

Datasheet for #sbcw24092 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 #sbcw24092 DN (please note that AlN submount numbering is A0V77)

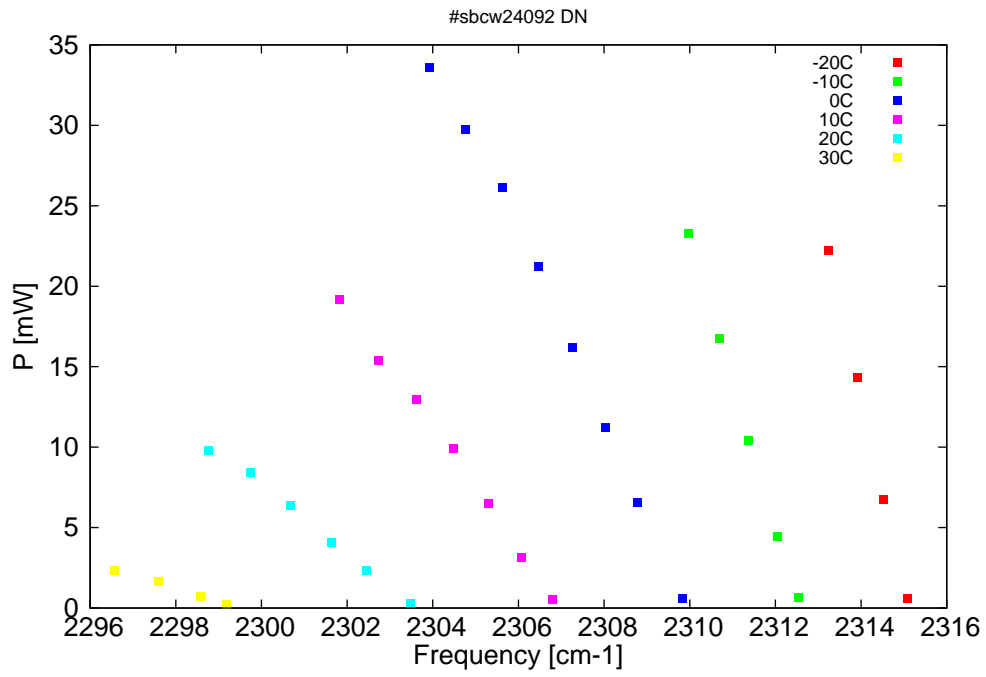


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

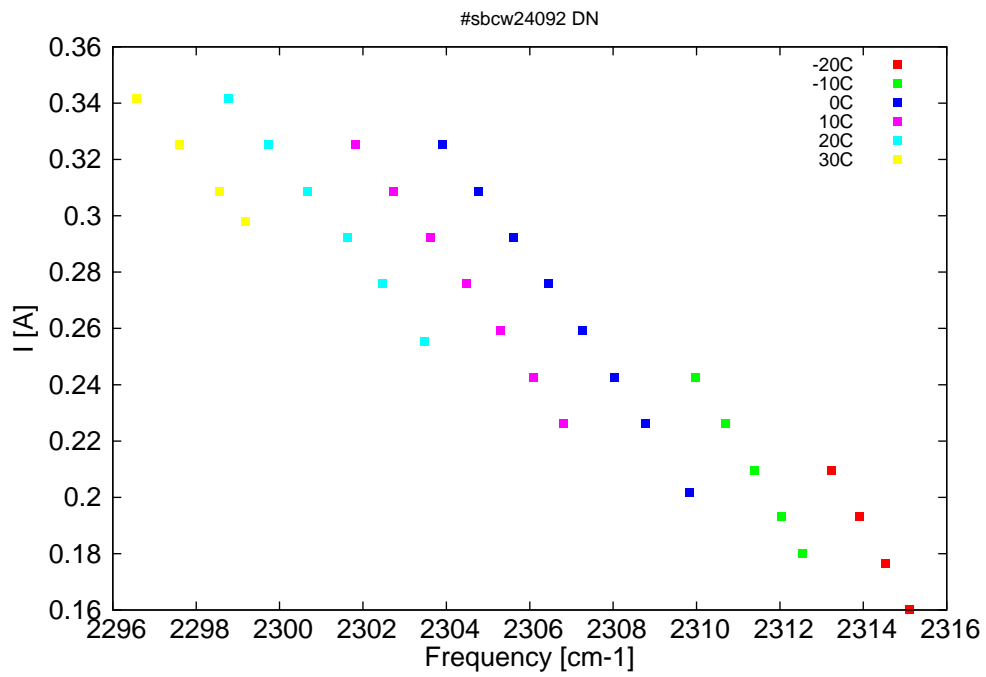


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4319.5	2315.1	0.6	-20	12.02	0.16
4320.5	2314.5	6.8	-20	12.16	0.177
4321.7	2313.9	14.3	-20	12.3	0.193
4322.9	2313.2	22.2	-20	12.45	0.21
4324.3	2312.5	0.6	-10	12.02	0.18
4325.2	2312	4.4	-10	12.13	0.193
4326.4	2311.4	10.4	-10	12.28	0.21
4327.7	2310.7	16.7	-10	12.42	0.226
4329.1	2310	23.3	-10	12.55	0.243
4329.3	2309.8	0.6	0	12.08	0.202
4331.3	2308.8	6.6	0	12.28	0.226
4332.7	2308	11.2	0	12.42	0.243
4334.2	2307.3	16.2	0	12.55	0.259
4335.6	2306.5	21.3	0	12.68	0.276
4337.2	2305.6	26.2	0	12.82	0.292
4338.8	2304.8	29.7	0	12.95	0.309
4340.4	2303.9	33.6	0	13.08	0.325
