

Datasheet for #sbcw27086 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.

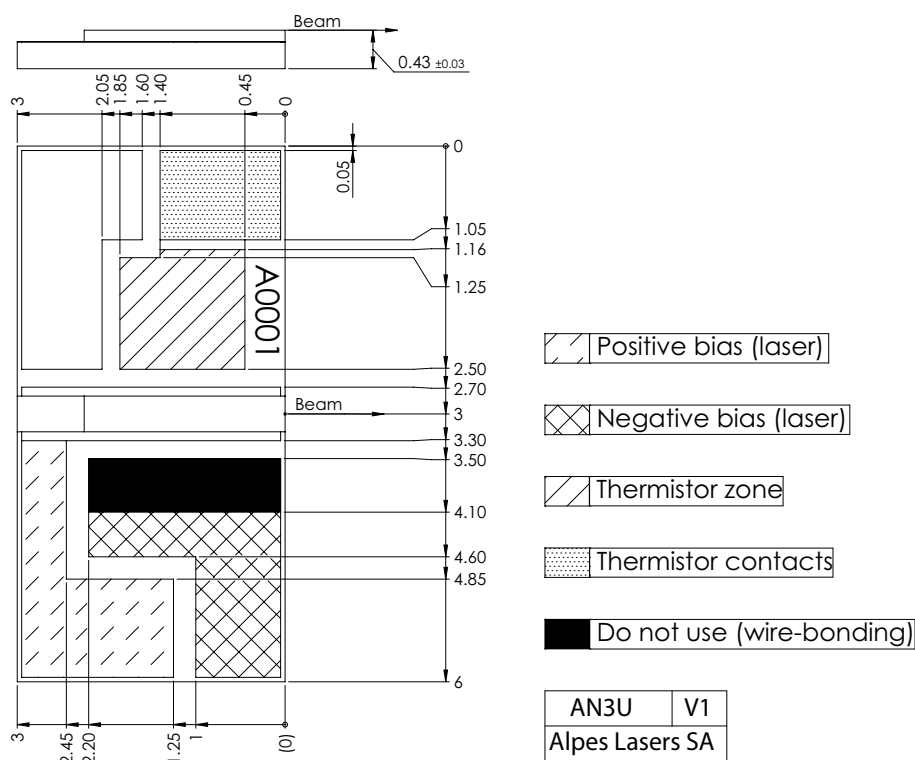


Figure 1: Mechanical and electrical interface for #sbcw27086 DN (please note that AlN submount numbering is A0YL2)

