

Datasheet for #sbcw25390 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 #sbcw25390 DN (please note that AlN submount numbering is A0ZOU)

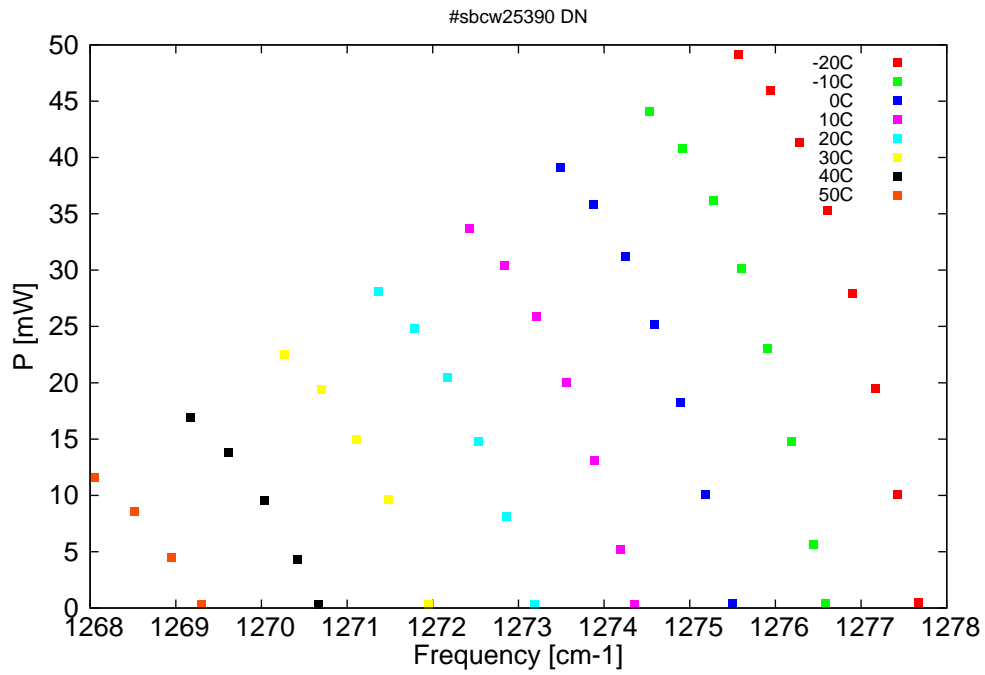


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

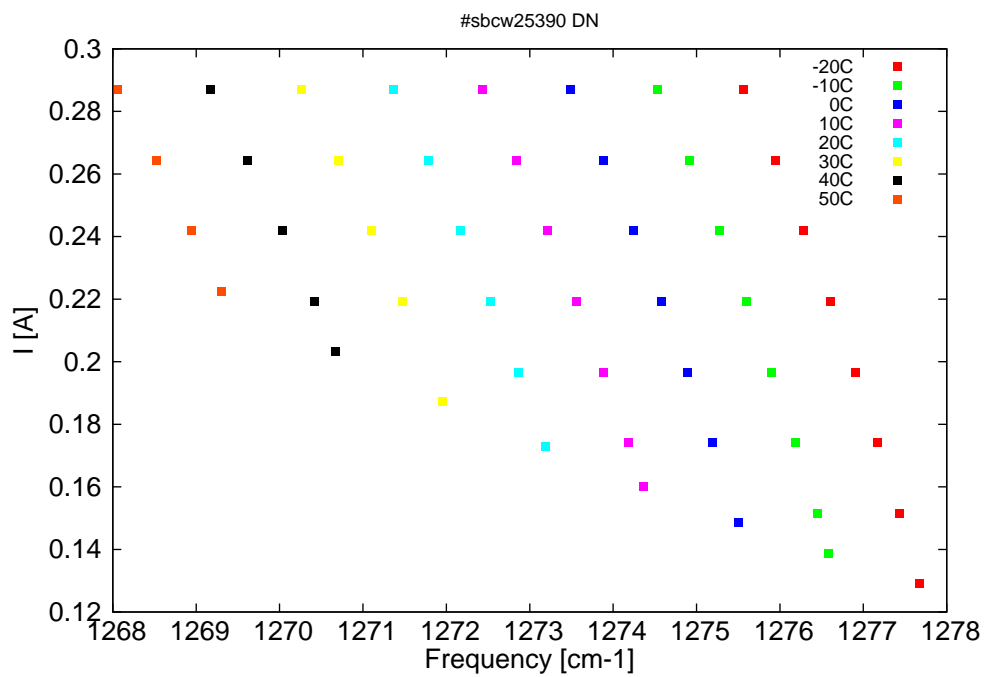


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7826.7	1277.7	0.5	-20	8.35	0.129
7828.2	1277.4	10.1	-20	8.56	0.152
7829.8	1277.2	19.5	-20	8.77	0.174
7831.5	1276.9	27.9	-20	8.97	0.197
7833.3	1276.6	35.3	-20	9.17	0.219
7835.2	1276.3	41.3	-20	9.38	0.242
7837.3	1275.9	46	-20	9.58	0.264
7839.7	1275.6	49.1	-20	9.79	0.287
7833.4	1276.6	0.4	-10	8.32	0.139
7834.2	1276.4	5.6	-10	8.44	0.152
7835.9	1276.2	14.8	-10	8.65	0.174
7837.6	1275.9	23	-10	8.85	0.197
7839.5	1275.6	30.1	-10	9.05	0.219
7841.5	1275.3	36.1	-10	9.26	0.242
7843.7	1274.9	40.8	-10	9.46	0.264
7846	1274.5	44.1	-10	9.67	0.287
7840.1	1275.5	0.4	0	8.31	0.149
7842	1275.2	10.1	0	8.54	0.174
7843.8	1274.9	18.2	0	8.75	0.197
7845.7	1274.6	25.1	0	8.94	0.219
7847.8	1274.2	31.2	0	9.14	0.242
7850	1273.9	35.9	0	9.35	0.264
7852.5	1273.5	39.1	0	9.56	0.287
