

Datasheet for #sbcw27041 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.

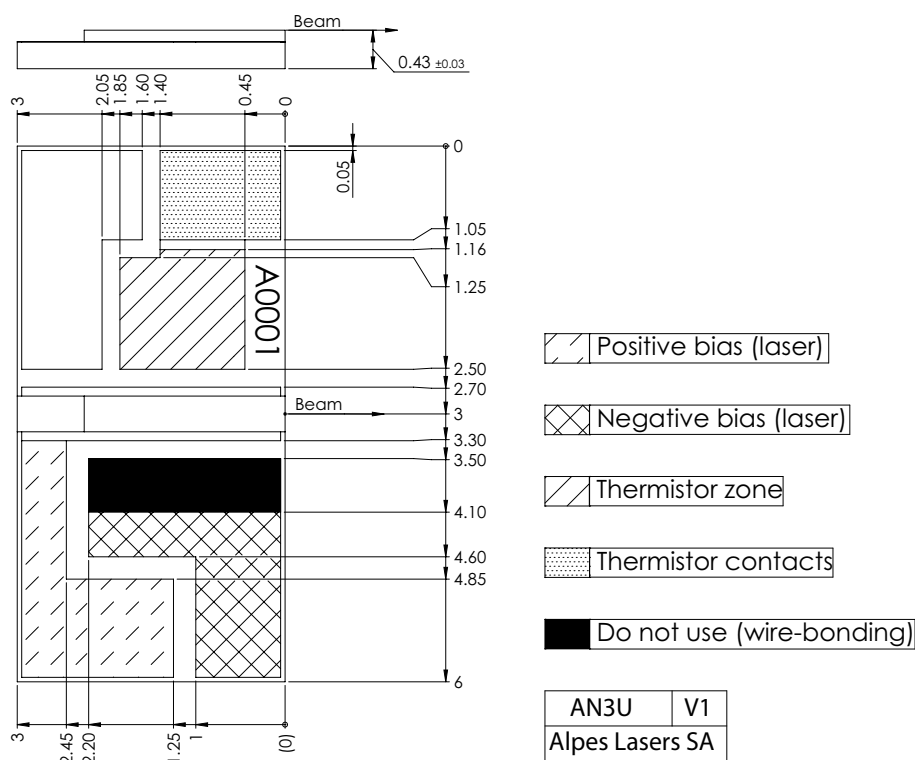


Figure 1: Mechanical and electrical interface for #sbcw27041 DN (please note that AlN submount numbering is A0Y8Z)

