

Datasheet for #sbcw22707 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 #sbcw22707 DN (please note that AlN submount numbering is A0X5V)

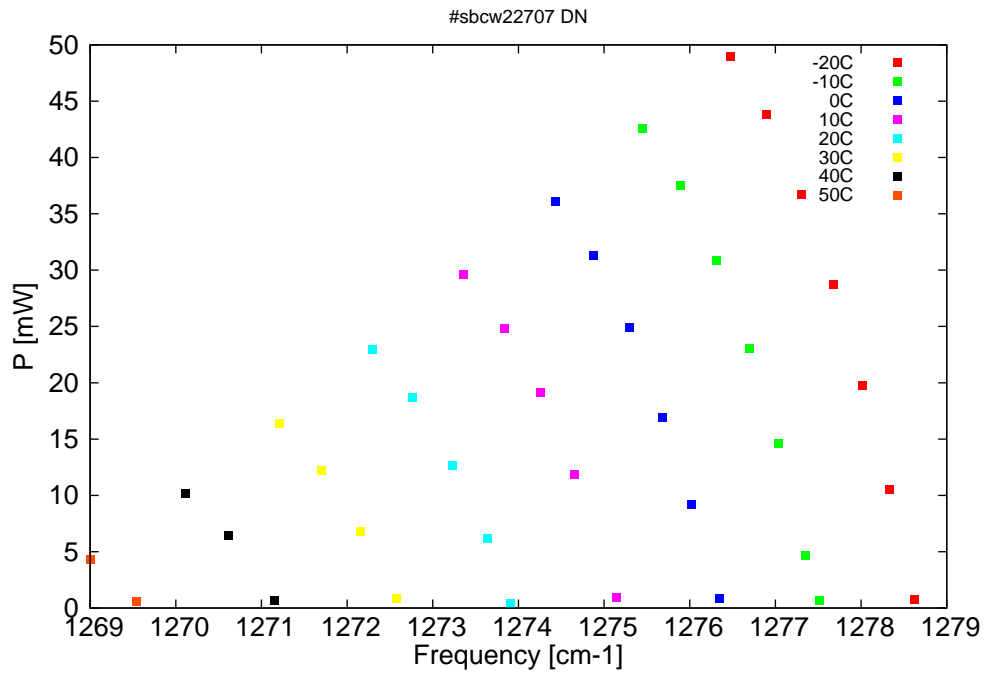


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

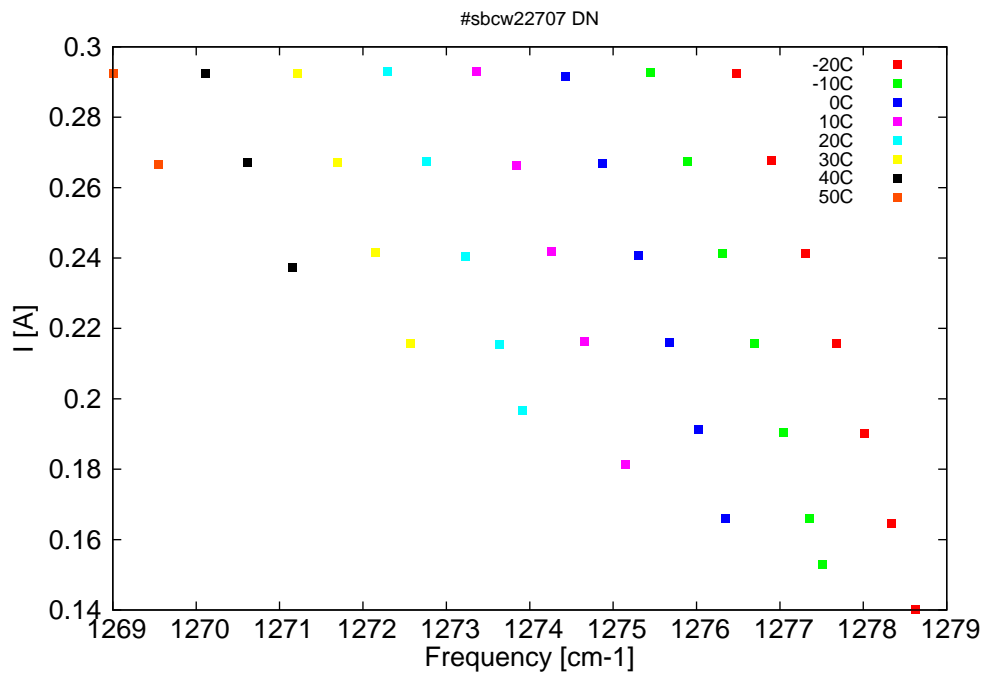


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7820.9	1278.6	0.7	-20	8.69	0.14
7822.7	1278.3	10.6	-20	8.93	0.165
7824.6	1278	19.7	-20	9.16	0.19
7826.7	1277.7	28.7	-20	9.38	0.216
7829	1277.3	36.7	-20	9.59	0.241
7831.5	1276.9	43.8	-20	9.81	0.268
7834	1276.5	49	-20	10.01	0.292
7827.7	1277.5	0.7	-10	8.62	0.153
7828.7	1277.4	4.6	-10	8.75	0.166
7830.6	1277	14.6	-10	8.97	0.19
7832.7	1276.7	23	-10	9.19	0.216
7835.1	1276.3	30.9	-10	9.4	0.241
7837.6	1275.9	37.5	-10	9.62	0.267
7840.4	1275.5	42.6	-10	9.83	0.293
7834.8	1276.4	0.9	0	8.57	0.166
7836.8	1276	9.2	0	8.8	0.191
7839	1275.7	16.9	0	9.02	0.216
7841.3	1275.3	24.9	0	9.23	0.241
