

Datasheet for #sbcw24707 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 #sbcw24707 DN (please note that AlN submount numbering is A0ZWX)

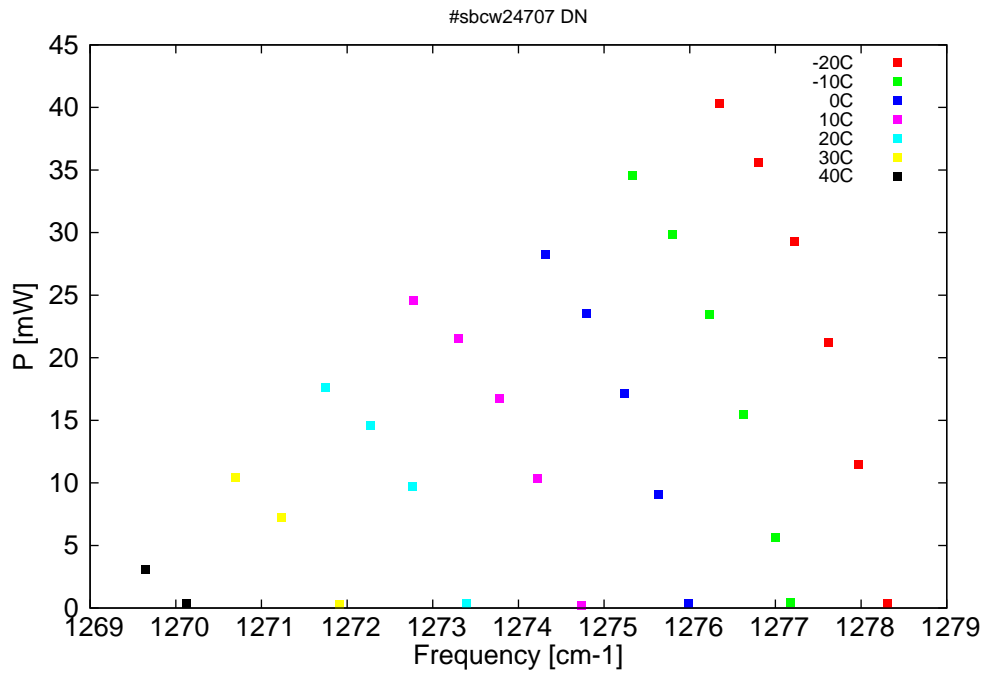


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

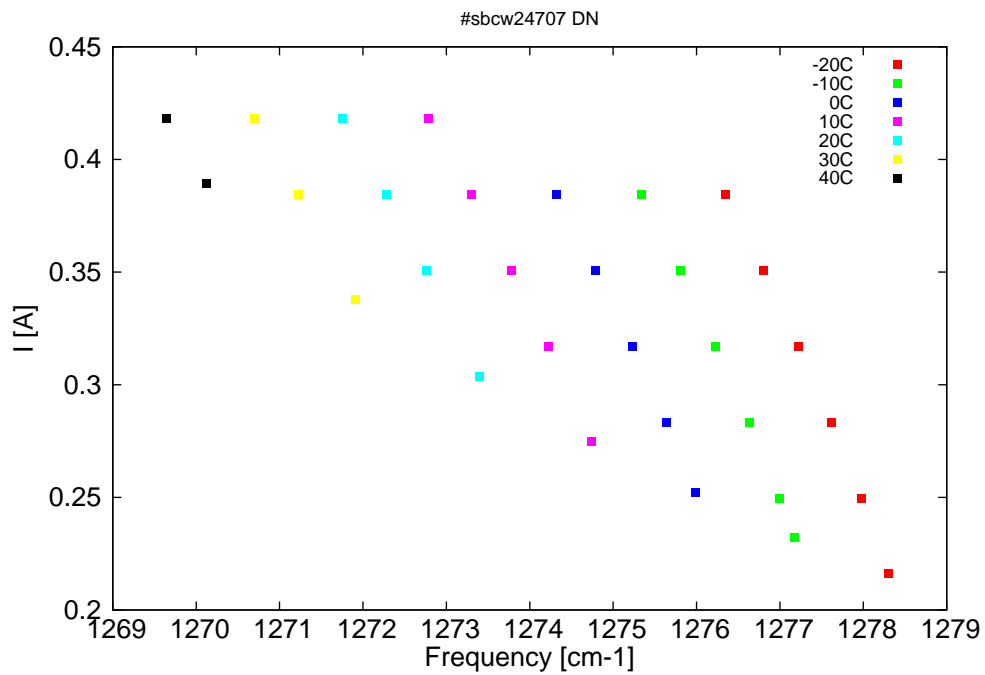


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7822.8	1278.3	0.4	-20	9.07	0.216
7824.9	1278	11.5	-20	9.36	0.25
7827.1	1277.6	21.2	-20	9.63	0.283
7829.5	1277.2	29.3	-20	9.9	0.317
7832.1	1276.8	35.6	-20	10.17	0.351
7834.9	1276.3	40.3	-20	10.44	0.384
7829.8	1277.2	0.4	-10	9.05	0.232
7830.9	1277	5.7	-10	9.2	0.25
7833.1	1276.6	15.5	-10	9.47	0.283
7835.6	1276.2	23.5	-10	9.74	0.317
7838.2	1275.8	29.9	-10	10.01	0.351
7841.1	1275.3	34.5	-10	10.28	0.384
7837.1	1276	0.4	0	9.09	0.252
7839.2	1275.6	9.1	0	9.34	0.283
