

**Datasheet for #sbcw25391 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**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 #sbcw25391 DN (please note that AlN submount numbering is A12A9)

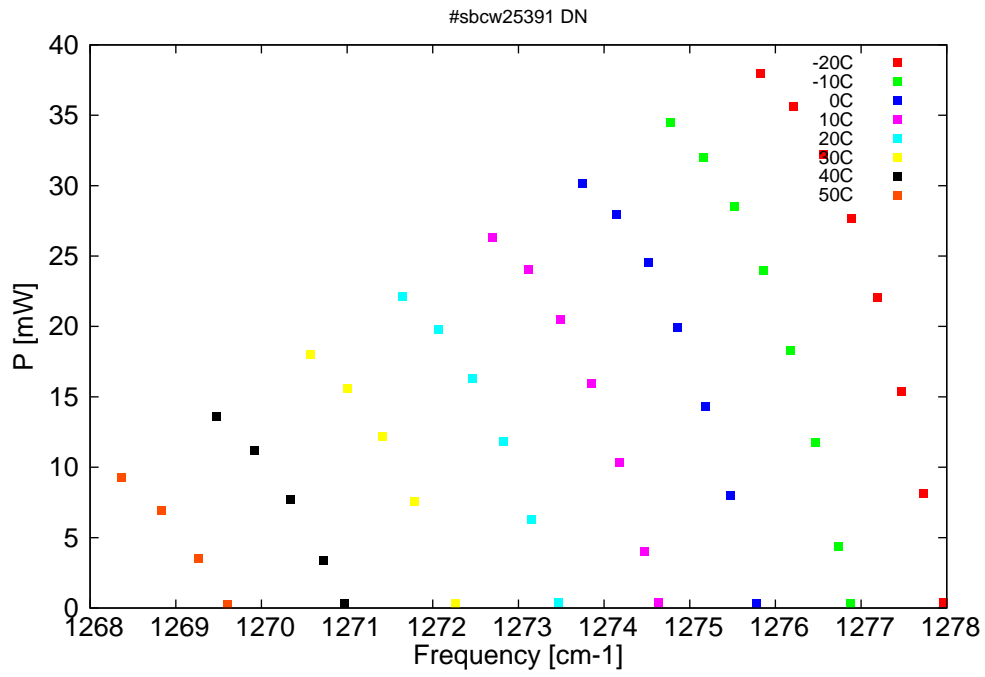


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

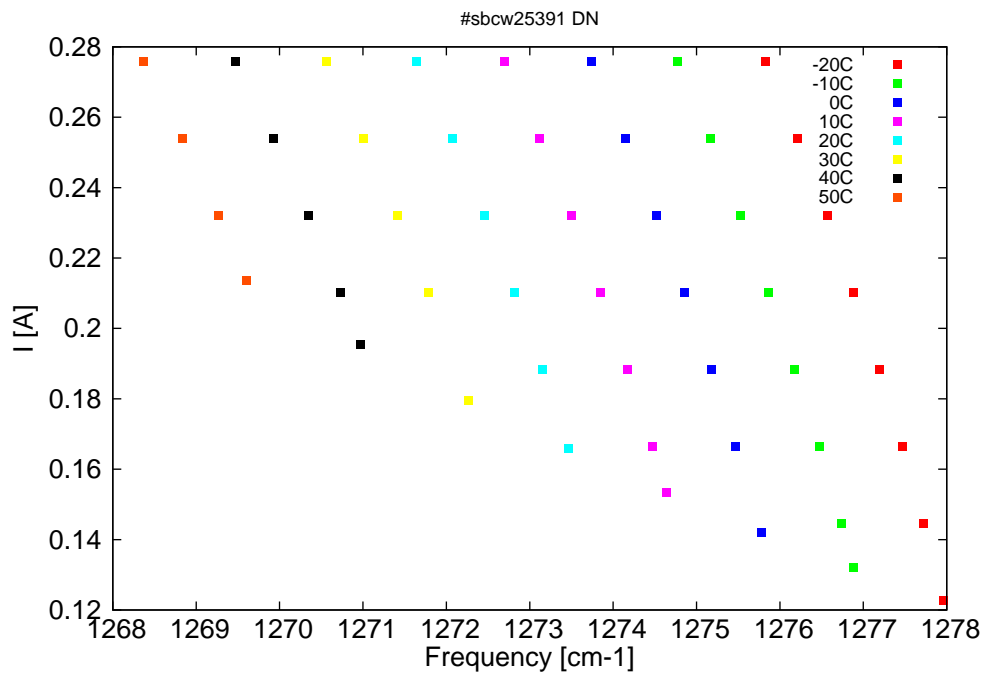


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7825	1278	0.4	-20	8.38	0.123
7826.4	1277.7	8.1	-20	8.6	0.145
7828	1277.5	15.4	-20	8.83	0.167
7829.7	1277.2	22.1	-20	9.04	0.188
7831.6	1276.9	27.7	-20	9.26	0.21
7833.5	1276.6	32.2	-20	9.47	0.232
7835.7	1276.2	35.6	-20	9.69	0.254
7838	1275.8	38	-20	9.91	0.276
7831.6	1276.9	0.3	-10	8.35	0.132
7832.5	1276.7	4.4	-10	8.48	0.145
7834.1	1276.5	11.8	-10	8.7	0.167
7835.9	1276.2	18.3	-10	8.91	0.188
7837.8	1275.9	24	-10	9.12	0.21
7839.9	1275.5	28.6	-10	9.34	0.232
7842.1	1275.2	32	-10	9.55	0.254
7844.5	1274.8	34.5	-10	9.76	0.276
7838.4	1275.8	0.3	0	8.32	0.142
7840.2	1275.5	8	0	8.56	0.167
7842	1275.2	14.3	0	8.77	0.188
7844	1274.9	19.9	0	8.98	0.21
7846.1	1274.5	24.5	0	9.19	0.232
7848.4	1274.1	28	0	9.4	0.254
7850.9	1273.7	30.2	0	9.62	0.276
7845.4	1274.6	0.4	10	8.33	0.154
