

Datasheet for #sbcw27076 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 #sbcw27076 DN (please note that AlN submount numbering is A0X4W)

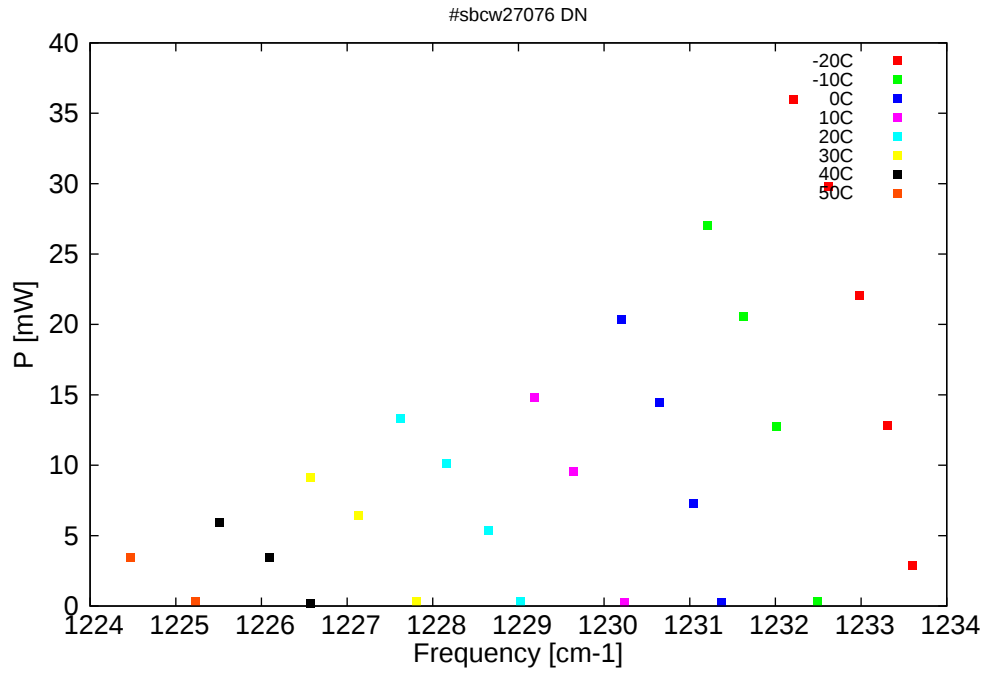


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

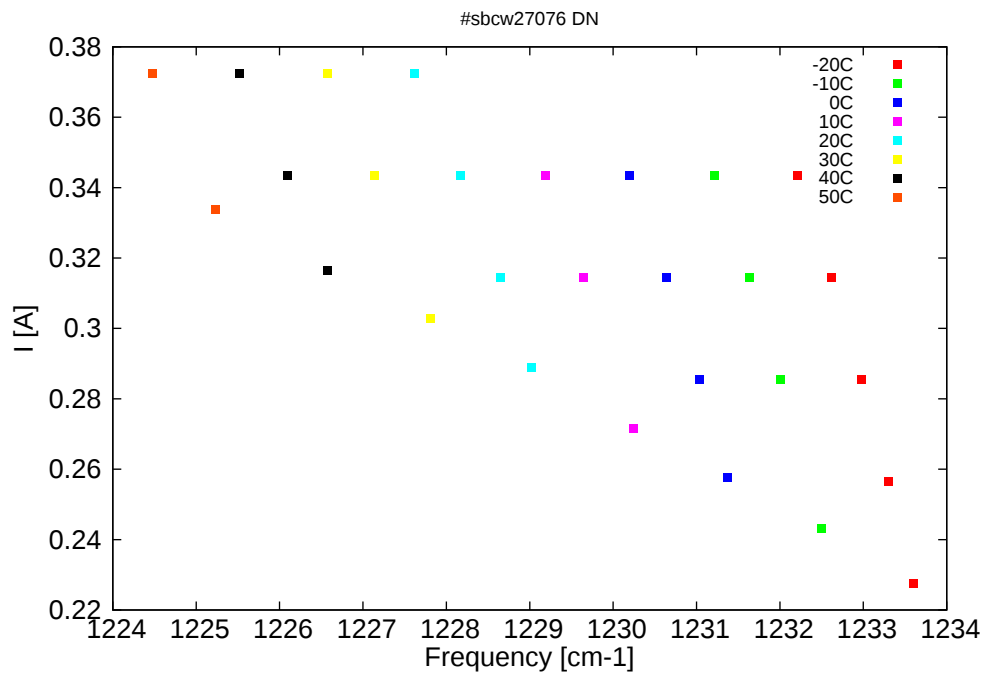


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8106.3	1233.6	2.9	-20	6.75	0.228
8108.3	1233.3	12.8	-20	7.05	0.257
8110.4	1233	22.1	-20	7.34	0.286
8112.8	1232.6	29.8	-20	7.65	0.315
8115.5	1232.2	36	-20	7.97	0.344
8113.6	1232.5	0.3	-10	6.87	0.243
8116.8	1232	12.8	-10	7.31	0.286
8119.3	1231.6	20.6	-10	7.62	0.315
8122.1	1231.2	27.1	-10	7.94	0.344
8121	1231.4	0.3	0	7	0.258
8123.2	1231	7.3	0	7.29	0.286
8125.8	1230.6	14.4	0	7.6	0.315
8128.8	1230.2	20.3	0	7.94	0.344
