

Datasheet for #sbcw27088 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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 #sbcw27088 DN (please note that AlN submount numbering is A0Y5L)

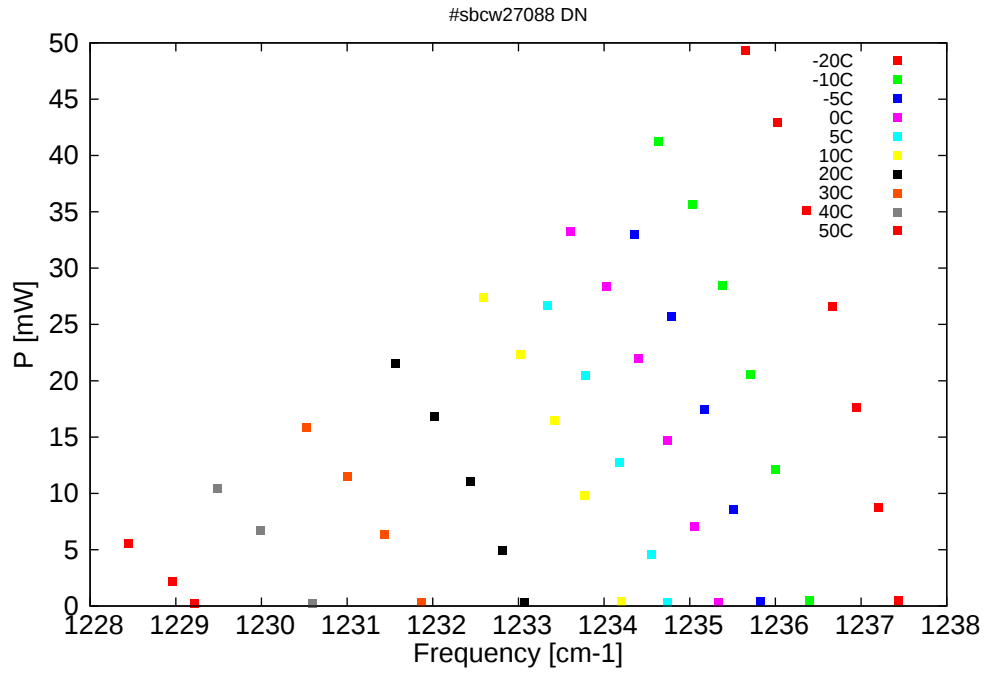


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

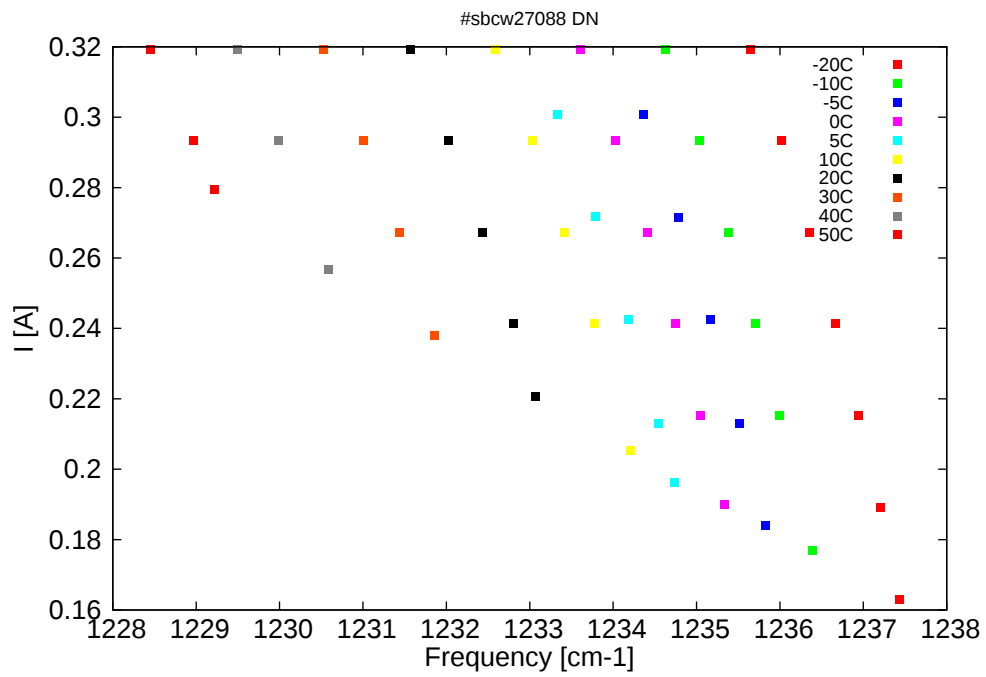


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8081.2	1237.4	0.5	-20	6.14	0.163
8082.7	1237.2	8.7	-20	6.42	0.189
8084.4	1236.9	17.7	-20	6.69	0.215
8086.3	1236.7	26.6	-20	6.96	0.241
8088.3	1236.4	35.2	-20	7.24	0.267
8090.4	1236	42.9	-20	7.53	0.293
8092.9	1235.6	49.3	-20	7.85	0.319
8088	1236.4	0.5	-10	6.26	0.177
8090.6	1236	12.1	-10	6.67	0.215
8092.5	1235.7	20.5	-10	6.95	0.241
8094.6	1235.4	28.5	-10	7.24	0.267
8097	1235	35.7	-10	7.54	0.293
8099.6	1234.6	41.2	-10	7.86	0.319
8091.7	1235.8	0.4	-5	6.34	0.184
8093.8	1235.5	8.6	-5	6.66	0.213
8096.1	1235.2	17.5	-5	6.98	0.242
8098.6	1234.8	25.8	-5	7.31	0.272
8101.4	1234.4	33	-5	7.66	0.301
8095	1235.3	0.3	0	6.38	0.19
8096.8	1235.1	7.1	0	6.66	0.215
8098.8	1234.7	14.7	0	6.95	0.241
8101.1	1234.4	22	0	7.24	0.267
