

Datasheet for #sbcw22710 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.

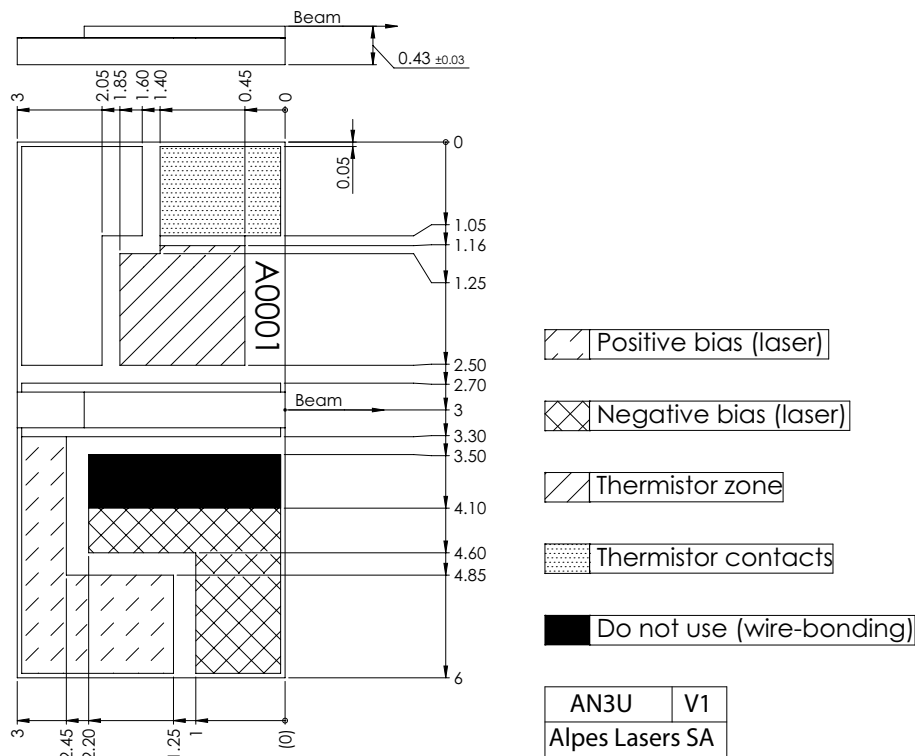


Figure 1: Mechanical and electrical interface for #sbcw22710 DN (please note that AlN submount numbering is A0X52)

