

Datasheet for #sbcw27039 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 #sbcw27039 DN (please note that AlN submount numbering is A0UWY)

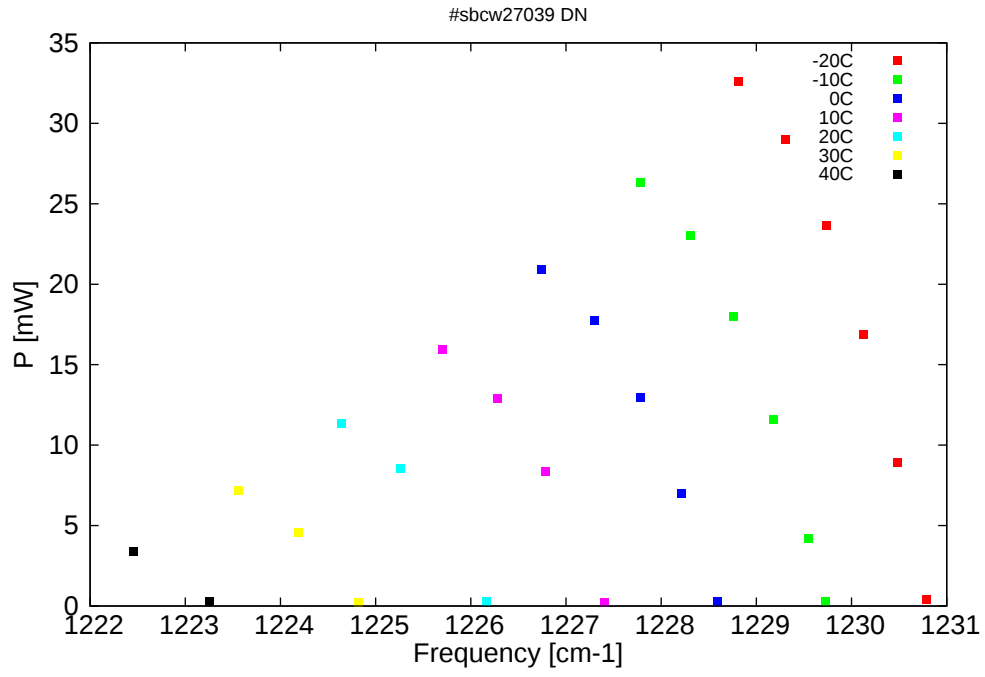


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

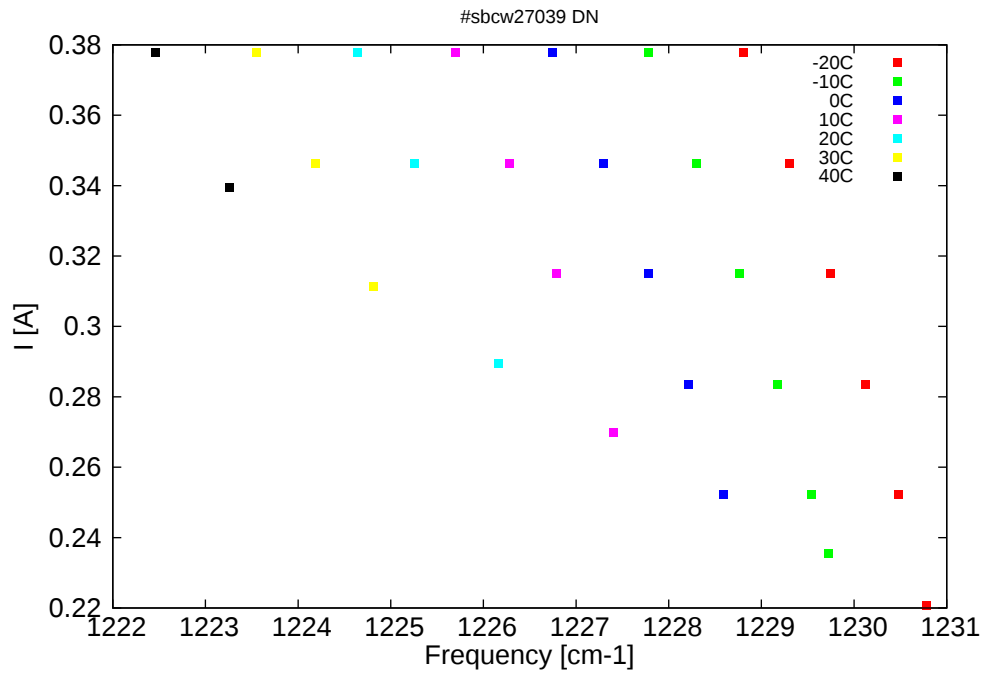


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8124.9	1230.8	0.4	-20	6.81	0.221
8126.9	1230.5	8.9	-20	7.07	0.252
8129.2	1230.1	16.9	-20	7.33	0.284
8131.8	1229.7	23.6	-20	7.6	0.315
8134.7	1229.3	29	-20	7.88	0.346
8137.9	1228.8	32.6	-20	8.2	0.378
8131.9	1229.7	0.3	-10	6.91	0.236
8133.1	1229.5	4.2	-10	7.05	0.252
8135.5	1229.2	11.6	-10	7.32	0.284
8138.3	1228.8	18	-10	7.6	0.315
8141.3	1228.3	23	-10	7.89	0.346
8144.8	1227.8	26.3	-10	8.21	0.378
8139.4	1228.6	0.3	0	7.03	0.252
