

Datasheet for #sbcw24090 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 #sbcw24090 DN (please note that AlN submount numbering is A0V6Z)

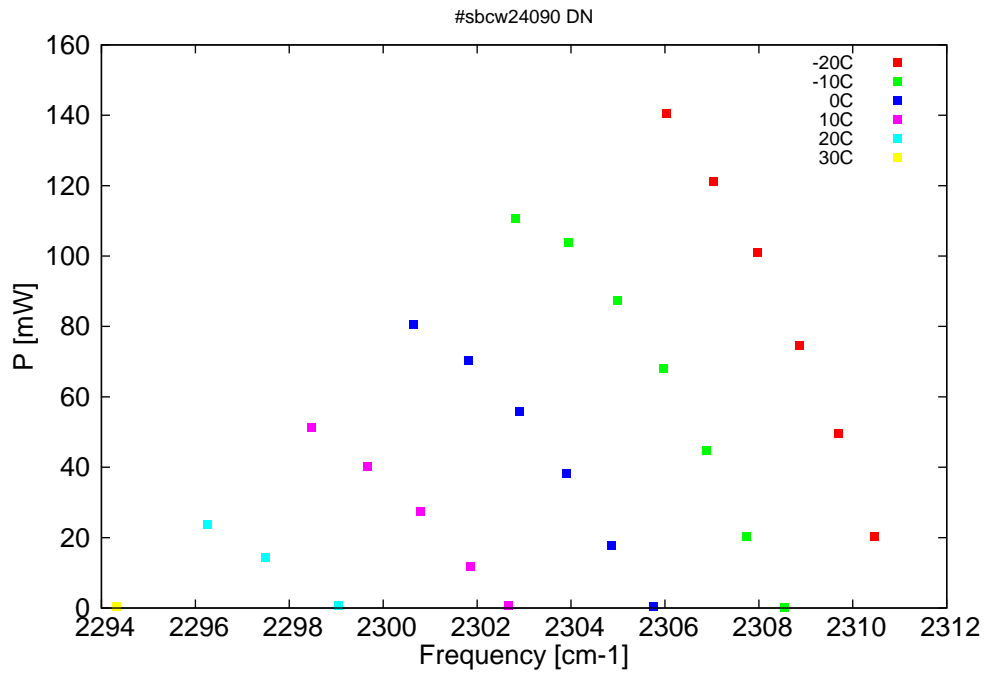


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

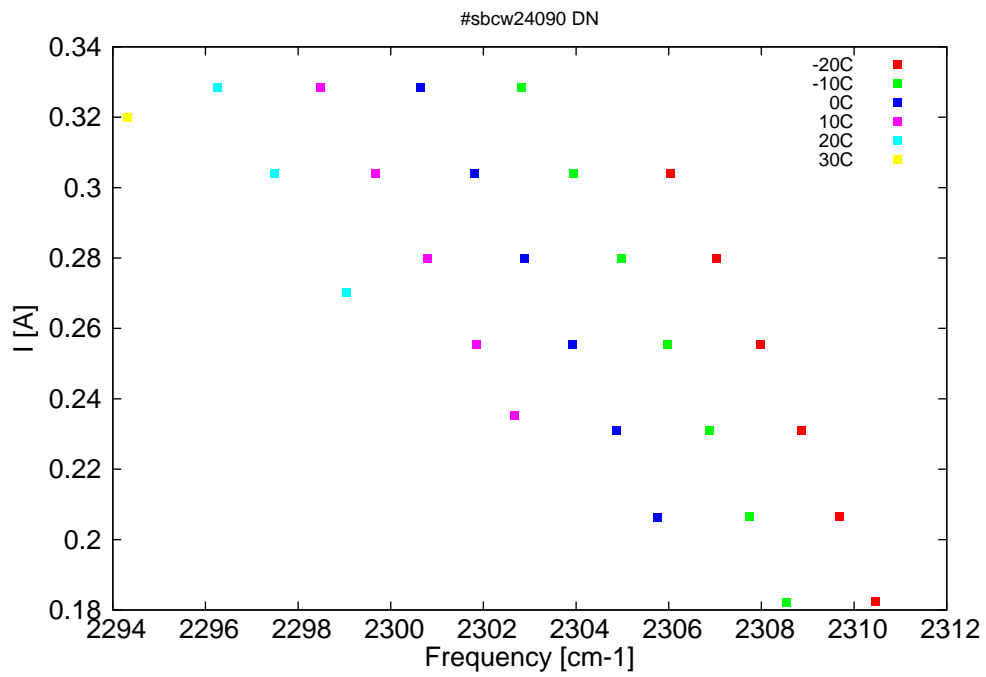


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4328.1	2310.5	20.4	-20	11.93	0.182
4329.6	2309.7	49.6	-20	12.09	0.207
4331.1	2308.9	74.7	-20	12.25	0.231
4332.8	2308	100.9	-20	12.42	0.255
4334.6	2307	121.2	-20	12.57	0.28
4336.5	2306	140.4	-20	12.73	0.304
4331.7	2308.5	0.1	-10	11.87	0.182
4333.2	2307.7	20.3	-10	12.02	0.207
4334.8	2306.9	44.9	-10	12.18	0.231
4336.6	2306	68.2	-10	12.34	0.255
4338.4	2305	87.5	-10	12.5	0.28
4340.4	2303.9	103.9	-10	12.65	0.304
4342.5	2302.8	110.6	-10	12.81	0.329