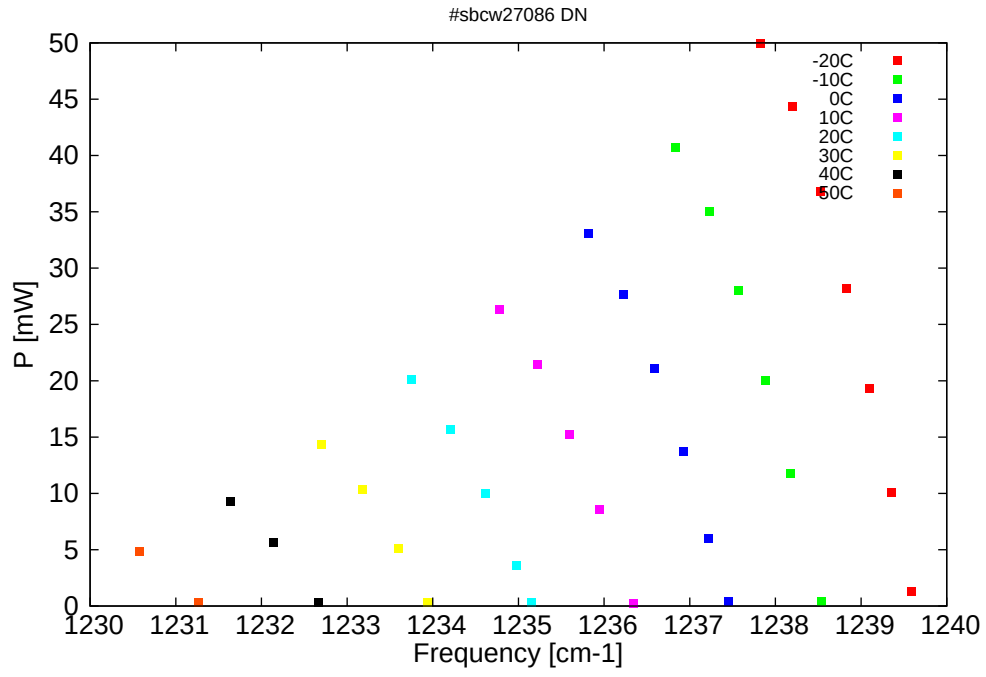


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

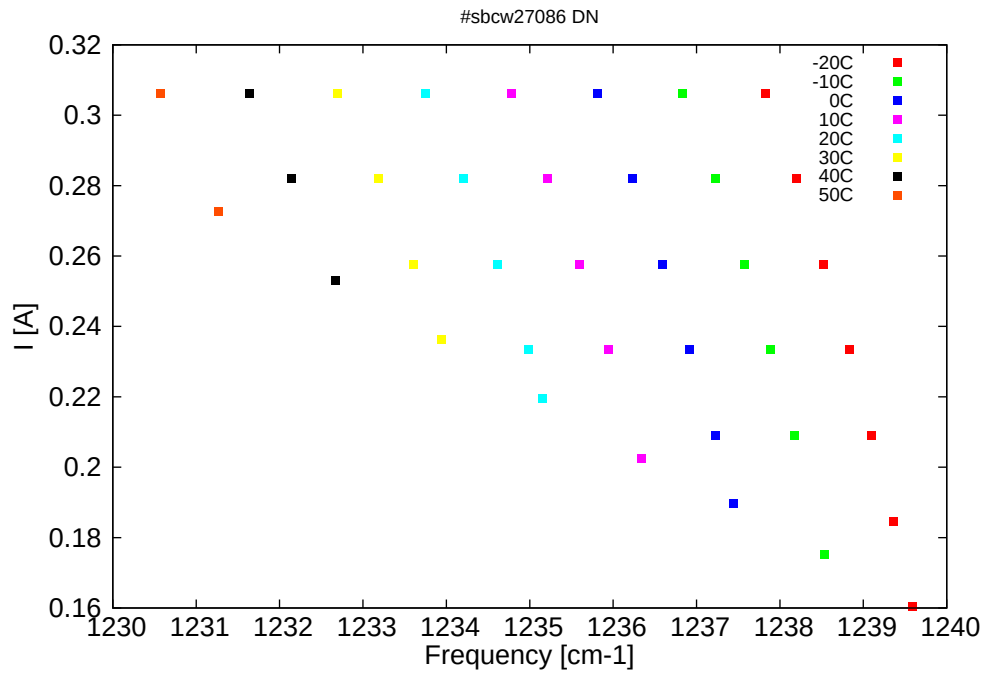


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8067.2	1239.6	1.3	-20	6.29	0.16
8068.7	1239.4	10.1	-20	6.57	0.185
8070.4	1239.1	19.3	-20	6.84	0.209
8072.1	1238.8	28.2	-20	7.1	0.233
8074.1	1238.5	36.8	-20	7.38	0.258
8076.3	1238.2	44.3	-20	7.67	0.282
8078.7	1237.8	50	-20	7.99	0.306
8074.1	1238.5	0.4	-10	6.41	0.175
8076.4	1238.2	11.7	-10	6.8	0.209
8078.3	1237.9	20	-10	7.07	0.233
8080.3	1237.6	28	-10	7.35	0.258
8082.6	1237.2	35.1	-10	7.65	0.282
8085.2	1236.8	40.8	-10	7.98	0.306
8081.1	1237.4	0.4	0	6.56	0.19
8082.6	1237.2	6	0	6.78	0.209
8084.6	1236.9	13.7	0	7.06	0.233
8086.7	1236.6	21.1	0	7.35	0.258
8089.1	1236.2	27.7	0	7.66	0.282
8091.8	1235.8	33	0	8	0.306
8088.4	1236.3	0.3	10	6.7	0.202
