

Datasheet for #sbcw27044 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 #sbcw27044 DN (please note that AlN submount numbering is A0UD4)

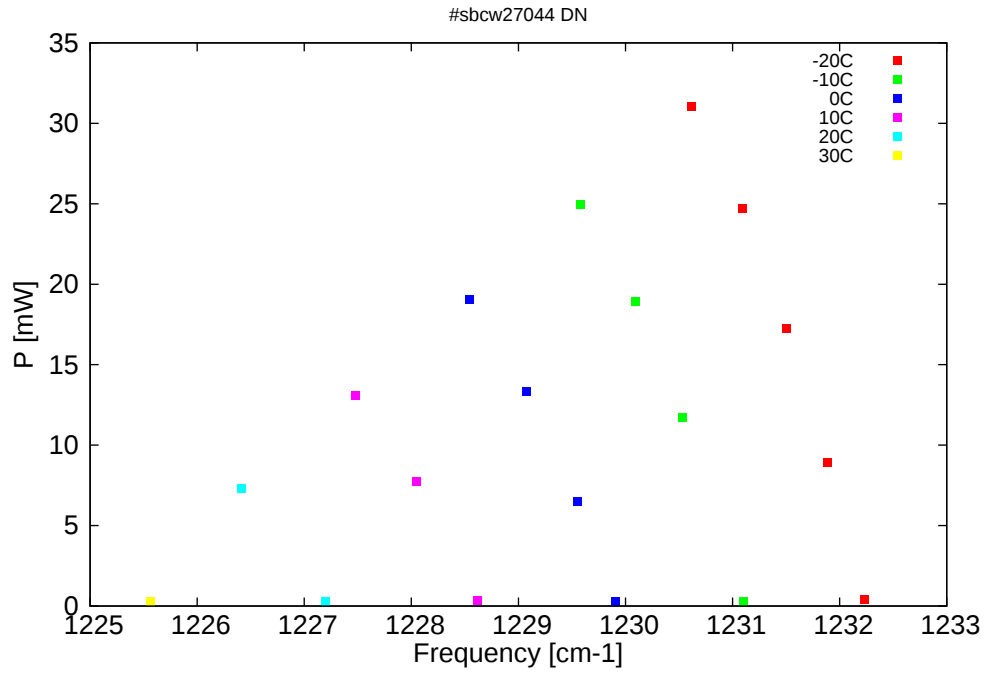


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

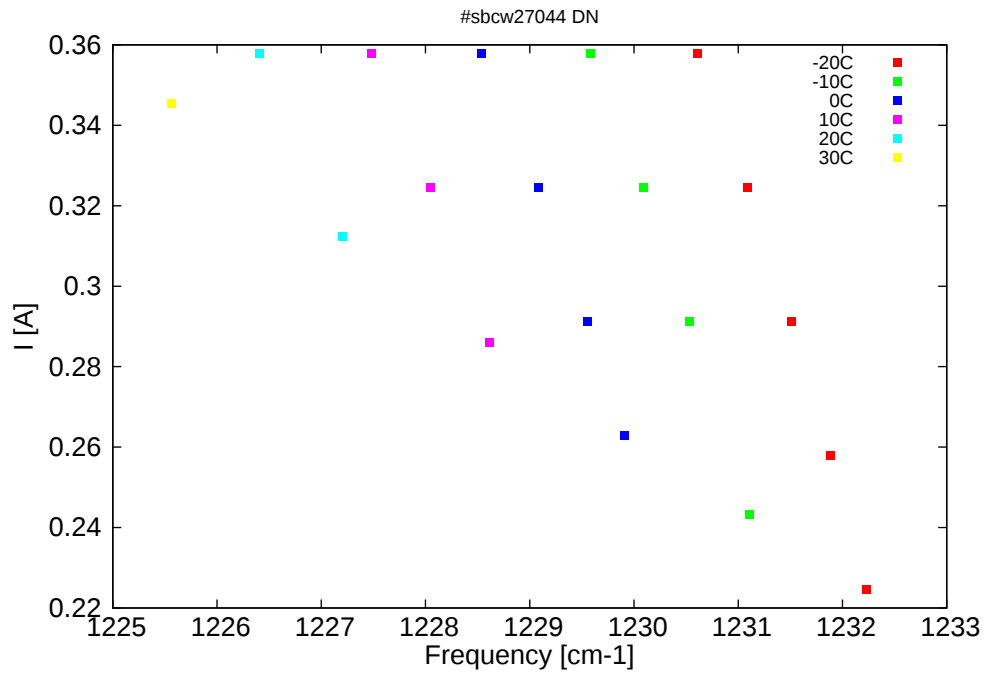


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8115.4	1232.2	0.4	-20	7.15	0.225
8117.6	1231.9	8.9	-20	7.41	0.258
8120.1	1231.5	17.2	-20	7.68	0.291
8122.9	1231.1	24.7	-20	7.95	0.325
8126	1230.6	31.1	-20	8.26	0.358
8122.8	1231.1	0.3	-10	7.27	0.243
8126.6	1230.5	11.7	-10	7.66	0.291
8129.5	1230.1	19	-10	7.95	0.325
