

Datasheet for #sbcw27040 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.

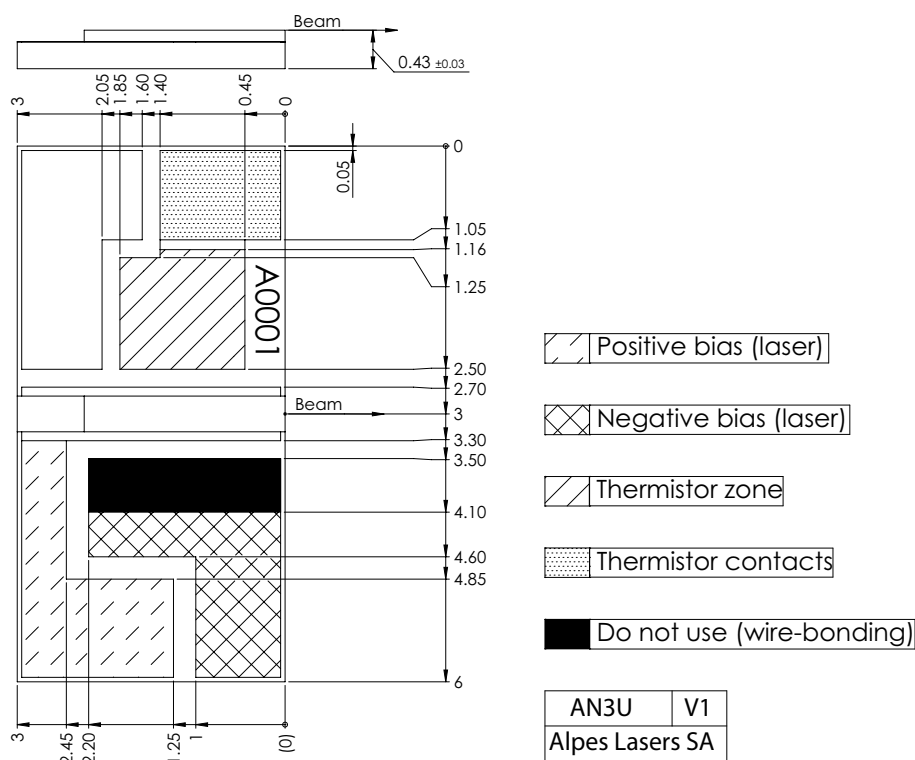


Figure 1: Mechanical and electrical interface for #sbcw27040 DN (please note that AlN submount numbering is A0XCZ)