8090.9	1235.9	8.5	10	7.07	0.233
8093.2	1235.6	15.3	10	7.36	0.258
8095.7	1235.2	21.4	10	7.67	0.282
8098.6	1234.8	26.4	10	8.02	0.306
8096.1	1235.2	0.4	20	6.89	0.219
8097.3	1235	3.6	20	7.06	0.233
8099.7	1234.6	10	20	7.37	0.258
8102.4	1234.2	15.6	20	7.68	0.282
8105.4	1233.7	20.2	20	8.04	0.306
8104.1	1233.9	0.3	30	7.11	0.236
8106.3	1233.6	5.1	30	7.38	0.258
8109.1	1233.2	10.3	30	7.71	0.282
8112.3	1232.7	14.4	30	8.07	0.306
8112.5	1232.7	0.3	40	7.34	0.253
8116	1232.1	5.7	40	7.73	0.282
8119.3	1231.6	9.3	40	8.1	0.306
8121.7	1231.3	0.3	50	7.62	0.273
8126.3	1230.6	4.9	50	8.11	0.306

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

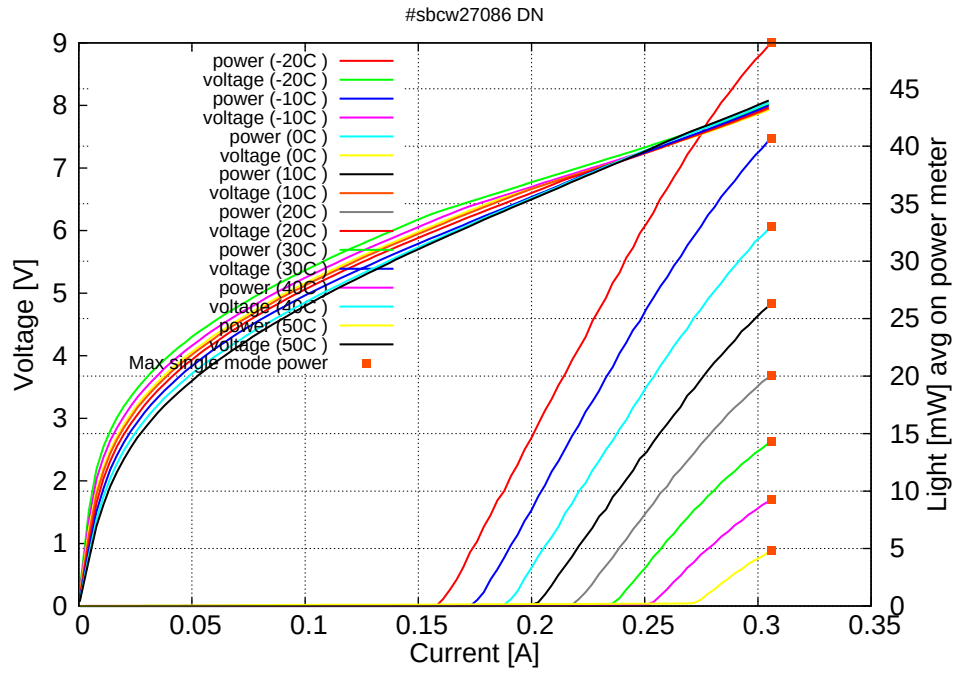


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=6.2V$ (2-wires measurements). Maximum operation current: 0.306A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

