

Datasheet for #sbcw24305 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 #sbcw24305 DN (please note that AlN submount numbering is A0VAC)

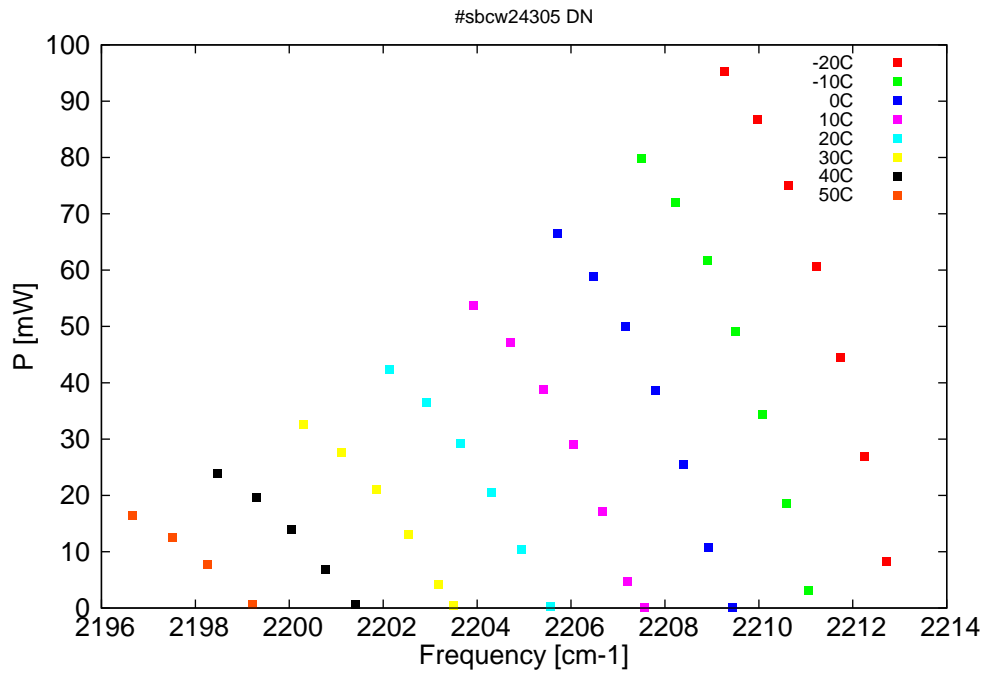


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

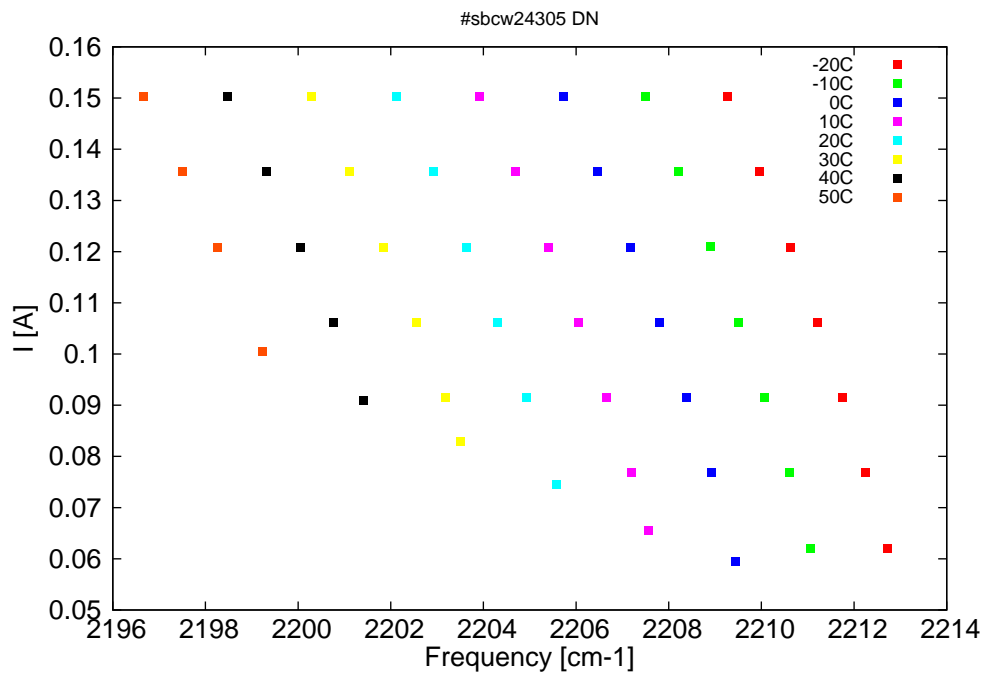


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4519.3	2212.7	8.3	-20	11.55	0.062
4520.3	2212.3	26.9	-20	11.85	0.077
4521.3	2211.7	44.5	-20	12.13	0.092
4522.4	2211.2	60.6	-20	12.42	0.106
4523.6	2210.6	75	-20	12.73	0.121
4525	2210	86.7	-20	13.04	0.136
4526.4	2209.3	95.3	-20	13.35	0.15
4522.7	2211.1	3.1	-10	11.68	0.062
4523.7	2210.6	18.5	-10	11.91	0.077
4524.7	2210.1	34.4	-10	12.17	0.092
4525.9	2209.5	49	-10	12.45	0.106
4527.1	2208.9	61.6	-10	12.73	0.121
4528.5	2208.2	72.1	-10	13.03	0.136
4530	2207.5	79.9	-10	13.29	0.15
4526	2209.4	0	0	11.4	0.059
4527.1	2208.9	10.7	0	11.68	0.077
4528.2	2208.4	25.5	0	11.95	0.092
4529.4	2207.8	38.6	0	12.25	0.106
4530.7	2207.2	50	0	12.6	0.121
4532.1	2206.5	58.9	0	12.86	0.136
4533.7	2205.7	66.5	0	13.18	0.15
4529.9	2207.6	0	10	11.41	0.066
4530.6	2207.2	4.8	10	11.57	0.077
4531.7	2206.7	17.1	10	11.83	0.092
