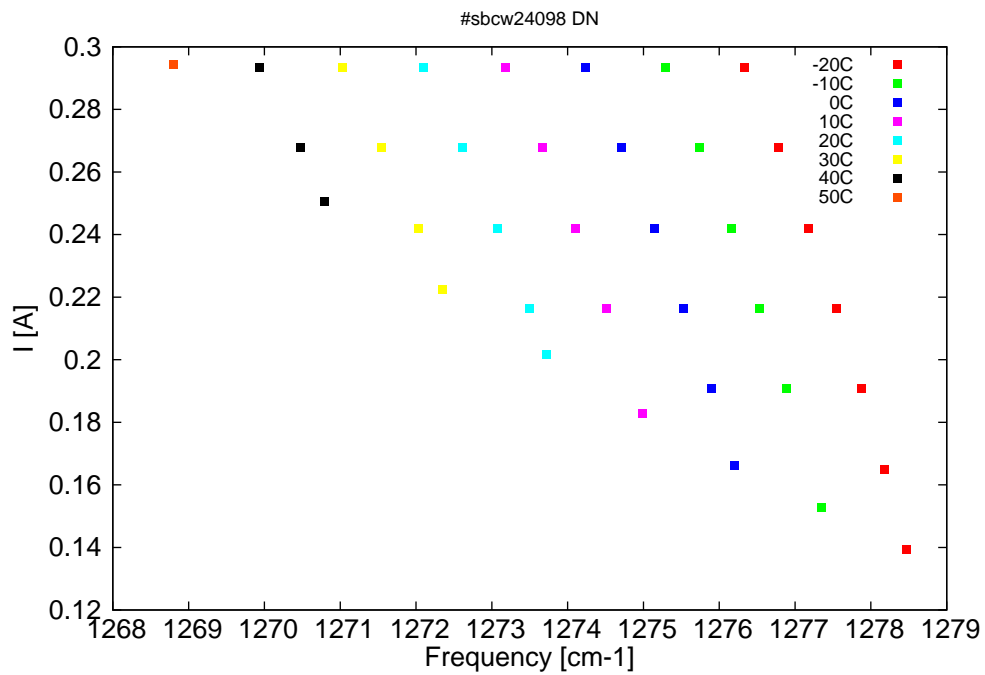


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7821.9	1278.5	0.4	-20	8.26	0.139
7823.6	1278.2	13.5	-20	8.49	0.165
7825.5	1277.9	27.1	-20	8.71	0.191
7827.5	1277.5	40	-20	8.92	0.216
7829.8	1277.2	52.1	-20	9.14	0.242
7832.2	1276.8	62.6	-20	9.36	0.268
7834.9	1276.3	71.1	-20	9.59	0.293
7828.8	1277.3	0.6	-10	8.26	0.153
7831.6	1276.9	19.7	-10	8.59	0.191
7833.7	1276.5	32.1	-10	8.81	0.216
7836	1276.2	43.5	-10	9.02	0.242
7838.6	1275.7	53.5	-10	9.25	0.268
7841.4	1275.3	61.4	-10	9.48	0.293
7835.7	1276.2	0.4	0	8.28	0.166
7837.7	1275.9	12	0	8.49	0.191
7839.9	1275.5	23.8	0	8.71	0.216
7842.3	1275.1	34.7	0	8.93	0.242
7844.9	1274.7	44.1	0	9.15	0.268
7847.8	1274.2	51.9	0	9.38	0.293
7843.2	1275	0.6	10	8.33	0.183
7846.1	1274.5	15.1	10	8.62	0.216
7848.6	1274.1	25.4	10	8.84	0.242
7851.4	1273.7	34.4	10	9.06	0.268
7854.4	1273.2	41.5	10	9.29	0.293
7851	1273.7	0.6	20	8.41	0.202
7852.4	1273.5	6.5	20	8.54	0.216
7855	1273.1	16.2	20	8.76	0.242
7857.9	1272.6	24.6	20	8.98	0.268
7861	1272.1	31.1	20	9.21	0.293
7859.5	1272.3	0.4	30	8.52	0.222
7861.5	1272	6.8	30	8.69	0.242
7864.4	1271.5	14.8	30	8.91	0.268
7867.6	1271	20.7	30	9.14	0.293
7869.1	1270.8	0.3	40	8.7	0.251
7871.1	1270.5	4.8	40	8.85	0.268
7874.4	1269.9	10.3	40	9.08	0.293
7881.4	1268.8	0.2	50	9.02	0.294

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

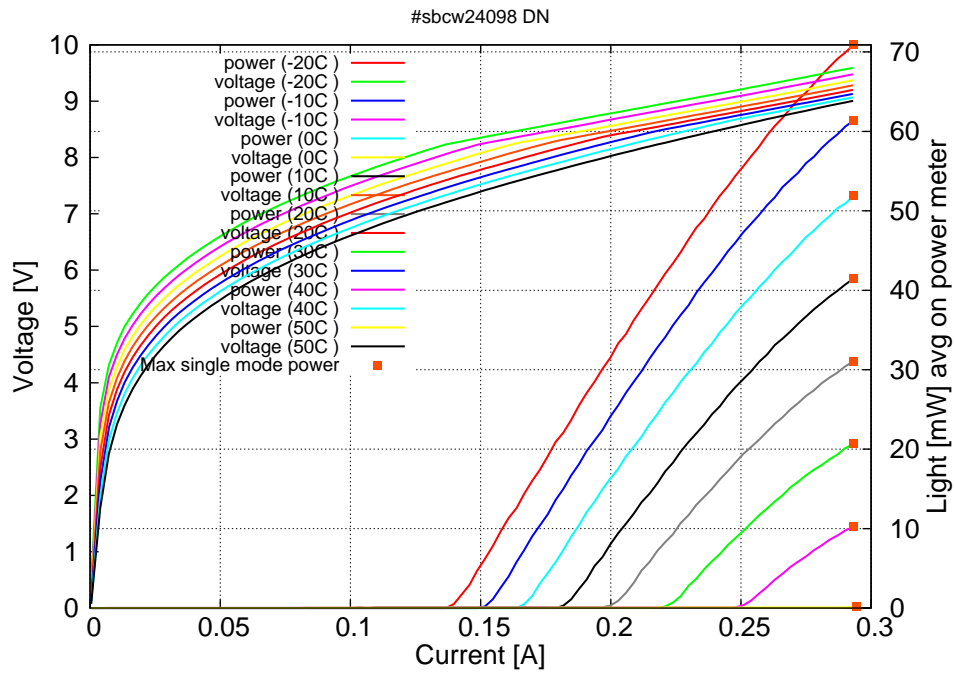


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.295A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

