

Datasheet for #sbcw27091 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 #sbcw27091 DN (please note that AlN submount numbering is A0YNX)

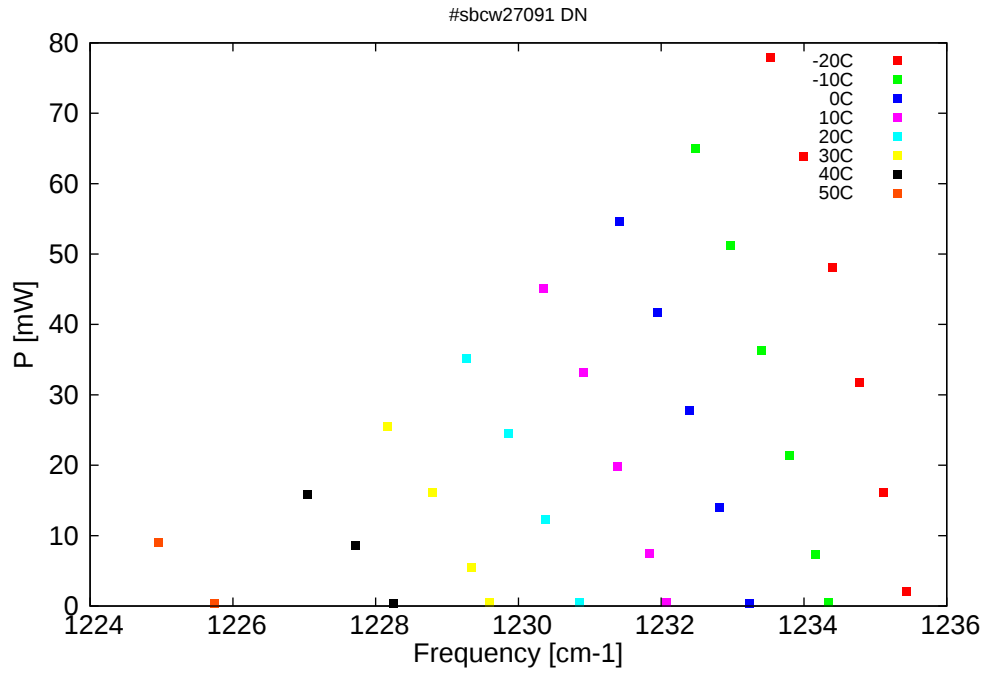


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

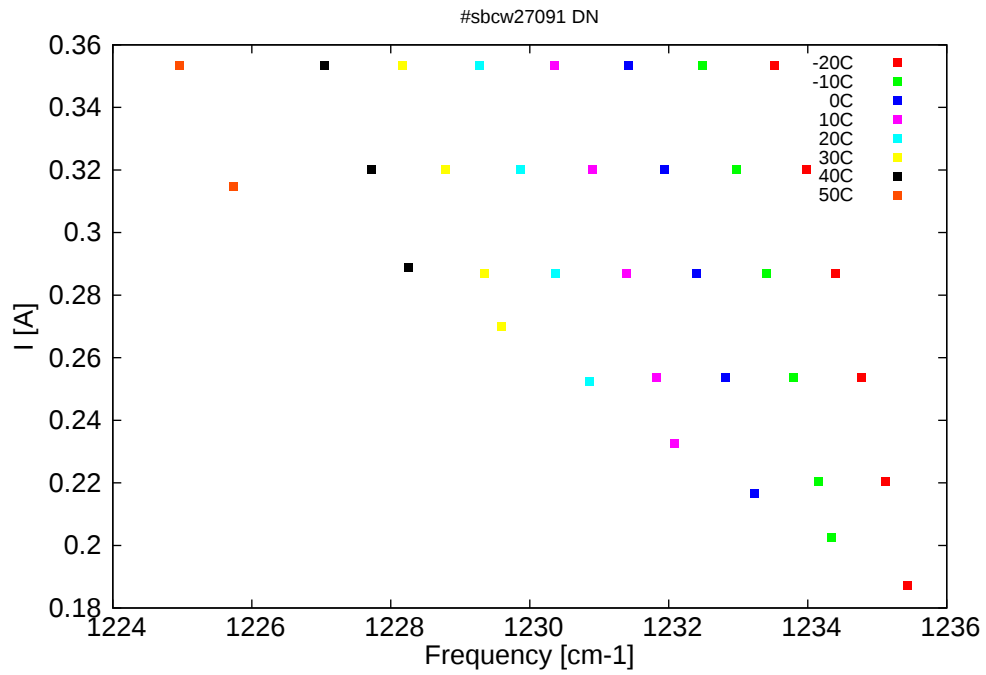


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8094.3	1235.4	2.1	-20	6.4	0.187
8096.4	1235.1	16.1	-20	6.74	0.22
8098.7	1234.8	31.7	-20	7.06	0.254
8101.1	1234.4	48	-20	7.38	0.287
8103.8	1234	63.9	-20	7.69	0.32
8106.8	1233.5	77.9	-20	8.04	0.354
8101.4	1234.3	0.5	-10	6.52	0.203
8102.7	1234.2	7.3	-10	6.71	0.22
8105	1233.8	21.4	-10	7.04	0.254
8107.6	1233.4	36.3	-10	7.37	0.287
8110.5	1233	51.2	-10	7.69	0.32
8113.7	1232.5	65	-10	8.05	0.354
8108.7	1233.2	0.4	0	6.66	0.217
8111.5	1232.8	14	0	7.05	0.254
8114.2	1232.4	27.8	0	7.38	0.287
8117.3	1231.9	41.7	0	7.72	0.32
