

Datasheet for #sbcw27080 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.

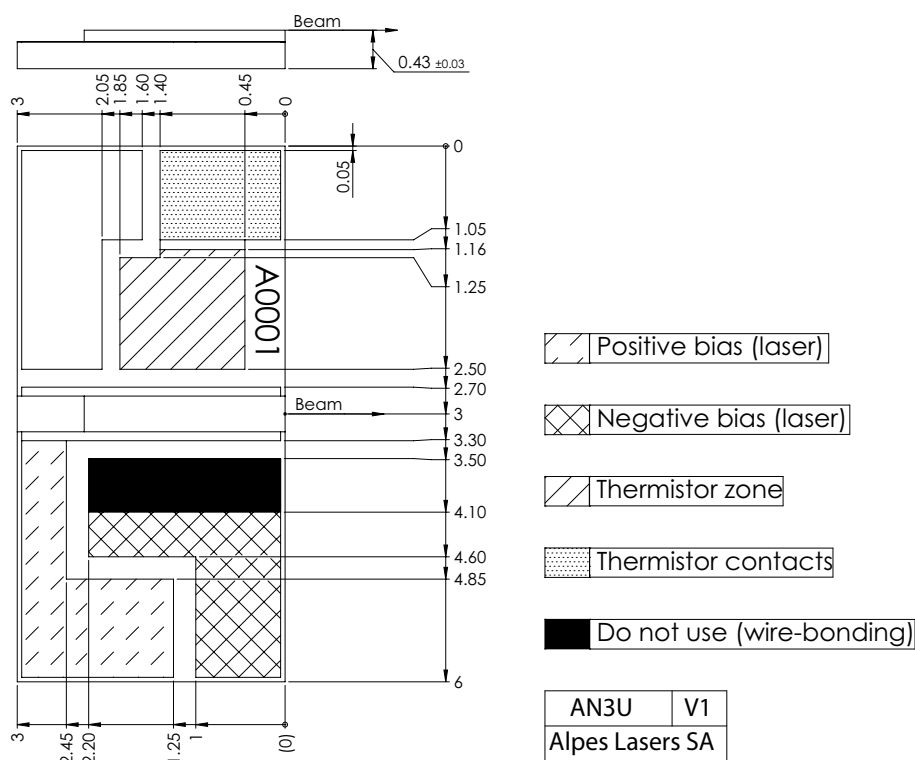


Figure 1: Mechanical and electrical interface for #sbcw27080 DN (please note that AlN submount numbering is A0UXZ)