7847.1	1274.4	0.3	10	8.32	0.16
7848.1	1274.2	5.2	10	8.44	0.174
7850	1273.9	13.1	10	8.65	0.197
7852	1273.6	20	10	8.85	0.219
7854.1	1273.2	25.9	10	9.05	0.242
7856.5	1272.8	30.4	10	9.25	0.264
7859	1272.4	33.7	10	9.46	0.287
7854.3	1273.2	0.3	20	8.35	0.173
7856.3	1272.9	8.1	20	8.56	0.197
7858.4	1272.5	14.8	20	8.76	0.219
7860.6	1272.2	20.4	20	8.96	0.242
7863	1271.8	24.8	20	9.16	0.264
7865.6	1271.4	28.1	20	9.37	0.287
7861.9	1271.9	0.3	30	8.4	0.187
7864.9	1271.5	9.6	30	8.69	0.219
7867.2	1271.1	15	30	8.89	0.242
7869.7	1270.7	19.4	30	9.09	0.264
7872.4	1270.3	22.5	30	9.3	0.287
7869.9	1270.7	0.3	40	8.5	0.203
7871.4	1270.4	4.3	40	8.64	0.219
7873.8	1270	9.5	40	8.85	0.242
7876.4	1269.6	13.8	40	9.05	0.264
7879.2	1269.2	16.9	40	9.26	0.287
7878.4	1269.3	0.3	50	8.61	0.222
7880.5	1268.9	4.5	50	8.79	0.242
7883.2	1268.5	8.5	50	9	0.264

continued on next page

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7886.1	1268.1	11.6	50	9.21	0.287

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

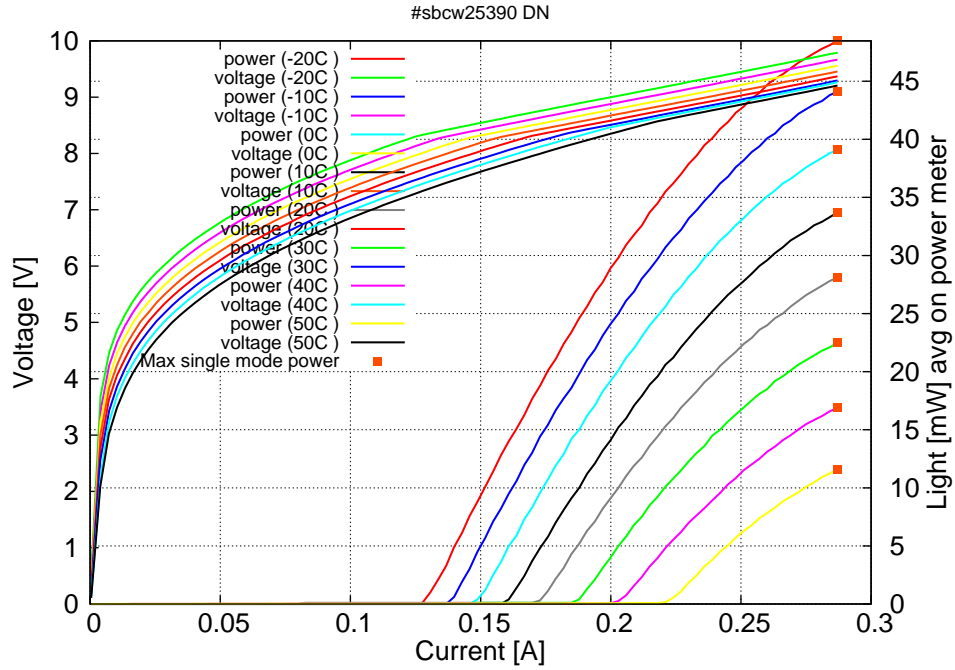


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