4533	2206	29.1	10	12.1	0.106
4534.3	2205.4	38.9	10	12.39	0.121
4535.8	2204.7	47.1	10	12.68	0.136
4537.4	2203.9	53.7	10	12.99	0.15
4534	2205.6	0.2	20	11.47	0.075
4535.3	2204.9	10.3	20	11.75	0.092
4536.6	2204.3	20.5	20	12.01	0.106
4537.9	2203.6	29.3	20	12.28	0.121
4539.4	2202.9	36.5	20	12.57	0.136
4541.1	2202.1	42.3	20	12.87	0.15
4538.2	2203.5	0.5	30	11.6	0.083
4538.9	2203.2	4.2	30	11.74	0.092
4540.2	2202.5	13.1	30	11.99	0.106
4541.6	2201.8	21	30	12.27	0.121
4543.2	2201.1	27.6	30	12.55	0.136
4544.8	2200.3	32.6	30	12.85	0.15
4542.6	2201.4	0.7	40	11.7	0.091
4543.9	2200.8	6.9	40	11.93	0.106
4545.3	2200.1	13.9	40	12.19	0.121
4546.9	2199.3	19.7	40	12.47	0.136
4548.6	2198.5	23.9	40	12.75	0.15
4547.1	2199.2	0.6	50	11.82	0.101
4549	2198.3	7.6	50	12.14	0.121
4550.6	2197.5	12.5	50	12.41	0.136
4552.4	2196.7	16.5	50	12.68	0.15

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

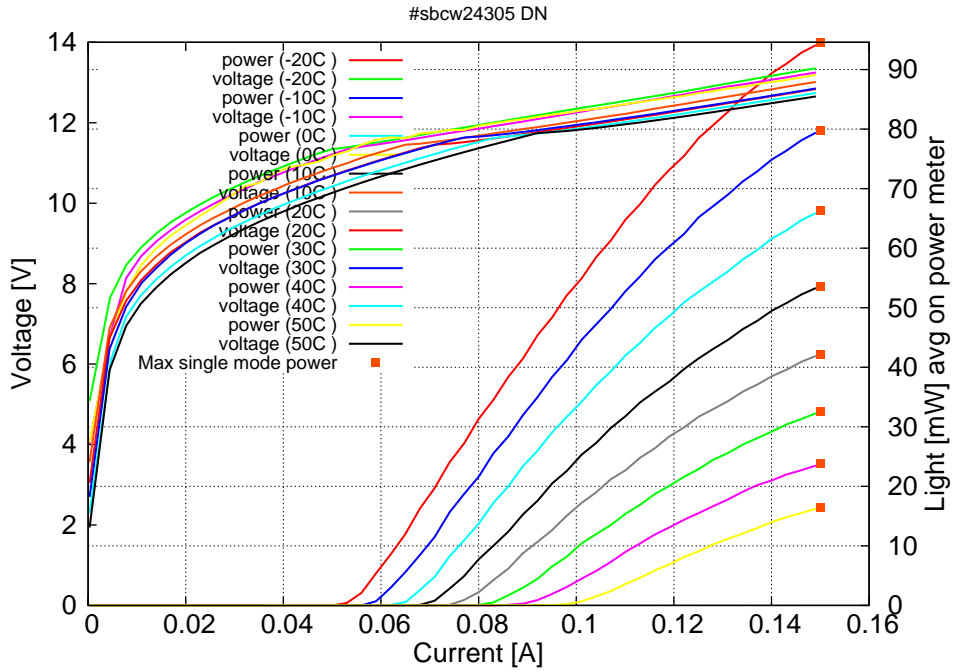


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05\text{A}$ / $V_{th}=11.3\text{V}$ (2-wires measurements). Maximum operation current: 0.15A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