7841.7	1275.2	17.2	0	9.61	0.317
7844.4	1274.8	23.6	0	9.87	0.351
7847.3	1274.3	28.3	0	10.13	0.384
7844.8	1274.7	0.2	10	9.15	0.275
7847.9	1274.2	10.4	10	9.48	0.317
7850.6	1273.8	16.8	10	9.74	0.351
7853.6	1273.3	21.5	10	10	0.384
7856.8	1272.8	24.6	10	10.26	0.418
7853	1273.4	0.4	20	9.27	0.304
7856.9	1272.8	9.7	20	9.63	0.351
7859.9	1272.3	14.6	20	9.88	0.384
7863.2	1271.7	17.6	20	10.14	0.418
7862.2	1271.9	0.3	30	9.44	0.338
7866.4	1271.2	7.2	30	9.79	0.384
7869.7	1270.7	10.4	30	10.05	0.418
7873.2	1270.1	0.4	40	9.75	0.389
7876.2	1269.6	3.1	40	9.97	0.418

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

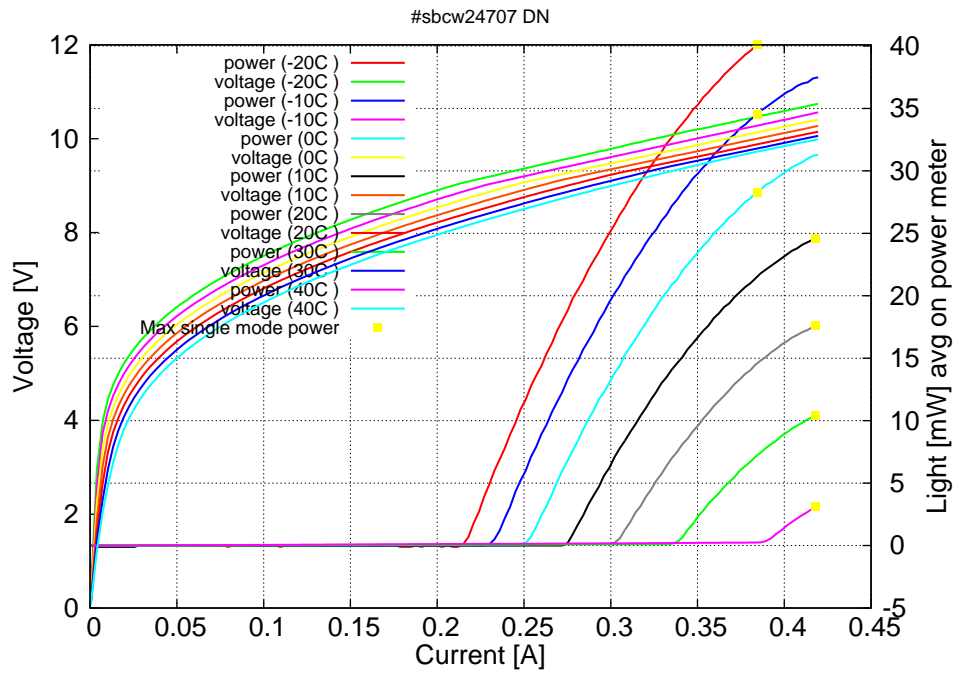


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.385A between -20C and 0C, 0.42A between 10C and 40C.

Figure 3: spectra at different temperatures for various DC currents