4335	2306.8	0.5	10	12.18	0.226
4336.4	2306.1	3.1	10	12.3	0.243
4337.8	2305.3	6.5	10	12.44	0.259
4339.4	2304.5	9.9	10	12.57	0.276
4341	2303.6	12.9	10	12.7	0.292
4342.7	2302.7	15.4	10	12.83	0.309
4344.4	2301.8	19.2	10	12.97	0.325
4341.3	2303.5	0.3	20	12.33	0.255
4343.2	2302.5	2.4	20	12.48	0.276
4344.8	2301.6	4.1	20	12.62	0.292
4346.6	2300.7	6.4	20	12.74	0.309
4348.3	2299.7	8.4	20	12.87	0.325
4350.2	2298.8	9.8	20	13.01	0.342
4349.4	2299.2	0.2	30	12.61	0.298
4350.5	2298.6	0.7	30	12.68	0.309
4352.4	2297.6	1.6	30	12.81	0.325
4354.3	2296.6	2.3	30	12.94	0.342

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

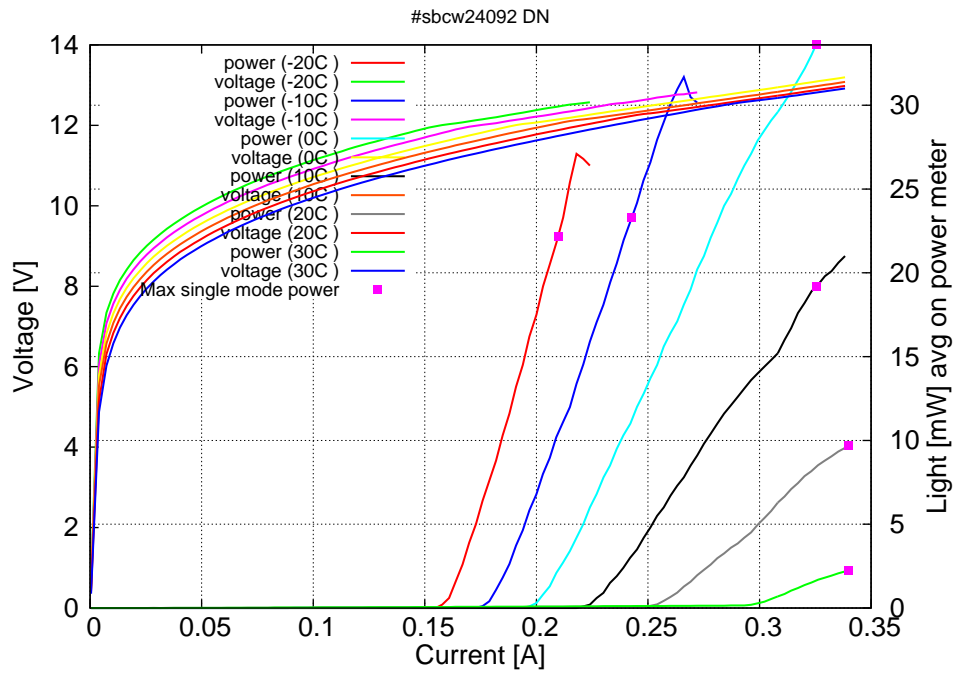


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=12.0V$ (2-wires measurements). Maximum operation current: 0.21A at -20C, 0.245A at -10C, 0.325A between 0C and 10C, 0.34A between 20C and 30C.

Figure 3: spectra at different temperatures for various DC currents