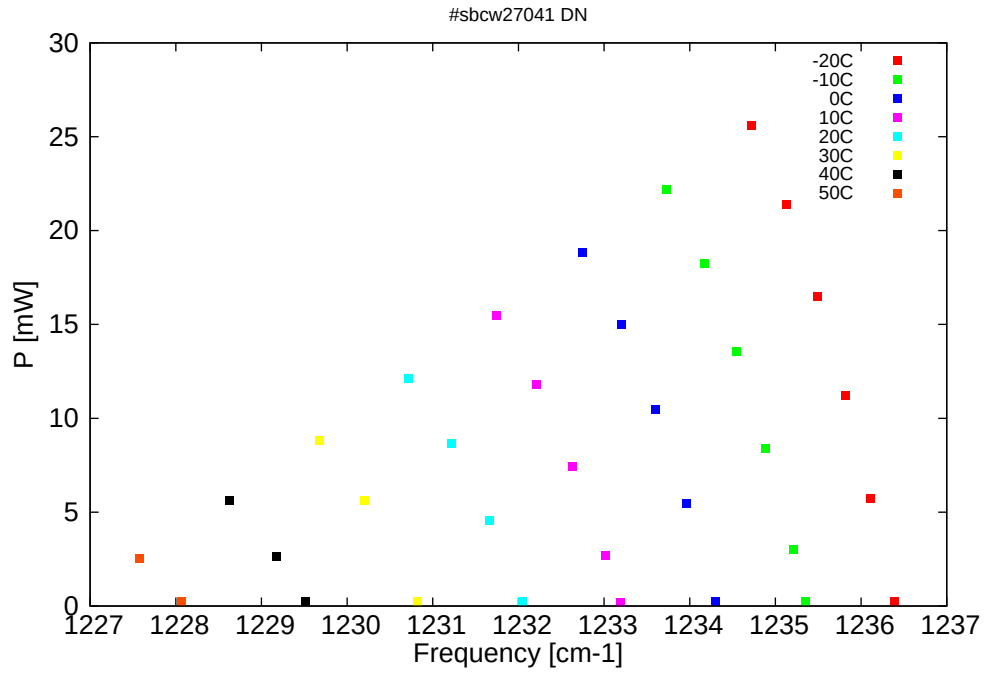


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

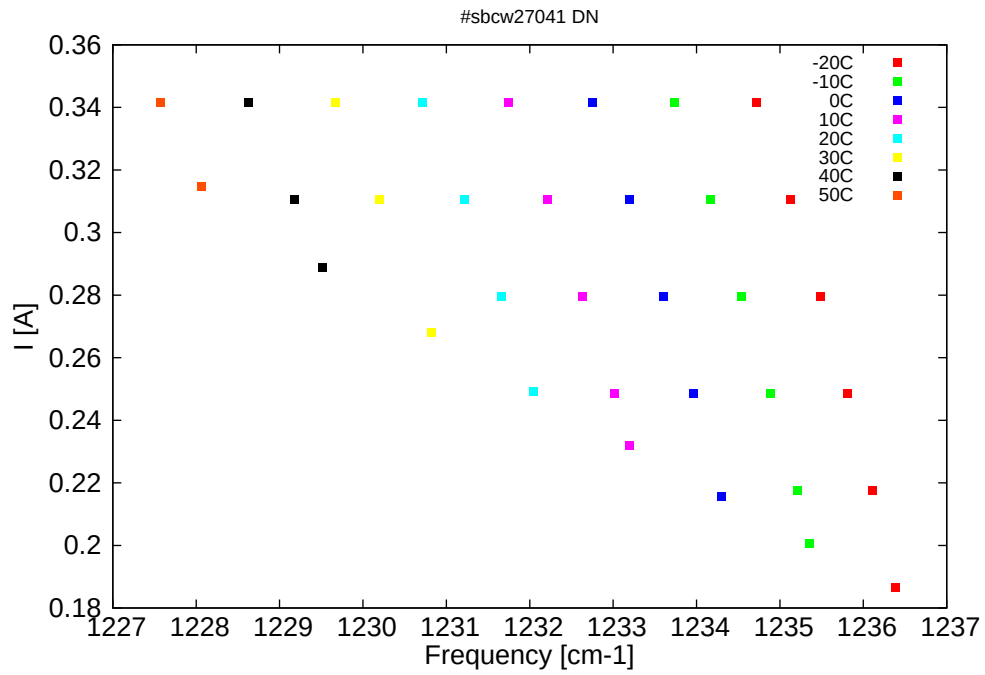


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8088.1	1236.4	0.3	-20	6.91	0.187
8089.9	1236.1	5.7	-20	7.16	0.218
8091.8	1235.8	11.2	-20	7.41	0.249
8094	1235.5	16.5	-20	7.67	0.28
8096.4	1235.1	21.4	-20	7.93	0.311
8099	1234.7	25.6	-20	8.23	0.342
8094.8	1235.4	0.2	-10	6.99	0.201
8095.8	1235.2	3	-10	7.13	0.218
8097.9	1234.9	8.4	-10	7.39	0.249
8100.2	1234.5	13.5	-10	7.65	0.28
8102.6	1234.2	18.3	-10	7.93	0.311
8105.5	1233.7	22.2	-10	8.24	0.342
8101.7	1234.3	0.2	0	7.09	0.216
8104	1234	5.5	0	7.38	0.249
8106.4	1233.6	10.5	0	7.65	0.28
8109	1233.2	15	0	7.93	0.311
8112	1232.7	18.8	0	8.25	0.342
8109	1233.2	0.2	10	7.21	0.232
8110.2	1233	2.7	10	7.36	0.249
8112.7	1232.6	7.5	10	7.64	0.28
8115.5	1232.2	11.8	10	7.94	0.311
8118.6	1231.7	15.5	10	8.26	0.342
8116.6	1232	0.2	20	7.35	0.249
8119.1	1231.7	4.5	20	7.64	0.28
8122	1231.2	8.7	20	7.94	0.311
8125.3	1230.7	12.1	20	8.27	0.342
8124.7	1230.8	0.2	30	7.54	0.268
8128.7	1230.2	5.6	30	7.97	0.311
8132.2	1229.7	8.8	30	8.31	0.342
8133.3	1229.5	0.3	40	7.74	0.289
8135.5	1229.2	2.6	40	7.96	0.311
8139.1	1228.6	5.6	40	8.3	0.342
8142.9	1228.1	0.3	50	7.99	0.315
8146.2	1227.6	2.5	50	8.29	0.342

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

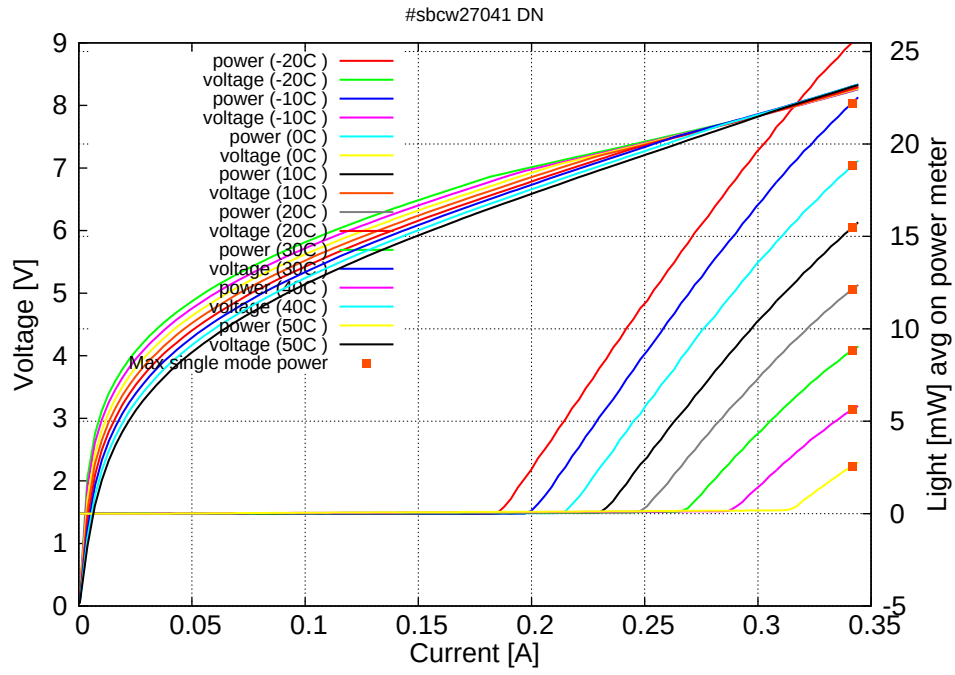


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=6.9V$ (2-wires measurements). Maximum operation current: 0.345A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