8103.5	1234	28.4	0	7.55	0.293
8106.3	1233.6	33.3	0	7.88	0.319
8098.9	1234.7	0.3	5	6.46	0.196
8100.1	1234.5	4.6	5	6.65	0.213
8102.5	1234.2	12.8	5	6.98	0.242
8105.1	1233.8	20.5	5	7.31	0.272
8108.1	1233.3	26.7	5	7.67	0.301
8102.4	1234.2	0.4	10	6.54	0.205
8105.2	1233.8	9.8	10	6.95	0.241
8107.5	1233.4	16.5	10	7.24	0.267
8110.1	1233	22.3	10	7.56	0.293
8113	1232.6	27.4	10	7.89	0.319
8109.9	1233.1	0.3	20	6.7	0.221
8111.6	1232.8	5	20	6.94	0.241
8114	1232.4	11.1	20	7.25	0.267
8116.7	1232	16.8	20	7.57	0.293
8119.7	1231.6	21.5	20	7.91	0.319
8117.8	1231.9	0.3	30	6.9	0.238
8120.6	1231.4	6.3	30	7.25	0.267
8123.4	1231	11.5	30	7.58	0.293
8126.6	1230.5	15.8	30	7.92	0.319
8126.2	1230.6	0.2	40	7.12	0.257
8130.2	1230	6.7	40	7.58	0.293
8133.4	1229.5	10.5	40	7.93	0.319
8135.3	1229.2	0.2	50	7.4	0.279
8136.9	1229	2.2	50	7.58	0.293
8140.4	1228.4	5.5	50	7.93	0.319

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

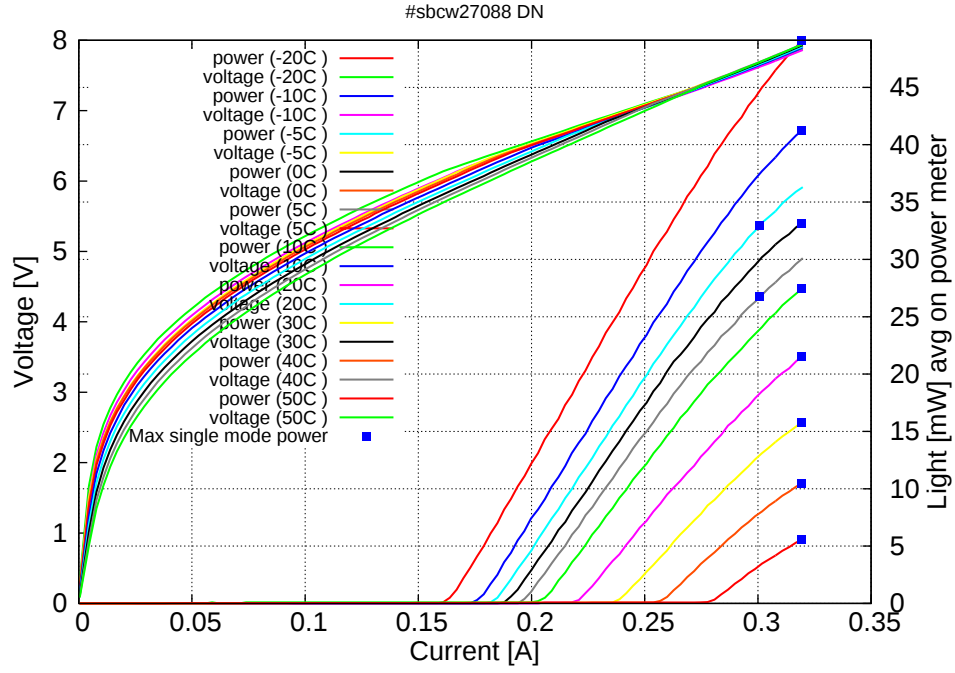


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.16A$ / $V_{th}=6.1V$ (2-wires measurements). Maximum operation current: 0.32A for all temperatures.

