

Datasheet for #sbcw27042 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 #sbcw27042 DN (please note that AlN submount numbering is A0UXF)

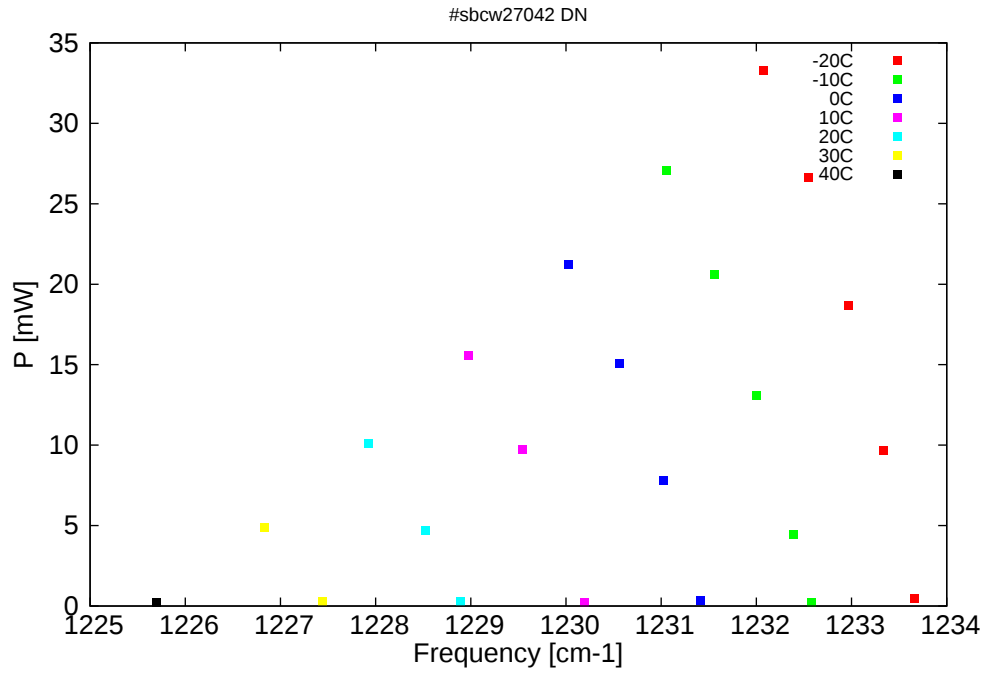


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

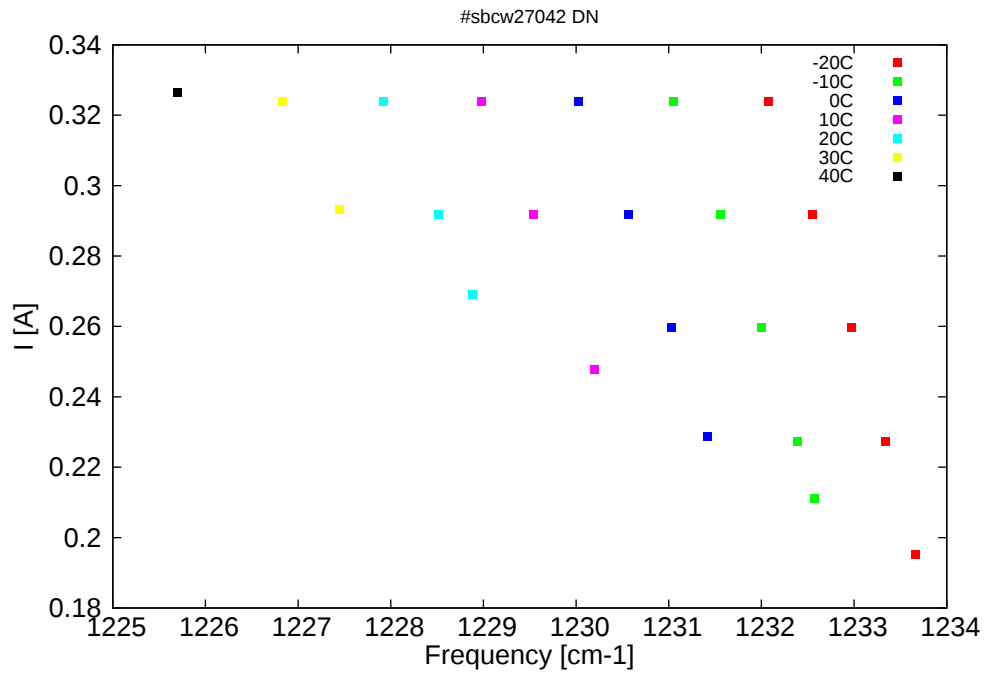


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8105.9	1233.7	0.5	-20	7.15	0.195
8108.1	1233.3	9.7	-20	7.43	0.227
8110.5	1233	18.7	-20	7.7	0.26
8113.3	1232.5	26.7	-20	8	0.292
8116.4	1232.1	33.3	-20	8.32	0.324
8113.1	1232.6	0.2	-10	7.27	0.211
8114.3	1232.4	4.4	-10	7.41	0.227
8116.8	1232	13.1	-10	7.7	0.26
8119.8	1231.6	20.6	-10	8	0.292
8123.1	1231.1	27.1	-10	8.34	0.324
