

**Datasheet for #sbcw24091 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 #sbcw24091 DN (please note that AlN submount numbering is A0V7Y)

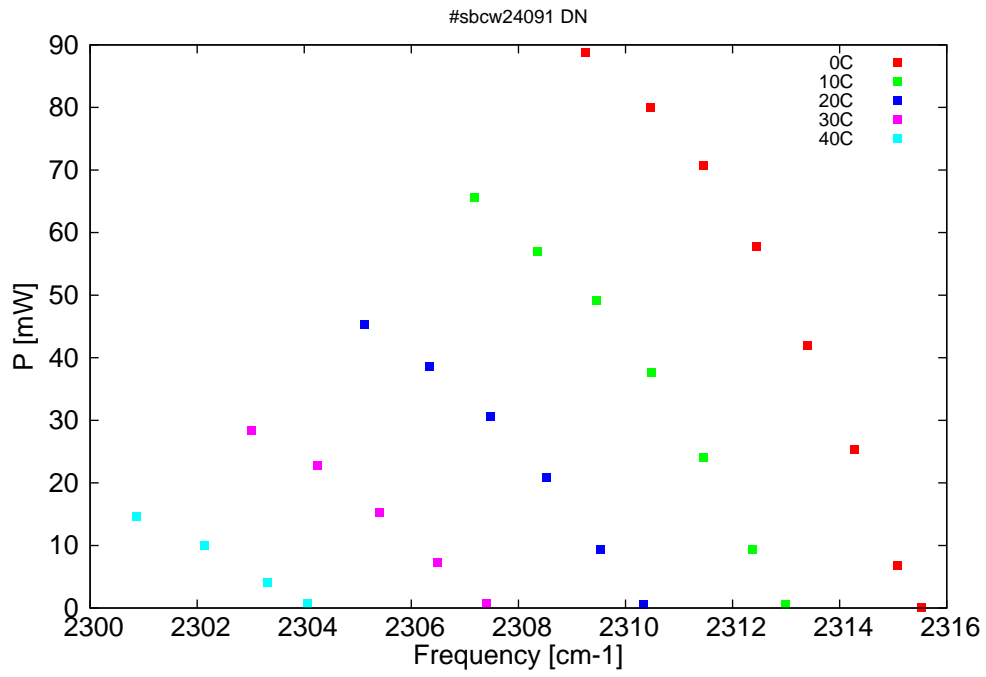


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

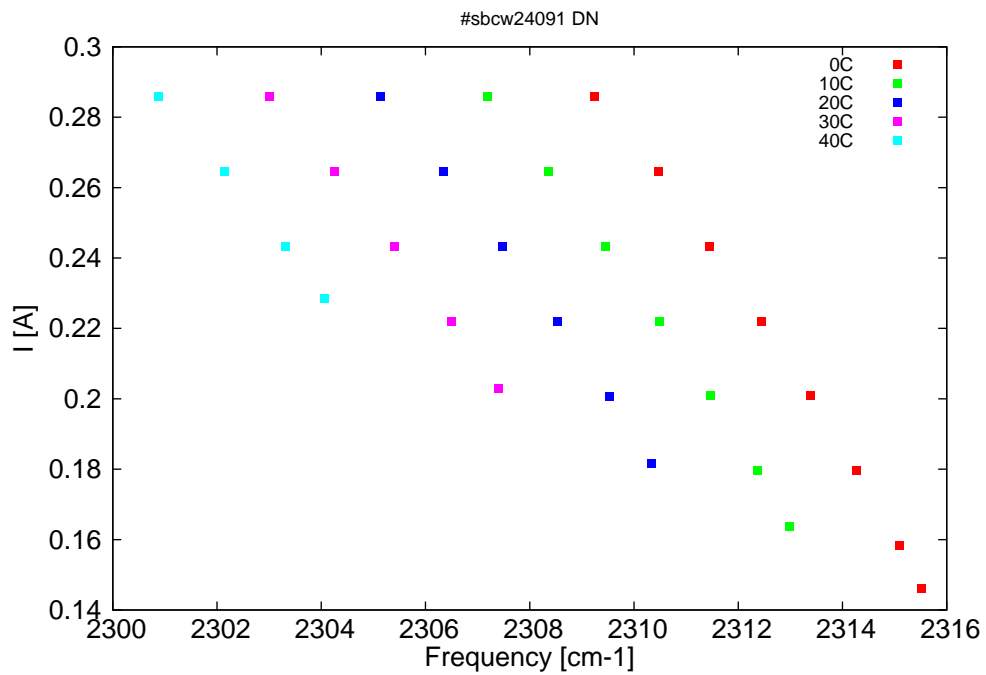


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4318.7	2315.5	0.2	0	11.93	0.146
4319.5	2315.1	6.8	0	12.02	0.158
4321	2314.3	25.3	0	12.21	0.18
4322.7	2313.4	42	0	12.4	0.201
4324.4	2312.5	57.8	0	12.58	0.222
4326.3	2311.5	70.8	0	12.76	0.243
4328.1	2310.5	80.1	0	12.94	0.265
4330.4	2309.2	88.8	0	13.14	0.286
4323.4	2313	0.6	10	12.01	0.164
4324.6	2312.4	9.3	10	12.14	0.18
4326.3	2311.5	24.1	10	12.32	0.201
4328.1	2310.5	37.6	10	12.5	0.222
4330	2309.5	49.2	10	12.69	0.243
