

Datasheet for #sbcw27081 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.

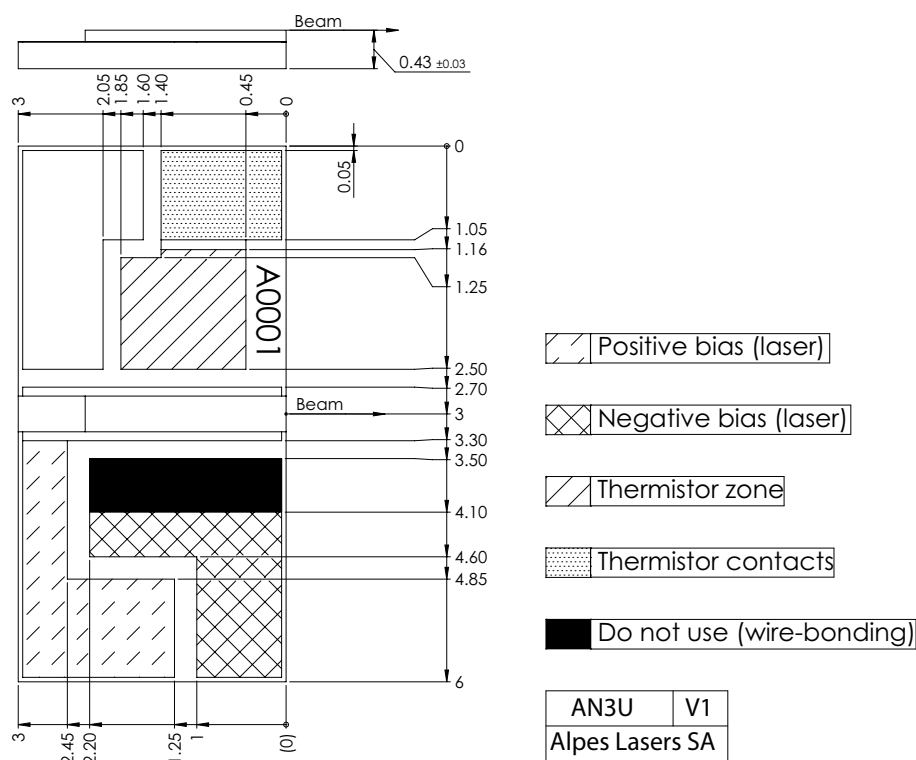


Figure 1: Mechanical and electrical interface for #sbcw27081 DN (please note that AlN submount numbering is A0X6R)

