

Datasheet for #sbcw27075 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.

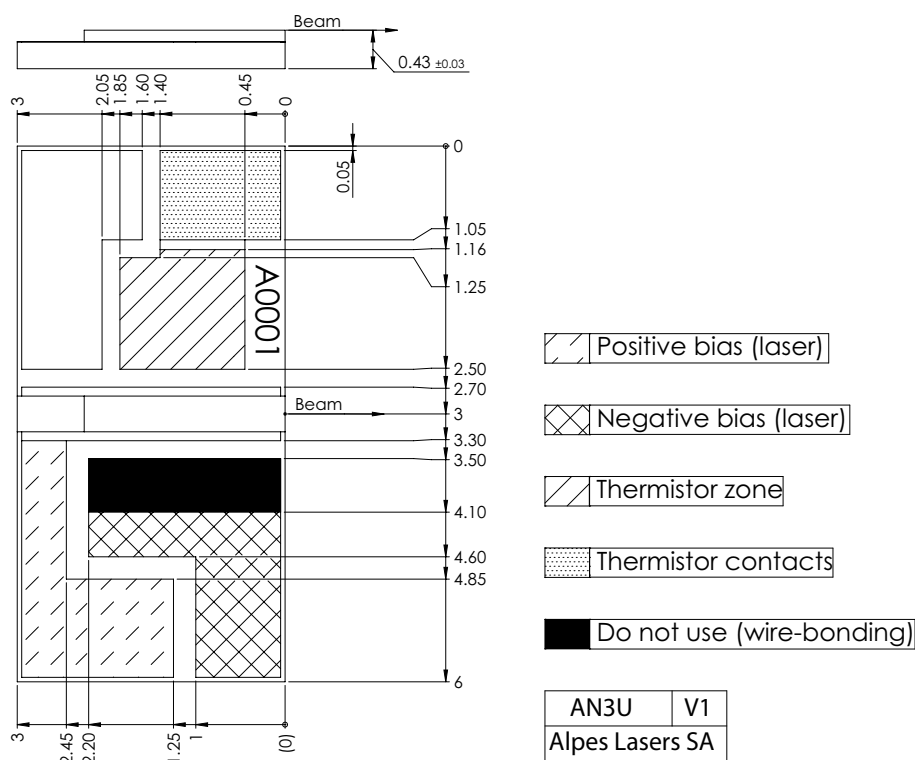


Figure 1: Mechanical and electrical interface for #sbcw27075 DN (please note that AlN submount numbering is A0UXP)