8141.9	1228.2	7	0	7.31	0.284
8144.7	1227.8	13	0	7.6	0.315
8148	1227.3	17.7	0	7.9	0.346
8151.6	1226.7	20.9	0	8.23	0.378
8147.3	1227.4	0.2	10	7.18	0.27
8151.4	1226.8	8.4	10	7.6	0.315
8154.7	1226.3	12.9	10	7.9	0.346
8158.6	1225.7	15.9	10	8.24	0.378
8155.5	1226.2	0.3	20	7.35	0.29
8161.6	1225.3	8.5	20	7.91	0.346
8165.7	1224.6	11.3	20	8.26	0.378
8164.5	1224.8	0.2	30	7.58	0.311
8168.7	1224.2	4.5	30	7.94	0.346
8172.9	1223.6	7.2	30	8.29	0.378
8174.9	1223.3	0.3	40	7.86	0.339
8180.2	1222.5	3.4	40	8.29	0.378

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

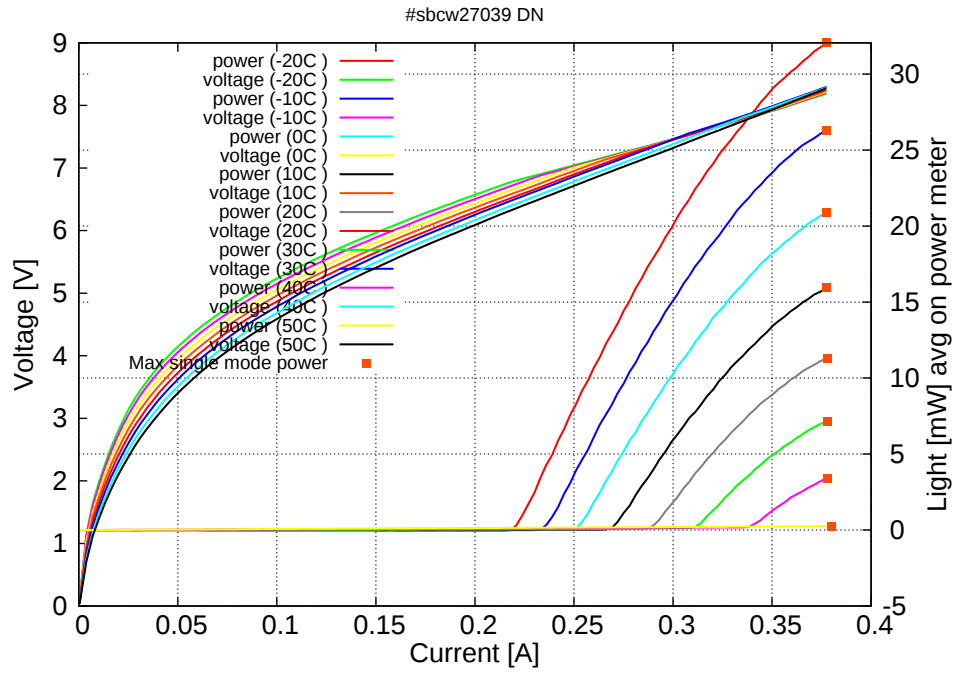


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.22A$ / $V_{th}=6.8V$ (2-wires measurements). Maximum operation current: 0.38A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

