

Datasheet for #sbcw27046 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.

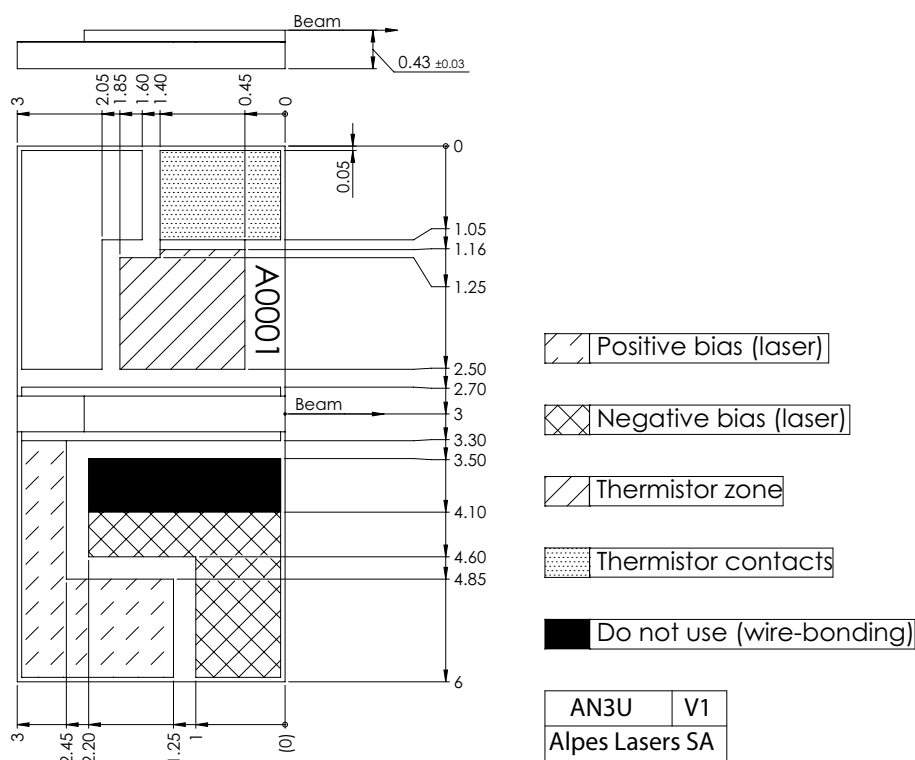


Figure 1: Mechanical and electrical interface for #sbcw27046 DN (please note that AlN submount numbering is A0Y50)