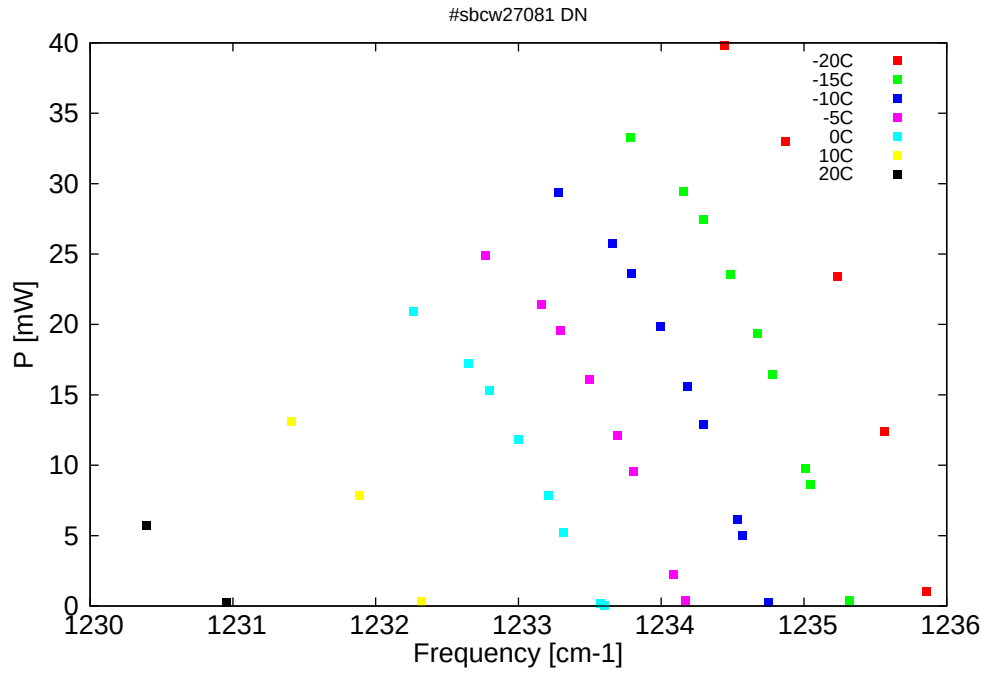


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

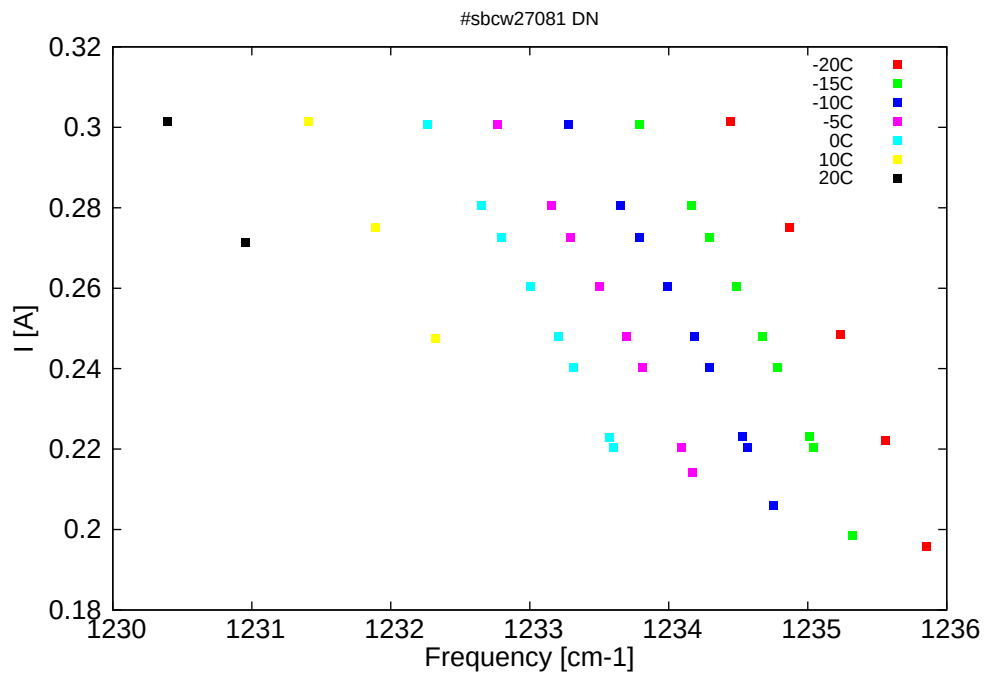


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8091.5	1235.9	1	-20	6.89	0.196
8093.5	1235.6	12.4	-20	7.22	0.222
8095.6	1235.2	23.4	-20	7.56	0.249
8098	1234.9	33	-20	7.92	0.275
8100.8	1234.4	39.8	-20	8.31	0.301
8095.1	1235.3	0.4	-15	6.79	0.199
8096.9	1235	8.6	-15	7.04	0.22
8097.1	1235	9.7	-15	7.08	0.223
8098.6	1234.8	16.5	-15	7.28	0.24
8099.3	1234.7	19.4	-15	7.38	0.248
8100.5	1234.5	23.6	-15	7.53	0.261
8101.8	1234.3	27.4	-15	7.7	0.273
8102.7	1234.2	29.5	-15	7.8	0.281
8105.1	1233.8	33.3	-15	8.11	0.301
8098.8	1234.8	0.3	-10	6.86	0.206
8100	1234.6	5	-10	7.03	0.22
8100.2	1234.5	6.2	-10	7.07	0.223
8101.8	1234.3	12.9	-10	7.27	0.24
8102.5	1234.2	15.6	-10	7.37	0.248
8103.8	1234	19.8	-10	7.53	0.261
8105.1	1233.8	23.7	-10	7.69	0.273
8106	1233.7	25.7	-10	7.8	0.281
