

Datasheet for #sbcw20697 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 #sbcw20697 DN (please note that AlN submount numbering is A0RJ1)

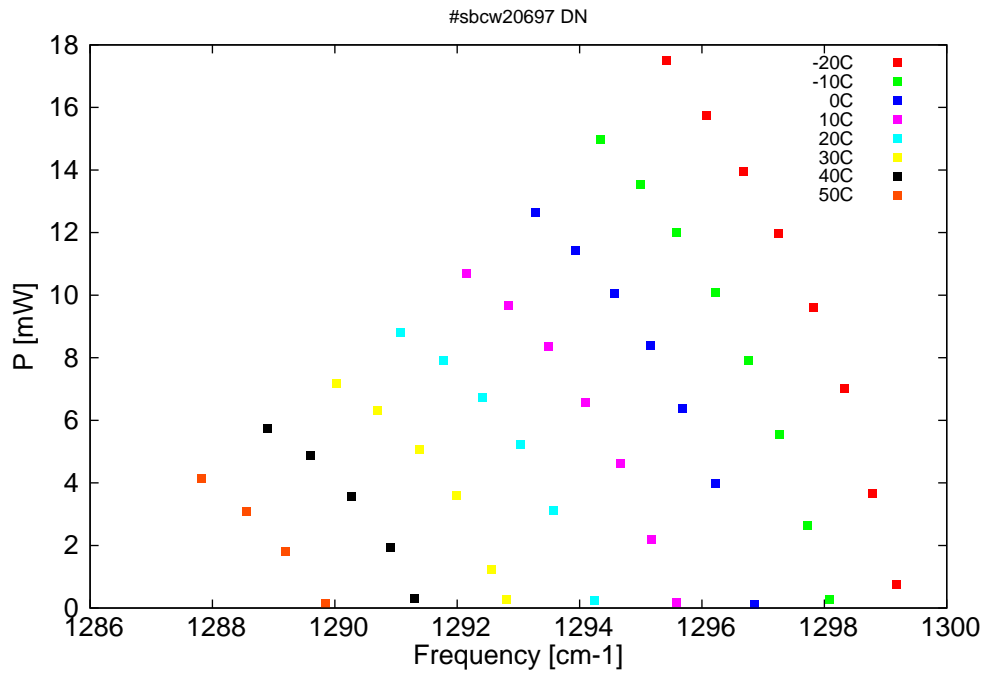


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

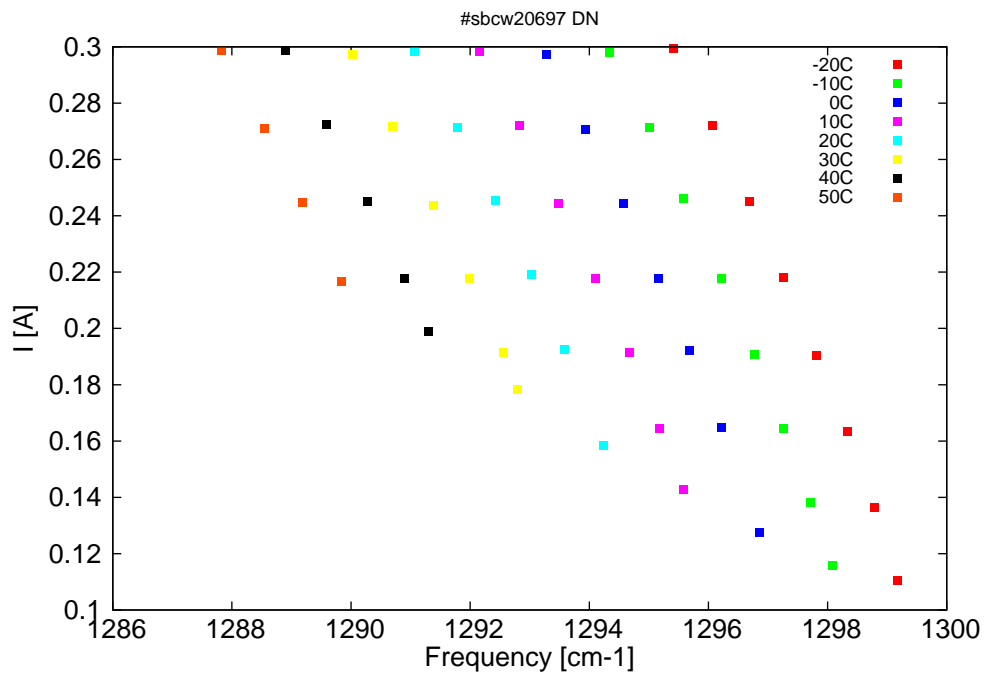


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7697.2	1299.2	0.7	-20	8.59	0.11
7699.5	1298.8	3.7	-20	8.88	0.136
7702.2	1298.3	7	-20	9.16	0.163
7705.2	1297.8	9.6	-20	9.42	0.19
7708.6	1297.3	12	-20	9.69	0.218
7712	1296.7	14	-20	9.93	0.245
7715.6	1296.1	15.7	-20	10.17	0.272
7719.5	1295.4	17.5	-20	10.41	0.299
7703.6	1298.1	0.3	-10	8.44	0.116
7705.8	1297.7	2.6	-10	8.7	0.138
7708.5	1297.3	5.5	-10	8.97	0.165
7711.5	1296.8	7.9	-10	9.23	0.191
7714.8	1296.2	10.1	-10	9.48	0.218
7718.5	1295.6	12	-10	9.73	0.246
7722	1295	13.5	-10	9.96	0.271
7725.9	1294.3	15	-10	10.19	0.298
7710.9	1296.9	0.1	0	8.39	0.128
7714.8	1296.2	4	0	8.78	0.165
7717.9	1295.7	6.4	0	9.05	0.192
7721	1295.2	8.4	0	9.28	0.218
7724.6	1294.6	10	0	9.52	0.244
7728.3	1293.9	11.4	0	9.75	0.271
7732.3	1293.3	12.6	0	9.98	0.297