8128.5	1230.2	0.3	10	7.12	0.272
8132.4	1229.6	9.5	10	7.6	0.315
8135.5	1229.2	14.8	10	7.93	0.344
8136.5	1229	0.3	20	7.3	0.289
8139	1228.6	5.4	20	7.59	0.315
8142.2	1228.2	10.1	20	7.93	0.344
8145.8	1227.6	13.3	20	8.3	0.372
8144.6	1227.8	0.3	30	7.45	0.303
8149.1	1227.1	6.4	30	7.94	0.344
8152.8	1226.6	9.1	30	8.31	0.372
8152.8	1226.6	0.2	40	7.61	0.317
8156	1226.1	3.4	40	7.94	0.344
8159.8	1225.5	6	40	8.32	0.373
8161.7	1225.2	0.3	50	7.82	0.334
8166.8	1224.5	3.5	50	8.31	0.373

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

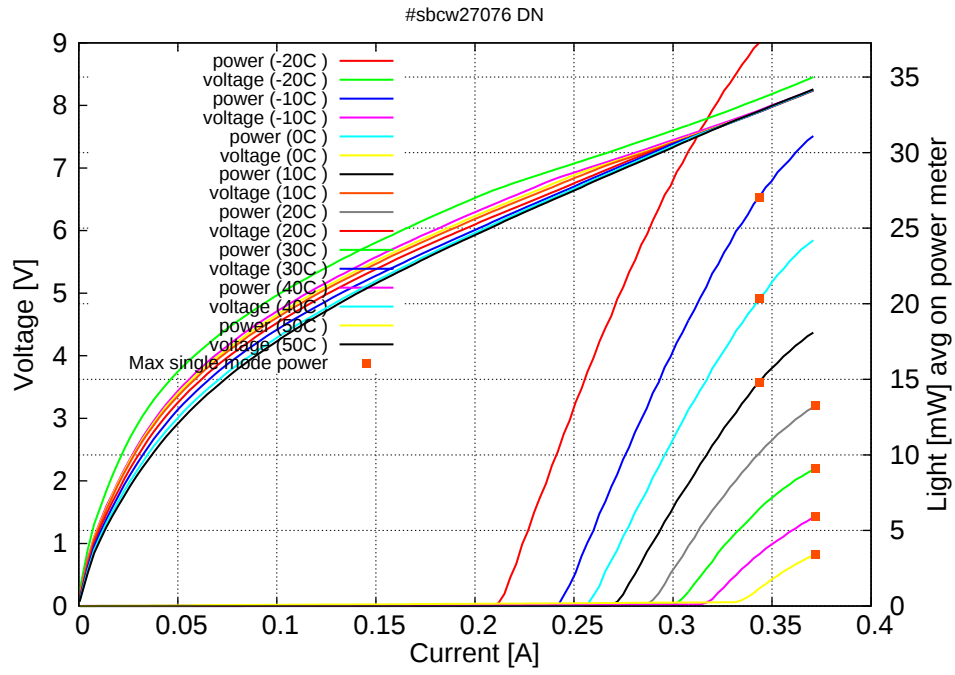


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=6.6V$ (2-wires measurements). Maximum operation current: 0.345A between -20C and 10C, 0.372A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