4332.1	2308.4	56.9	10	12.87	0.265
4334.3	2307.2	65.6	10	13.06	0.286
4328.4	2310.3	0.6	20	12.1	0.182
4329.9	2309.5	9.4	20	12.25	0.201
4331.8	2308.5	20.8	20	12.43	0.222
4333.7	2307.5	30.6	20	12.61	0.243
4335.9	2306.3	38.7	20	12.79	0.265
4338.1	2305.1	45.2	20	12.98	0.286
4333.9	2307.4	0.7	30	12.23	0.203
4335.6	2306.5	7.2	30	12.38	0.222
4337.6	2305.4	15.3	30	12.56	0.243
4339.8	2304.2	22.8	30	12.74	0.265
4342.1	2303	28.4	30	12.91	0.286
4340.2	2304.1	0.7	40	12.41	0.228
4341.6	2303.3	4.1	40	12.52	0.243
4343.8	2302.1	10	40	12.69	0.265
4346.2	2300.9	14.7	40	12.87	0.286

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

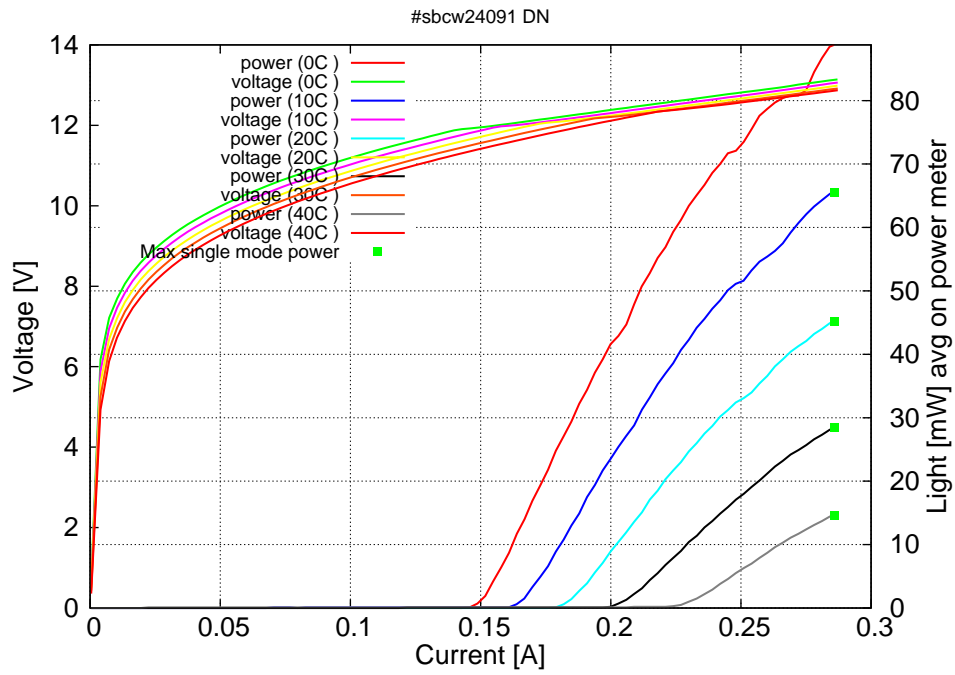


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=11.8V$  (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