7718.5	1295.6	0.2	10	8.37	0.143
7721	1295.2	2.2	10	8.6	0.164
7724	1294.7	4.6	10	8.86	0.191
7727.4	1294.1	6.6	10	9.1	0.218
7731	1293.5	8.4	10	9.34	0.244
7734.9	1292.8	9.7	10	9.57	0.272
7739	1292.2	10.7	10	9.8	0.298
7726.5	1294.2	0.2	20	8.35	0.158
7730.5	1293.6	3.1	20	8.68	0.192
7733.7	1293	5.2	20	8.93	0.219
7737.4	1292.4	6.7	20	9.16	0.245
7741.3	1291.8	7.9	20	9.38	0.272
7745.5	1291.1	8.8	20	9.61	0.298
7735.2	1292.8	0.3	30	8.39	0.178
7736.6	1292.6	1.2	30	8.52	0.191
7740	1292	3.6	30	8.76	0.218
7743.7	1291.4	5.1	30	8.98	0.244
7747.8	1290.7	6.3	30	9.22	0.272
7751.8	1290	7.2	30	9.43	0.297
7744.1	1291.3	0.3	40	8.44	0.199
7746.5	1290.9	1.9	40	8.61	0.218
7750.3	1290.3	3.6	40	8.84	0.245
7754.4	1289.6	4.9	40	9.07	0.273
7758.5	1288.9	5.7	40	9.28	0.299
7752.9	1289.8	0.1	50	8.45	0.217
7756.8	1289.2	1.8	50	8.69	0.245

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7760.7	1288.5	3.1	50	8.91	0.271
7765.1	1287.8	4.2	50	9.13	0.299

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

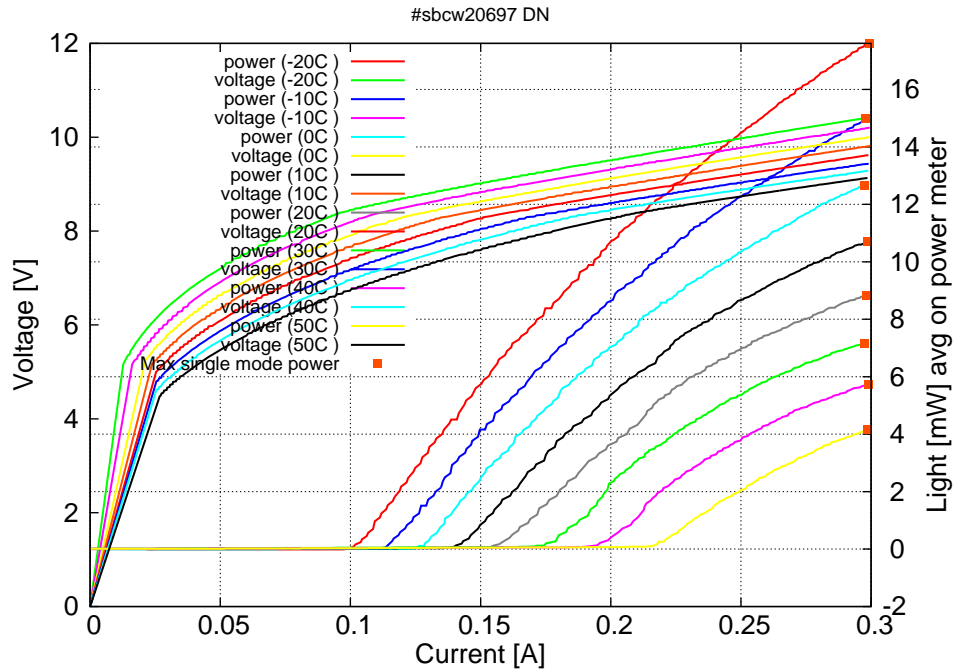


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