8120.7	1231.4	54.7	0	8.1	0.354
8116.3	1232.1	0.5	10	6.84	0.233
8118	1231.8	7.4	10	7.06	0.254
8120.9	1231.4	19.8	10	7.41	0.287
8124.1	1230.9	33.1	10	7.76	0.32
8127.7	1230.4	45.1	10	8.15	0.354
8124.4	1230.9	0.4	20	7.04	0.252
8127.6	1230.4	12.3	20	7.42	0.287
8131	1229.9	24.5	20	7.79	0.32
8134.9	1229.3	35.1	20	8.19	0.354
8132.8	1229.6	0.5	30	7.24	0.27
8134.4	1229.3	5.4	30	7.44	0.287
8138.1	1228.8	16.1	30	7.82	0.32
8142.2	1228.2	25.6	30	8.24	0.354
8141.6	1228.3	0.4	40	7.49	0.289
8145.2	1227.7	8.6	40	7.86	0.32
8149.6	1227	15.9	40	8.3	0.354
8158.4	1225.7	0.3	50	7.8	0.315
8163.5	1225	9.1	50	8.29	0.354

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

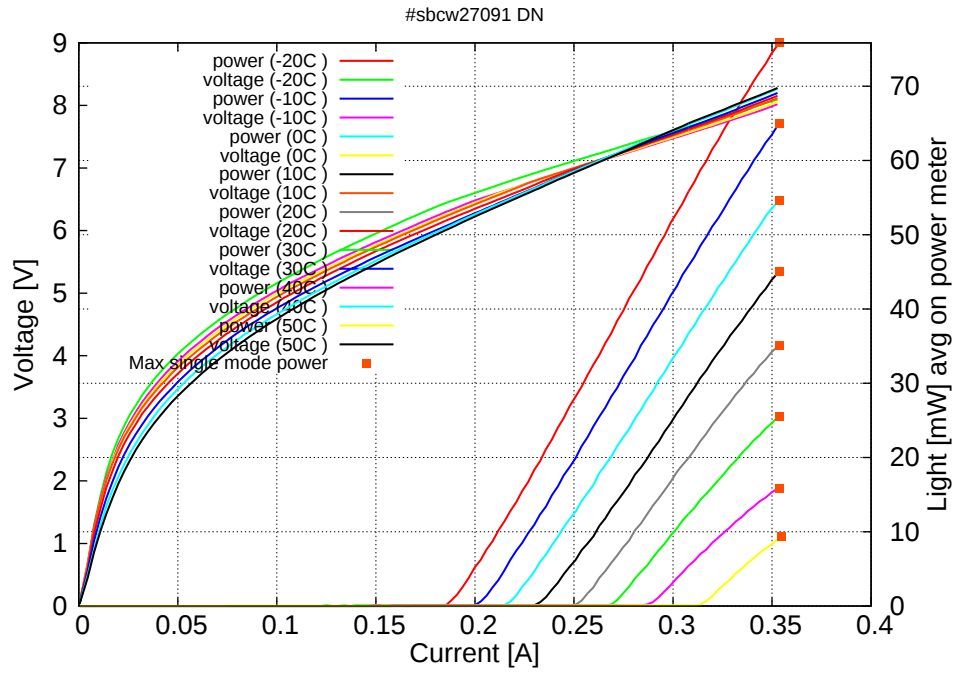


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=6.3V$ (2-wires measurements). Maximum operation current: 0.355A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