7843.9	1274.9	31.3	0	9.44	0.267
7846.6	1274.4	36.1	0	9.64	0.292
7842.2	1275.1	1	10	8.55	0.181
7845.3	1274.7	11.9	10	8.85	0.216
7847.7	1274.3	19.1	10	9.07	0.242
7850.3	1273.8	24.8	10	9.28	0.266
7853.2	1273.4	29.6	10	9.49	0.293
7849.8	1273.9	0.4	20	8.53	0.197
7851.5	1273.6	6.2	20	8.7	0.215
7854.1	1273.2	12.6	20	8.91	0.24
7856.9	1272.8	18.7	20	9.14	0.268
7859.8	1272.3	22.9	20	9.34	0.293
7858.1	1272.6	0.8	30	8.57	0.216
7860.7	1272.2	6.8	30	8.79	0.241
7863.5	1271.7	12.3	30	9.01	0.267
7866.5	1271.2	16.4	30	9.22	0.292
7866.9	1271.2	0.6	40	8.63	0.237
7870.2	1270.6	6.4	40	8.89	0.267
7873.3	1270.1	10.2	40	9.1	0.292
7876.9	1269.5	0.5	50	8.77	0.267
7880.2	1269	4.3	50	8.99	0.293

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

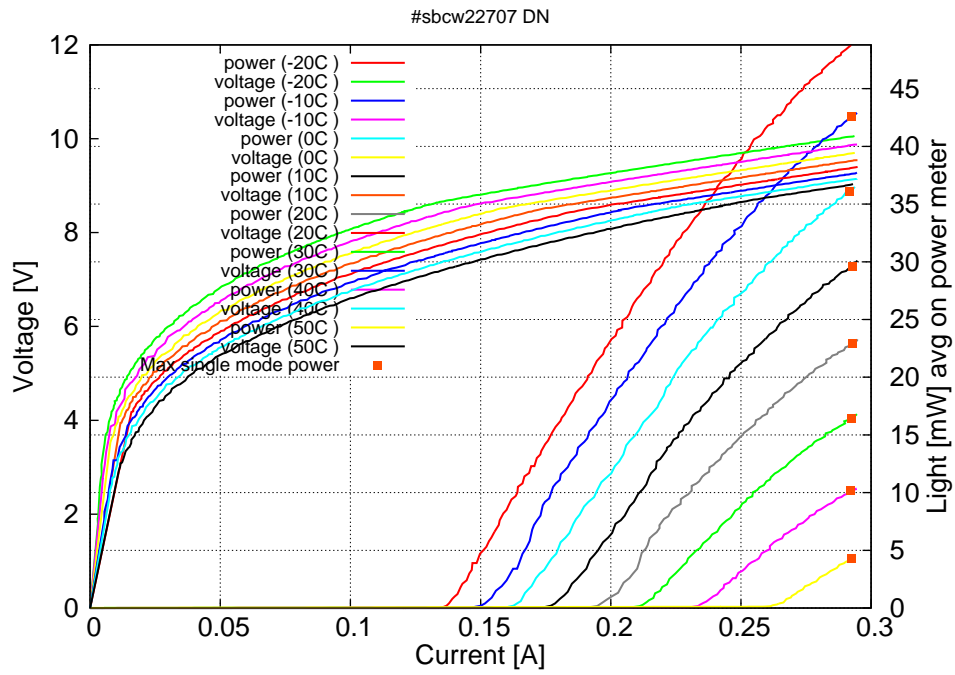


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=8.65V$ (2-wires measurements). Maximum operation current: 0.295A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