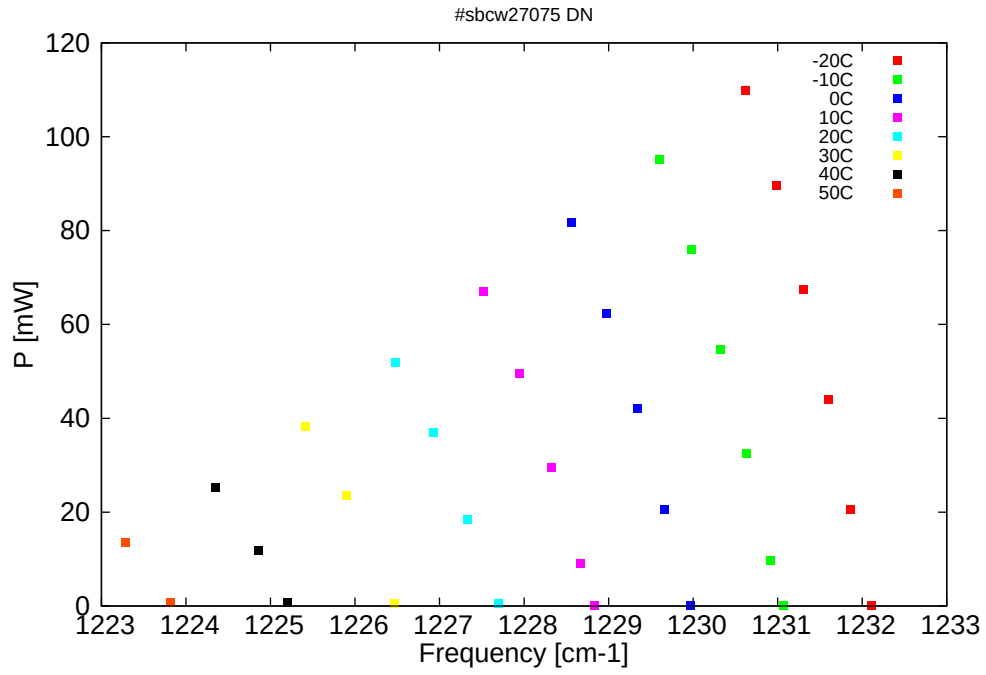


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

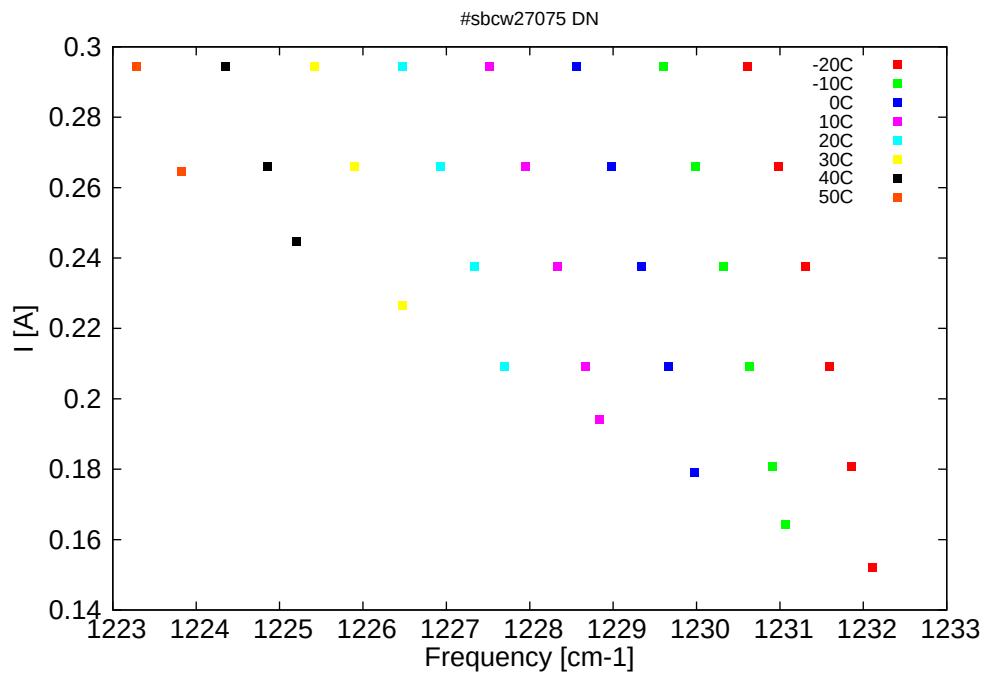


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8116.2	1232.1	0.1	-20	6.75	0.152
8117.8	1231.9	20.5	-20	7.04	0.181
8119.5	1231.6	44.1	-20	7.32	0.209
8121.4	1231.3	67.4	-20	7.61	0.238
8123.6	1231	89.6	-20	7.9	0.266
8126	1230.6	109.8	-20	8.22	0.295
8123	1231.1	0	-10	6.84	0.164
8124	1230.9	9.7	-10	7.01	0.181
8125.9	1230.6	32.4	-10	7.29	0.209
8127.9	1230.3	54.6	-10	7.58	0.238
8130.2	1230	75.9	-10	7.88	0.266
8132.7	1229.6	95.1	-10	8.21	0.295
8130.3	1230	0.2	0	6.97	0.179
8132.3	1229.7	20.6	0	7.29	0.209
8134.5	1229.3	42.1	0	7.59	0.238
8136.8	1229	62.3	0	7.9	0.266
8139.6	1228.6	81.7	0	8.24	0.295
8137.8	1228.8	0.2	10	7.09	0.194
8138.9	1228.7	9	10	7.24	0.209
8141.1	1228.3	29.5	10	7.55	0.238
8143.7	1228	49.5	10	7.87	0.266
8146.5	1227.5	67.1	10	8.22	0.295
8145.4	1227.7	0.5	20	7.23	0.209
8147.7	1227.3	18.5	20	7.55	0.238
8150.4	1226.9	36.9	20	7.87	0.266
8153.4	1226.5	51.8	20	8.23	0.295
8153.5	1226.5	0.6	30	7.42	0.227
8157.3	1225.9	23.6	30	7.88	0.266
8160.5	1225.4	38.2	30	8.24	0.295
8161.9	1225.2	0.7	40	7.62	0.245
8164.2	1224.9	11.7	40	7.88	0.266
8167.6	1224.4	25.3	40	8.25	0.295
8171.1	1223.8	0.7	50	7.87	0.265
8174.7	1223.3	13.4	50	8.26	0.295

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

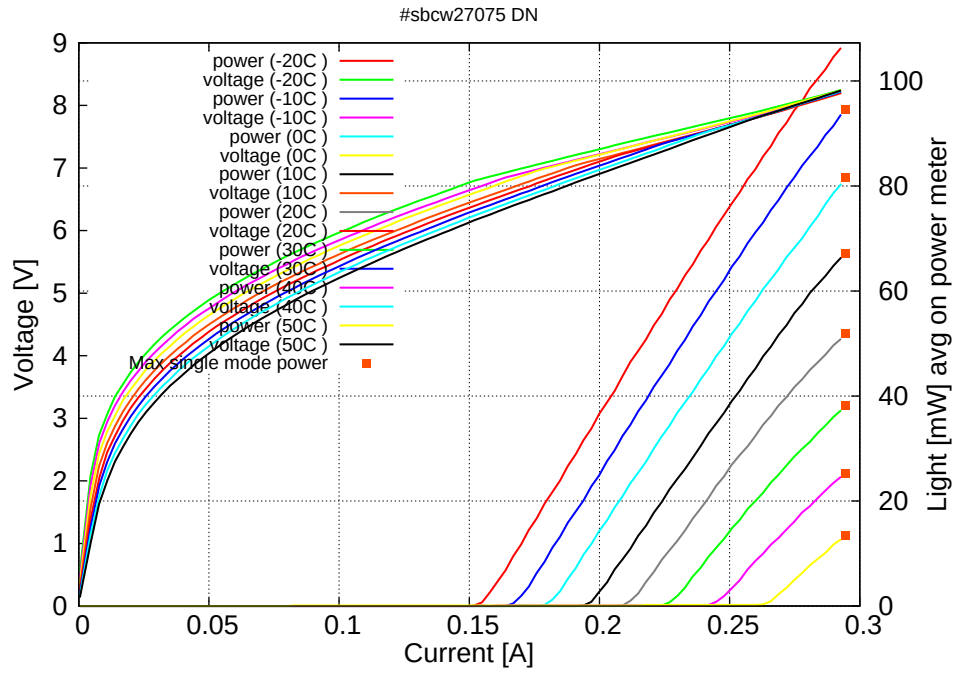


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=6.8V$ (2-wires measurements). Maximum operation current: 0.295A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