8120.7	1231.4	0.3	0	7.41	0.229
8123.3	1231	7.8	0	7.7	0.26
8126.4	1230.6	15.1	0	8.01	0.292
8129.9	1230	21.2	0	8.36	0.324
8128.8	1230.2	0.2	10	7.59	0.248
8133.1	1229.5	9.8	10	8.02	0.292
8136.9	1229	15.6	10	8.37	0.324
8137.4	1228.9	0.3	20	7.79	0.269
8139.9	1228.5	4.7	20	8.03	0.292
8143.8	1227.9	10.1	20	8.39	0.324
8147	1227.4	0.3	30	8.05	0.293
8151.1	1226.8	4.9	30	8.4	0.324
8158.6	1225.7	0.2	40	8.44	0.327

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

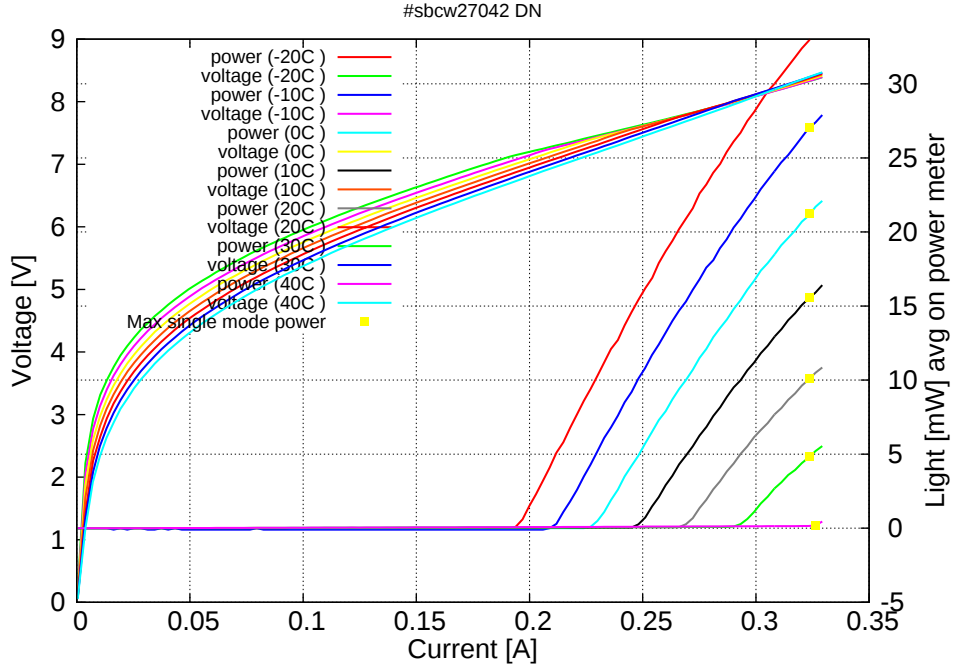


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=7.1V$ (2-wires measurements). Maximum operation current: 0.33A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