8108.5	1233.3	29.4	-10	8.1	0.301
8102.6	1234.2	0.4	-5	6.95	0.214
8103.1	1234.1	2.3	-5	7.02	0.22
8105	1233.8	9.5	-5	7.26	0.24
8105.7	1233.7	12.1	-5	7.36	0.248
8107	1233.5	16.1	-5	7.52	0.261
8108.4	1233.3	19.6	-5	7.68	0.273
8109.3	1233.2	21.4	-5	7.79	0.281
8111.8	1232.8	24.9	-5	8.1	0.301
8106.3	1233.6	0	0	7	0.22
8106.5	1233.6	0.2	0	7.04	0.223
8108.2	1233.3	5.2	0	7.25	0.24
8108.9	1233.2	7.9	0	7.35	0.248
8110.3	1233	11.9	0	7.51	0.261
8111.6	1232.8	15.3	0	7.67	0.273
8112.6	1232.7	17.2	0	7.78	0.281
8115.2	1232.3	20.9	0	8.09	0.301
8114.8	1232.3	0.3	10	7.46	0.247
8117.6	1231.9	7.8	10	7.84	0.275
8120.8	1231.4	13.1	10	8.25	0.301
8123.8	1231	0.2	20	7.77	0.271
8127.5	1230.4	5.7	20	8.23	0.301

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

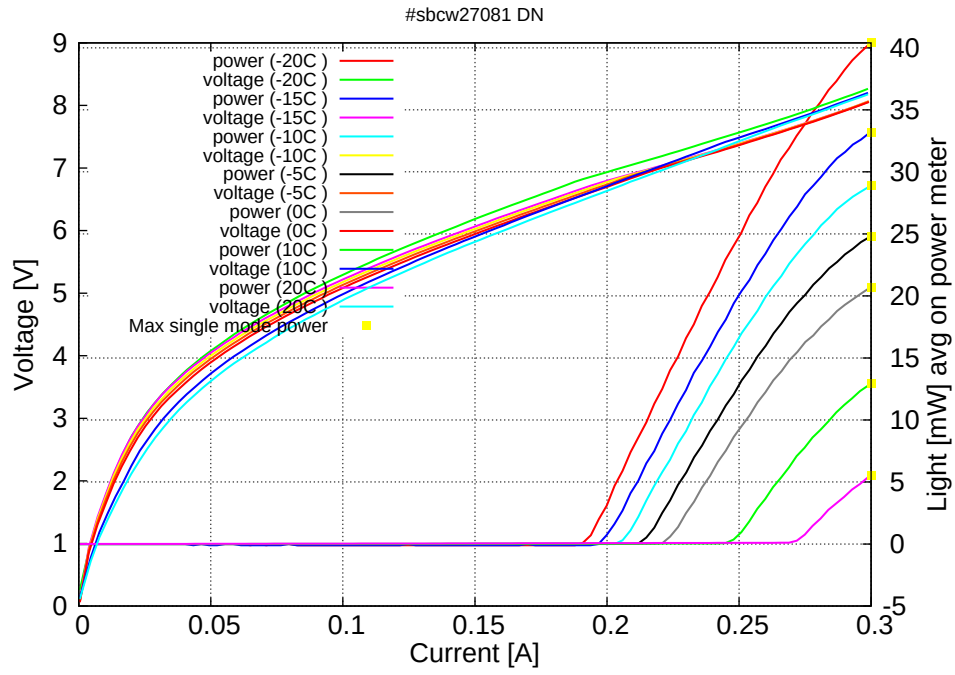


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=6.8V$ (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