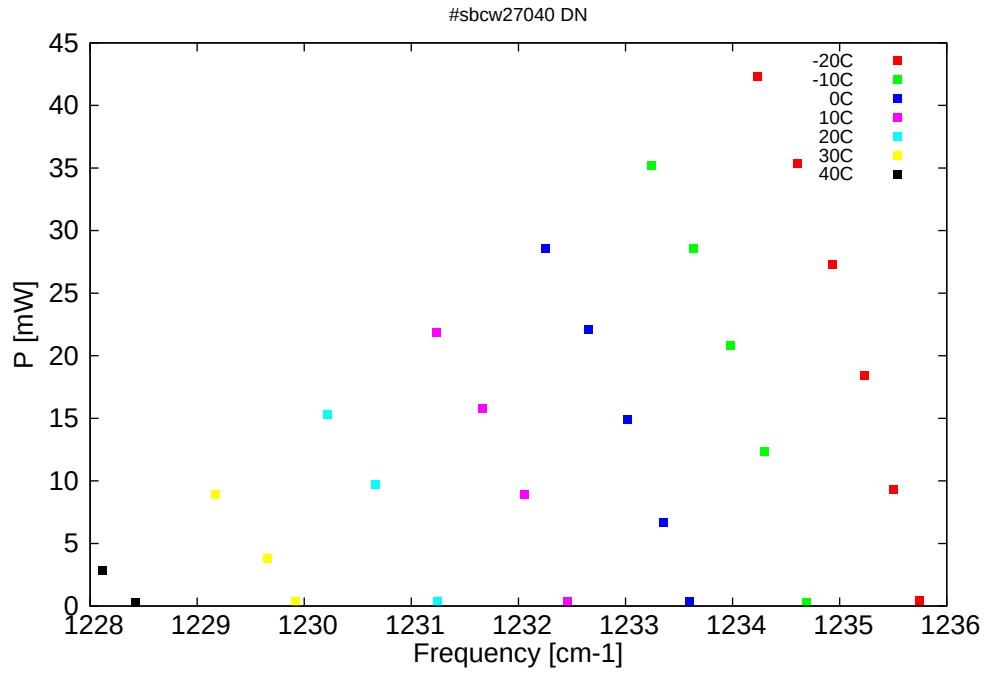


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

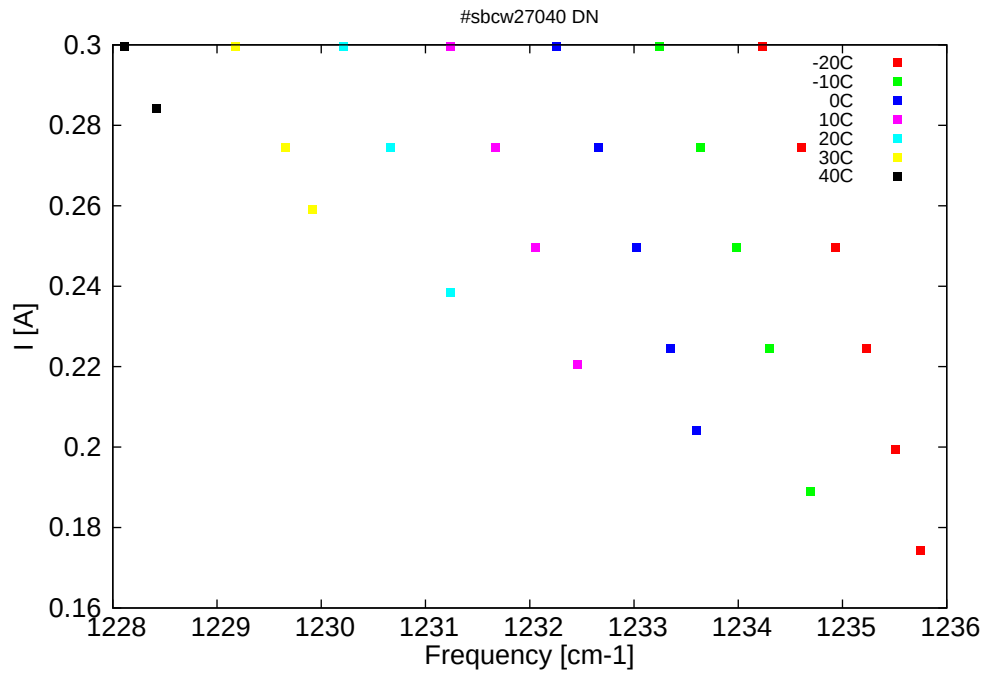


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8092.3	1235.7	0.4	-20	6.98	0.174
8093.9	1235.5	9.3	-20	7.21	0.2
8095.6	1235.2	18.4	-20	7.44	0.225
8097.6	1234.9	27.3	-20	7.67	0.25
8099.8	1234.6	35.4	-20	7.91	0.275
8102.2	1234.2	42.3	-20	8.19	0.3
8099.2	1234.7	0.3	-10	7.09	0.189
8101.8	1234.3	12.4	-10	7.42	0.225
8103.9	1234	20.8	-10	7.66	0.25
8106.1	1233.6	28.6	-10	7.92	0.275
8108.7	1233.2	35.2	-10	8.2	0.3
8106.4	1233.6	0.4	0	7.21	0.204
8108	1233.4	6.7	0	7.41	0.225
8110.2	1233	14.9	0	7.66	0.25
8112.6	1232.7	22.1	0	7.92	0.275
8115.2	1232.3	28.5	0	8.21	0.3
8113.9	1232.5	0.4	10	7.37	0.221
8116.5	1232.1	8.9	10	7.67	0.25
8119.1	1231.7	15.8	10	7.94	0.275
8121.9	1231.2	21.9	10	8.23	0.3
8121.9	1231.2	0.4	20	7.55	0.239
8125.7	1230.7	9.7	20	7.95	0.275
8128.7	1230.2	15.3	20	8.25	0.3
8130.7	1229.9	0.3	30	7.79	0.259
8132.4	1229.7	3.8	30	7.97	0.275
8135.5	1229.2	8.9	30	8.28	0.3
8140.5	1228.4	0.3	40	8.08	0.284
8142.6	1228.1	2.8	40	8.28	0.3

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

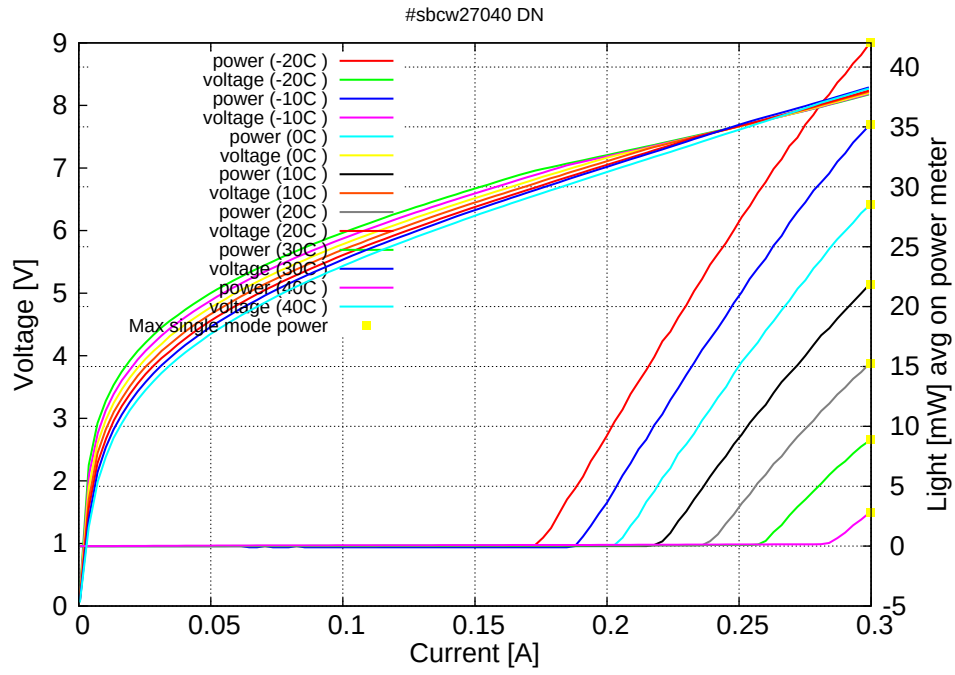


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=6.9V$ (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