4337	2305.8	0.3	0	11.95	0.206
4338.6	2304.9	17.8	0	12.1	0.231
4340.4	2303.9	38.2	0	12.26	0.255
4342.4	2302.9	55.8	0	12.42	0.28
4344.4	2301.8	70.4	0	12.58	0.304
4346.6	2300.7	80.6	0	12.73	0.329
4342.8	2302.7	0.8	10	12.08	0.235
4344.3	2301.8	11.8	10	12.19	0.255
4346.3	2300.8	27.3	10	12.35	0.28
4348.5	2299.7	40.3	10	12.51	0.304
4350.7	2298.5	51.3	10	12.67	0.329
4349.6	2299	0.8	20	12.26	0.27
4352.6	2297.5	14.4	20	12.47	0.304
4354.9	2296.3	23.8	20	12.63	0.329
4358.6	2294.3	0.4	30	12.56	0.32

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

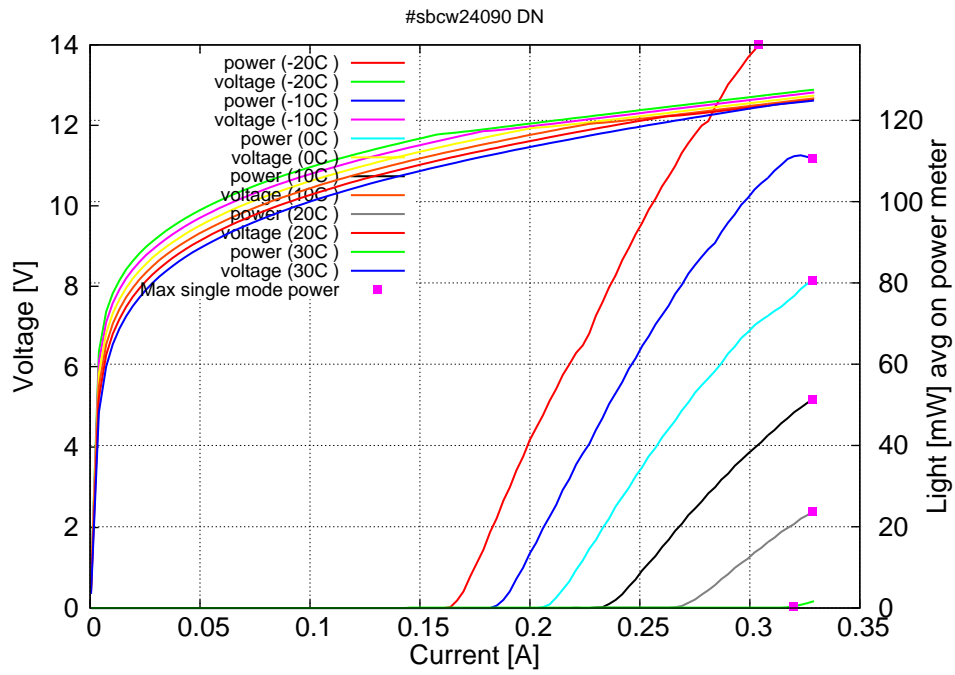


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=11.8V$ (2-wires measurements). Maximum operation current: 0.305A at -20C, 0.33A between -10C and 30C.

Figure 3: spectra at different temperatures for various DC currents