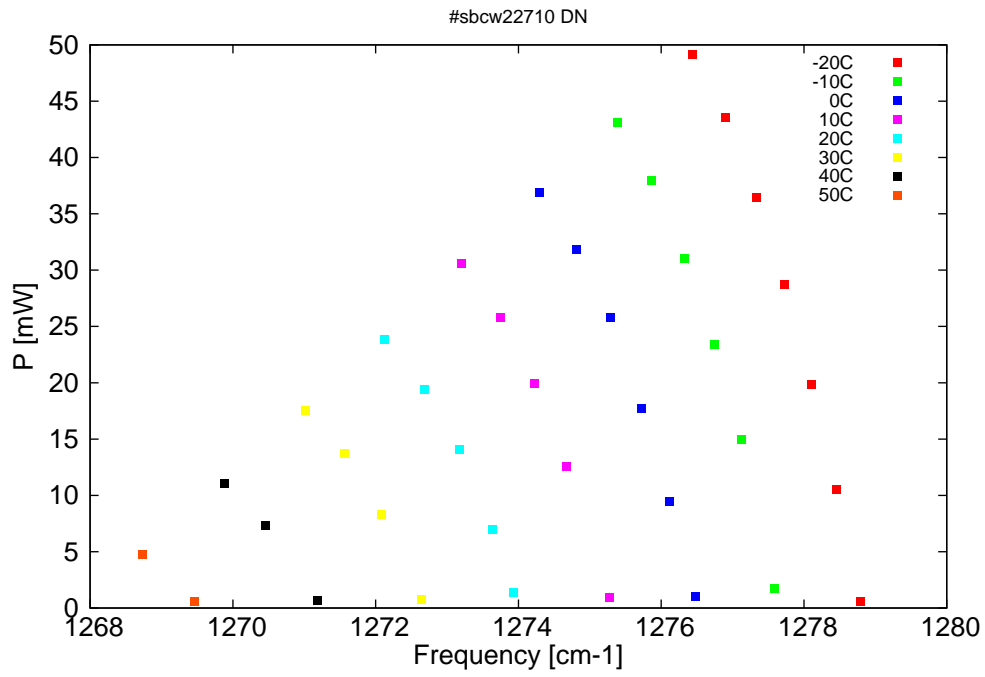


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

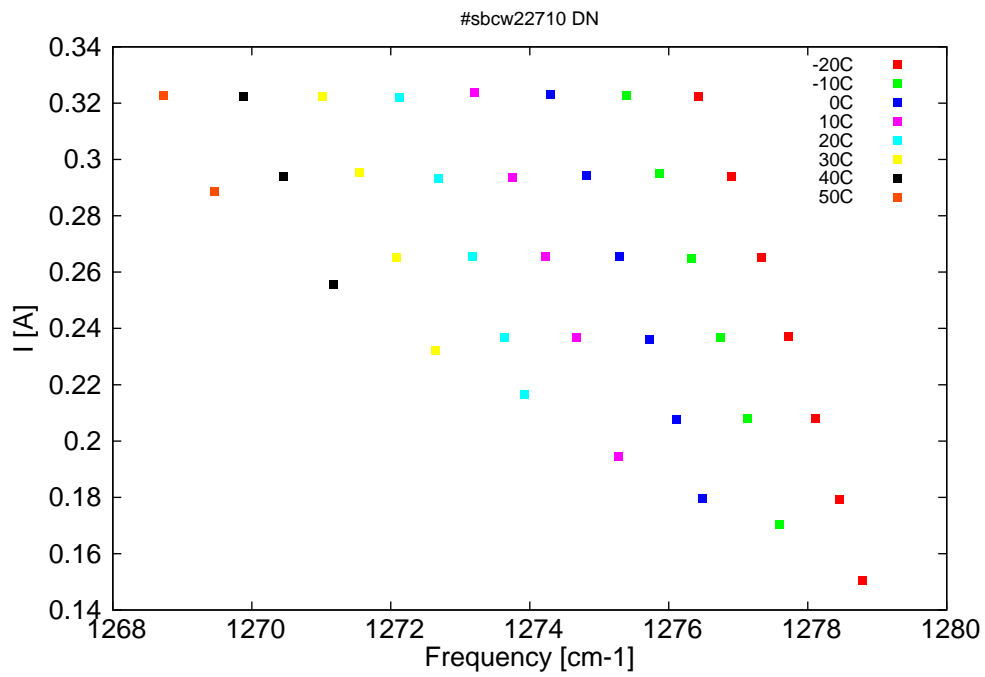


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7819.9	1278.8	0.6	-20	8.67	0.151
7821.9	1278.5	10.5	-20	8.91	0.179
7824.1	1278.1	19.9	-20	9.15	0.208
7826.4	1277.7	28.7	-20	9.37	0.237
7828.8	1277.3	36.5	-20	9.58	0.265
7831.5	1276.9	43.5	-20	9.79	0.294
7834.3	1276.4	49.1	-20	9.99	0.323
7827.2	1277.6	1.8	-10	8.66	0.17
7830.1	1277.1	15	-10	8.97	0.208
7832.4	1276.7	23.4	-10	9.2	0.237
7835	1276.3	31	-10	9.41	0.265
7837.8	1275.9	38	-10	9.63	0.295
7840.8	1275.4	43.1	-10	9.84	0.323
7834	1276.5	1	0	8.57	0.18
7836.3	1276.1	9.5	0	8.81	0.208
7838.7	1275.7	17.7	0	9.03	0.236
7841.4	1275.3	25.8	0	9.26	0.266
7844.3	1274.8	31.8	0	9.47	0.294
7847.5	1274.3	36.9	0	9.69	0.323
7841.5	1275.3	1	10	8.55	0.195
7845.1	1274.7	12.6	10	8.89	0.237
7847.9	1274.2	20	10	9.11	0.265
7850.8	1273.7	25.8	10	9.33	0.294
7854.2	1273.2	30.6	10	9.55	0.324
7849.7	1273.9	1.4	20	8.58	0.217
7851.6	1273.6	7	20	8.75	0.237
7854.4	1273.2	14.1	20	8.97	0.265
7857.4	1272.7	19.4	20	9.19	0.293
7860.8	1272.1	23.8	20	9.41	0.322
7857.6	1272.6	0.8	30	8.59	0.232
7861.1	1272.1	8.3	30	8.86	0.265
7864.4	1271.6	13.7	30	9.09	0.295
7867.8	1271	17.5	30	9.31	0.322
7866.7	1271.2	0.7	40	8.67	0.256
7871.2	1270.5	7.3	40	8.98	0.294
7874.8	1269.9	11.1	40	9.2	0.322
7877.4	1269.5	0.6	50	8.84	0.289
7881.9	1268.7	4.8	50	9.11	0.323

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

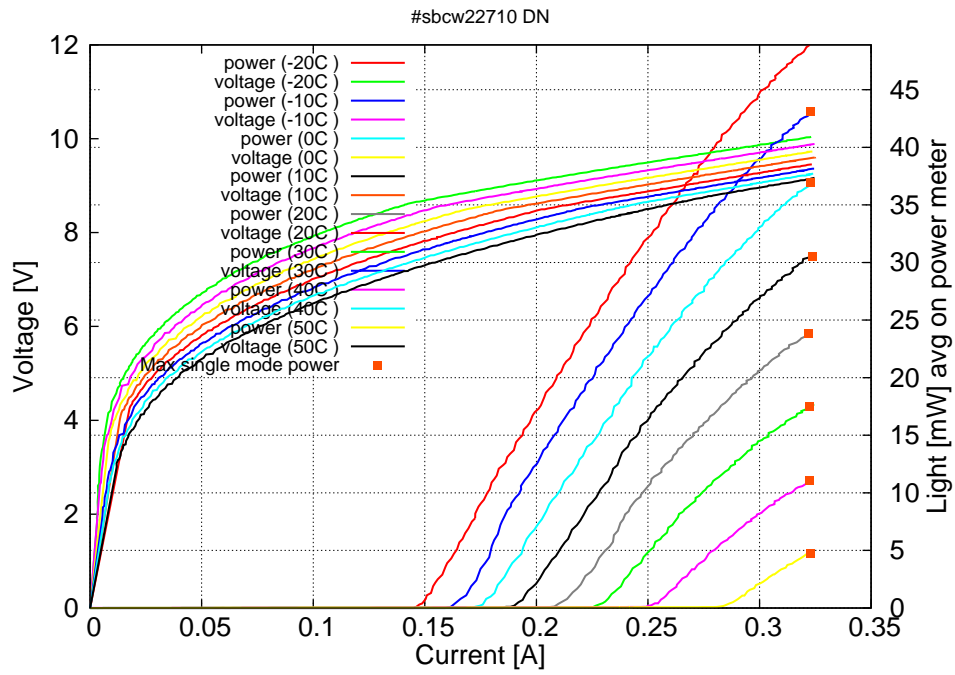


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=8.65V$ (2-wires measurements). Maximum operation current: 0.325A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