7846.4	1274.5	4	10	8.45	0.167
7848.2	1274.2	10.3	10	8.66	0.188
7850.2	1273.8	16	10	8.87	0.21
7852.4	1273.5	20.5	10	9.08	0.232
7854.8	1273.1	24.1	10	9.29	0.254
7857.3	1272.7	26.3	10	9.5	0.276
7852.6	1273.5	0.4	20	8.36	0.166
7854.5	1273.2	6.2	20	8.57	0.188
7856.6	1272.8	11.8	20	8.78	0.21
7858.8	1272.5	16.3	20	8.98	0.232
7861.2	1272.1	19.8	20	9.19	0.254
7863.8	1271.6	22.2	20	9.41	0.276
7860	1272.3	0.3	30	8.42	0.18
7863	1271.8	7.6	30	8.71	0.21
7865.3	1271.4	12.1	30	8.92	0.232
7867.8	1271	15.6	30	9.13	0.254
7870.5	1270.6	18	30	9.35	0.276
7868	1271	0.3	40	8.52	0.195
7869.5	1270.7	3.4	40	8.66	0.21
7871.9	1270.3	7.7	40	8.87	0.232
7874.5	1269.9	11.2	40	9.08	0.254
7877.3	1269.5	13.6	40	9.3	0.276
7876.5	1269.6	0.3	50	8.61	0.214
7878.6	1269.3	3.5	50	8.79	0.232
7881.2	1268.8	6.9	50	9	0.254

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7884.1	1268.4	9.3	50	9.21	0.276

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

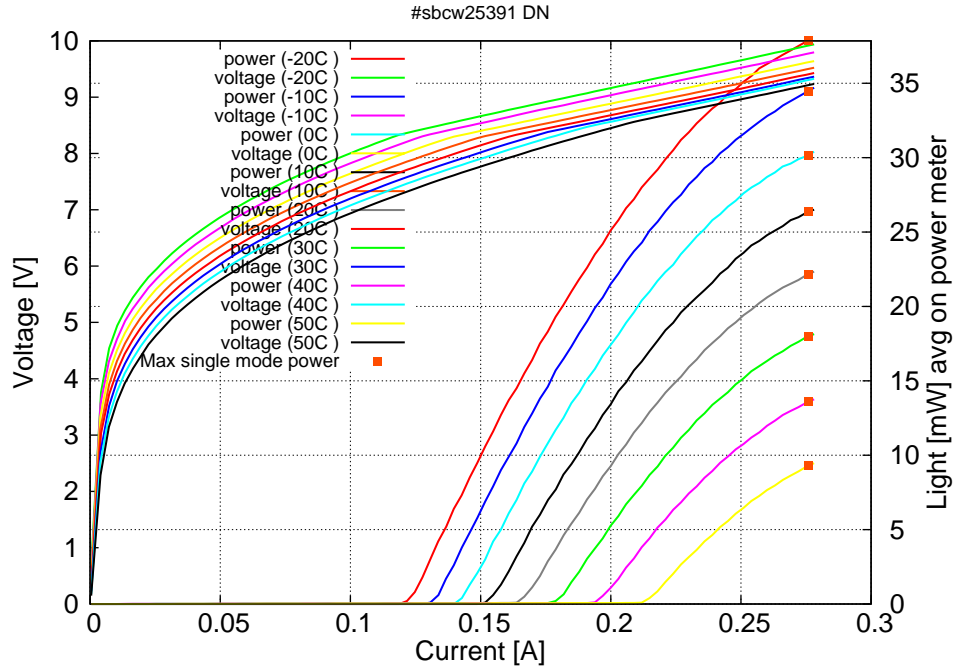


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12A$  /  $V_{th}=8.3V$  (2-wires measurements). Maximum operation current: 0.28A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