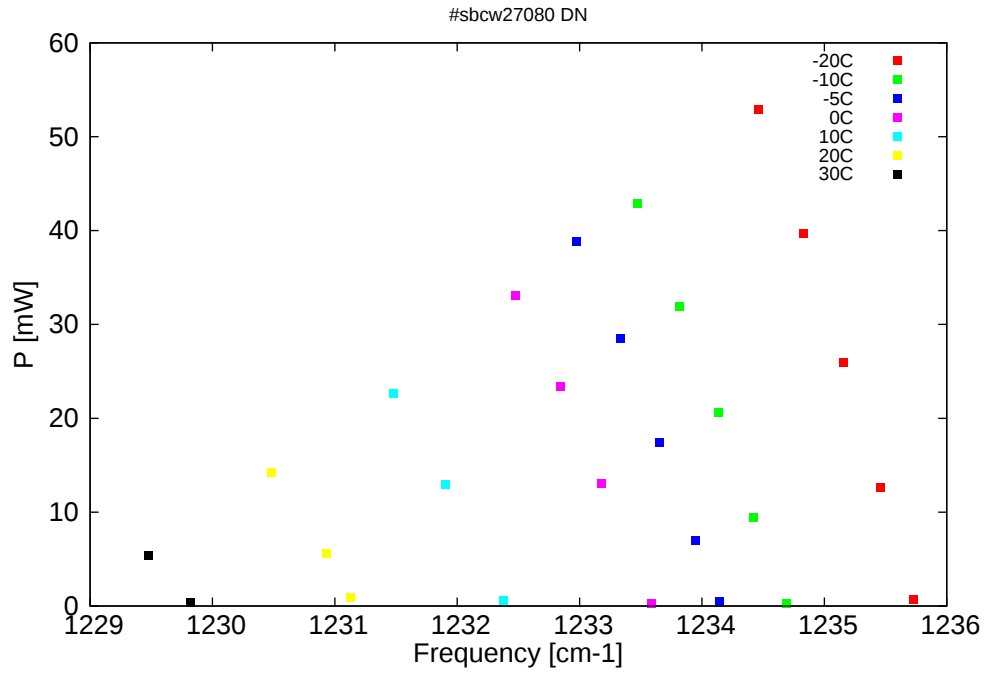


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

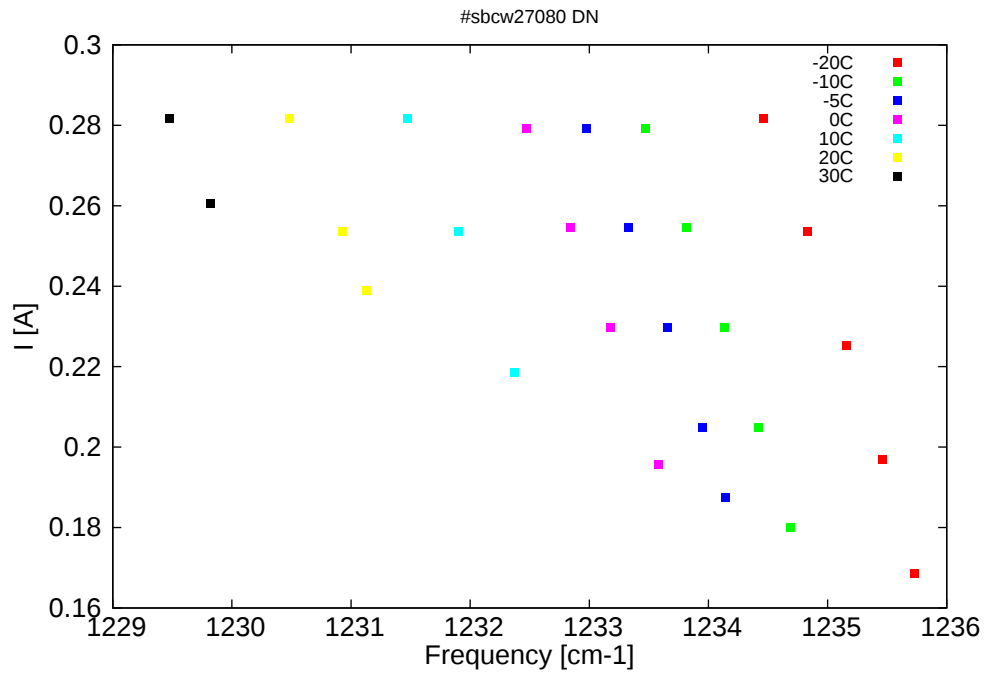


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8092.4	1235.7	0.7	-20	6.45	0.169
8094.1	1235.5	12.6	-20	6.77	0.197
8096.1	1235.2	25.9	-20	7.08	0.225
8098.3	1234.8	39.7	-20	7.39	0.254
8100.7	1234.5	52.9	-20	7.73	0.282
8099.2	1234.7	0.3	-10	6.68	0.18
8100.9	1234.4	9.5	-10	6.99	0.205
8102.8	1234.1	20.7	-10	7.29	0.23
8104.9	1233.8	31.9	-10	7.59	0.255
8107.2	1233.5	42.9	-10	7.91	0.279
8102.8	1234.1	0.4	-5	6.75	0.188
8104.1	1233.9	6.9	-5	6.96	0.205
8106	1233.7	17.5	-5	7.26	0.23
8108.1	1233.3	28.5	-5	7.57	0.255
8110.5	1233	38.9	-5	7.89	0.279
8106.5	1233.6	0.3	0	6.83	0.196
8109.1	1233.2	13	0	7.25	0.23
8111.3	1232.8	23.4	0	7.56	0.255
8113.8	1232.5	33.1	0	7.89	0.279
8114.4	1232.4	0.6	10	6.94	0.219
8117.5	1231.9	12.9	10	7.36	0.254
8120.3	1231.5	22.6	10	7.72	0.282
8122.6	1231.1	0.9	20	7.15	0.239
8123.9	1230.9	5.6	20	7.34	0.254
8126.9	1230.5	14.3	20	7.7	0.282
8131.3	1229.8	0.3	30	7.4	0.261
8133.5	1229.5	5.4	30	7.68	0.282

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

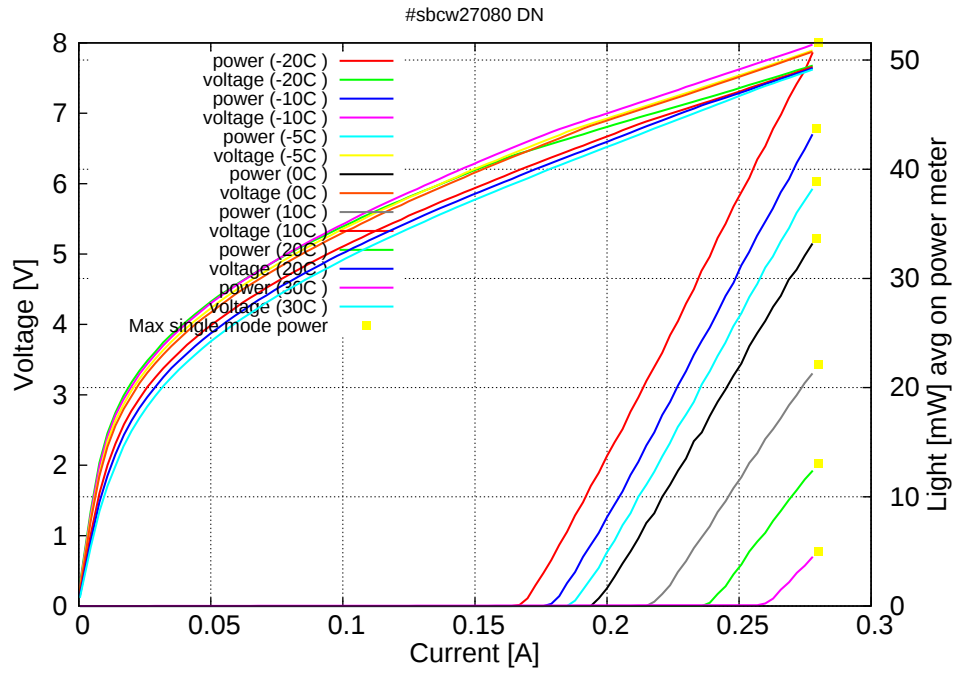


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=6.4V$ (2-wires measurements). Maximum operation current: 0.28A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