8132.8	1229.6	25	-10	8.26	0.358
8130.7	1229.9	0.3	0	7.41	0.263
8133	1229.6	6.5	0	7.65	0.291
8136.2	1229.1	13.3	0	7.95	0.325
8139.7	1228.5	19.1	0	8.27	0.358
8139.3	1228.6	0.3	10	7.6	0.286
8143	1228	7.7	10	7.95	0.325
8146.8	1227.5	13.1	10	8.29	0.358
8148.6	1227.2	0.3	20	7.84	0.312
8153.9	1226.4	7.3	20	8.3	0.358
8159.5	1225.6	0.3	30	8.19	0.345

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

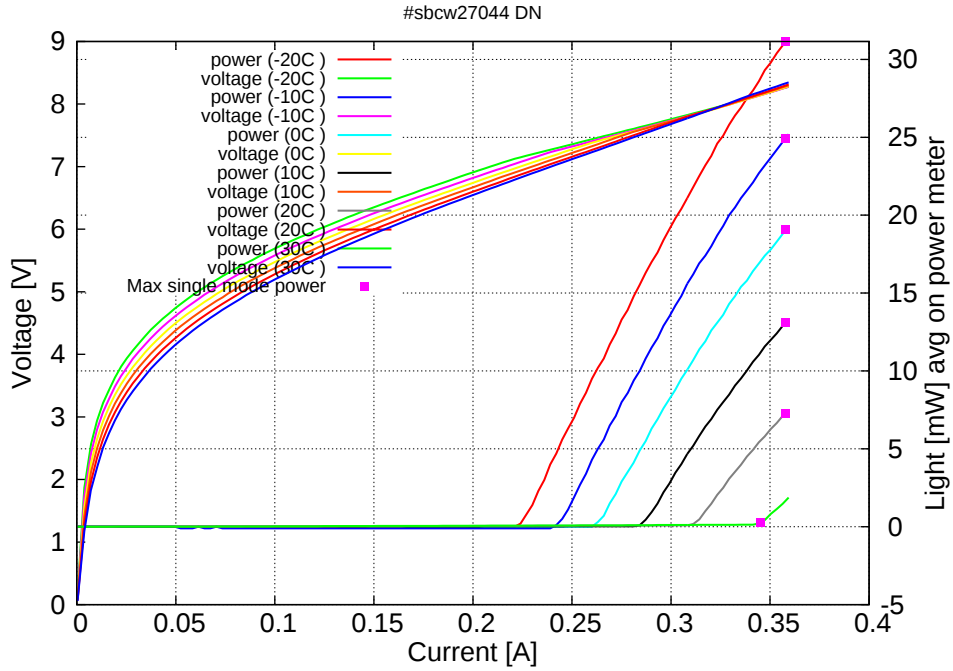


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.22A$ / $V_{th}=7.1V$ (2-wires measurements). Maximum operation current: 0.36A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