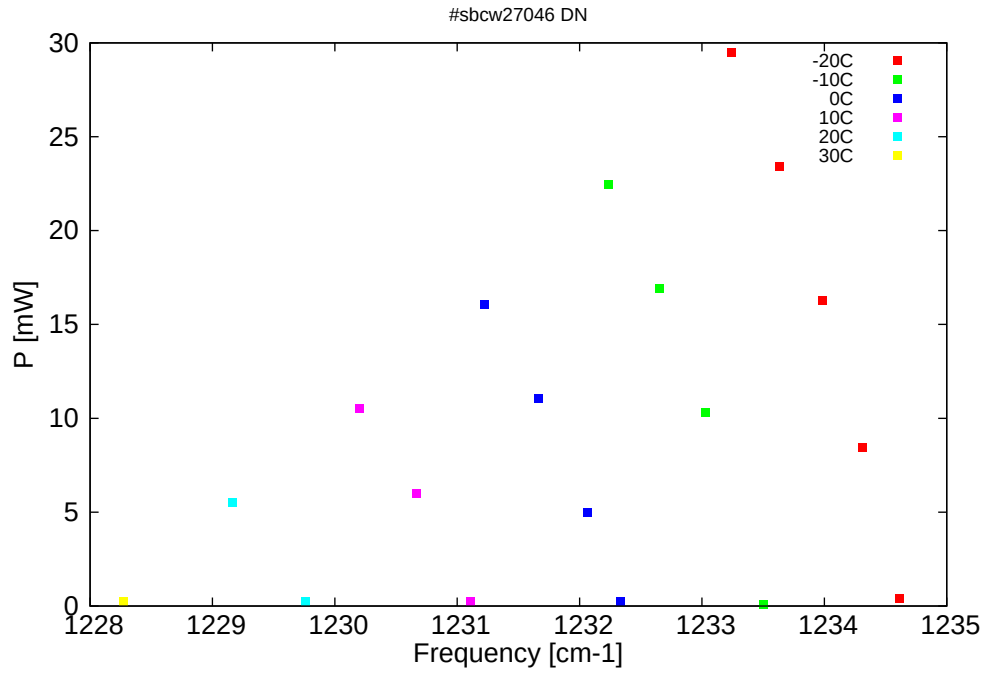


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

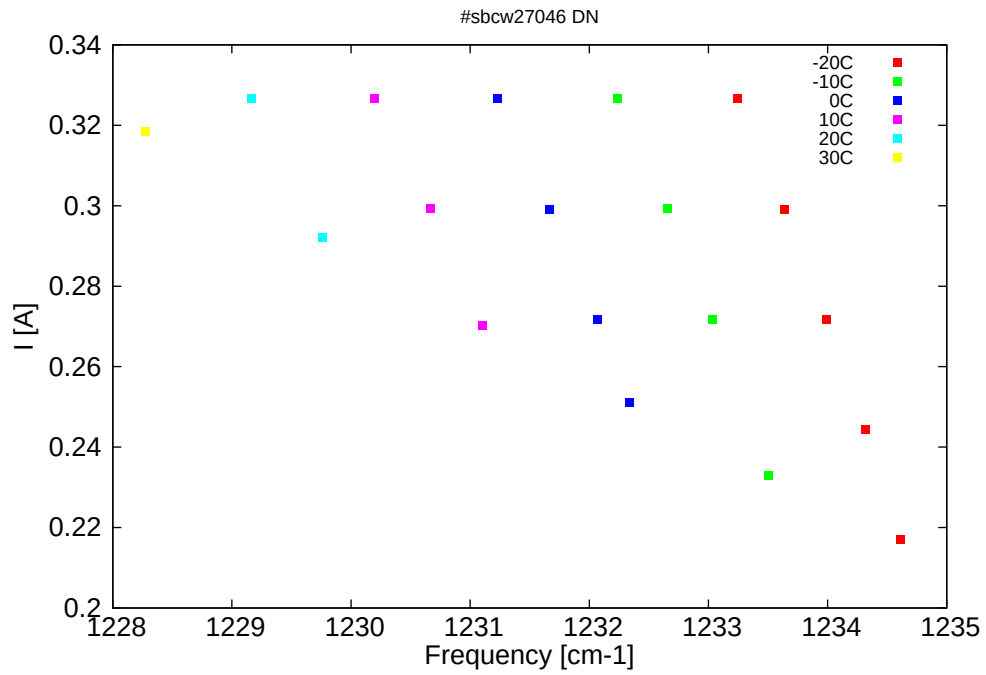


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8099.7	1234.6	0.4	-20	6.76	0.217
8101.7	1234.3	8.4	-20	7.02	0.244
8103.8	1234	16.3	-20	7.27	0.272
8106.1	1233.6	23.4	-20	7.53	0.299
8108.7	1233.2	29.5	-20	7.8	0.327
8107	1233.5	0.1	-10	6.9	0.233
8110.1	1233	10.3	-10	7.27	0.272
8112.6	1232.7	16.9	-10	7.53	0.299
8115.3	1232.2	22.5	-10	7.81	0.327
8114.7	1232.3	0.2	0	7.05	0.251
8116.5	1232.1	5	0	7.26	0.272
8119.1	1231.7	11.1	0	7.53	0.299
8122	1231.2	16.1	0	7.81	0.327
8122.8	1231.1	0.3	10	7.23	0.27
8125.7	1230.7	6	10	7.53	0.299
8128.8	1230.2	10.5	10	7.82	0.327
8131.6	1229.8	0.3	20	7.45	0.292
8135.6	1229.2	5.5	20	7.83	0.327
8141.5	1228.3	0.2	30	7.74	0.319

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

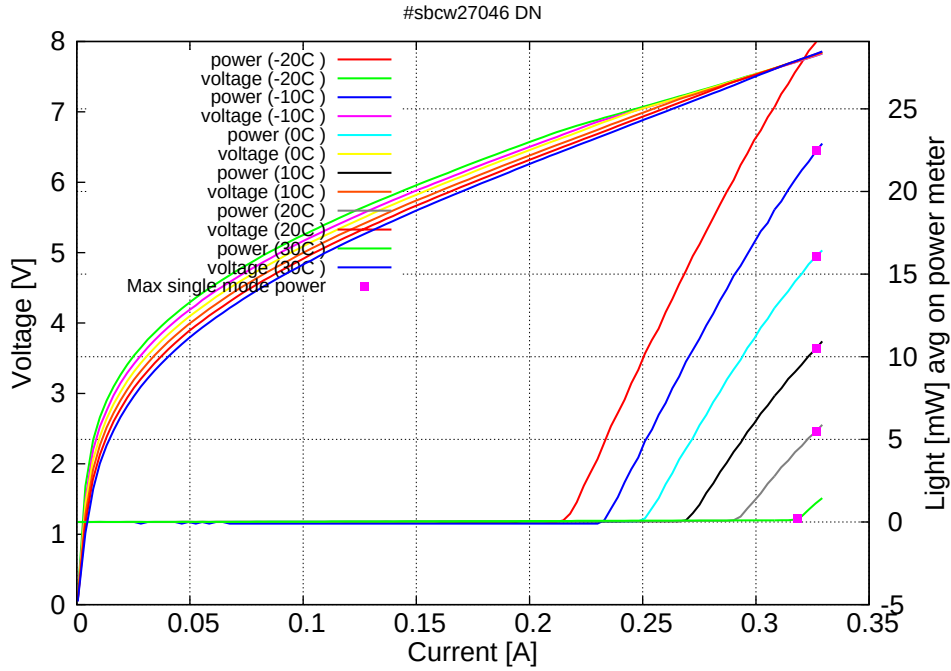


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.21A$ / $V_{th}=6.7V$ (2-wires measurements). Maximum operation current: 0.33A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

