

Datasheet for #sbcw24312 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 #sbcw24312 DN (please note that AlN submount numbering is A10ZX)

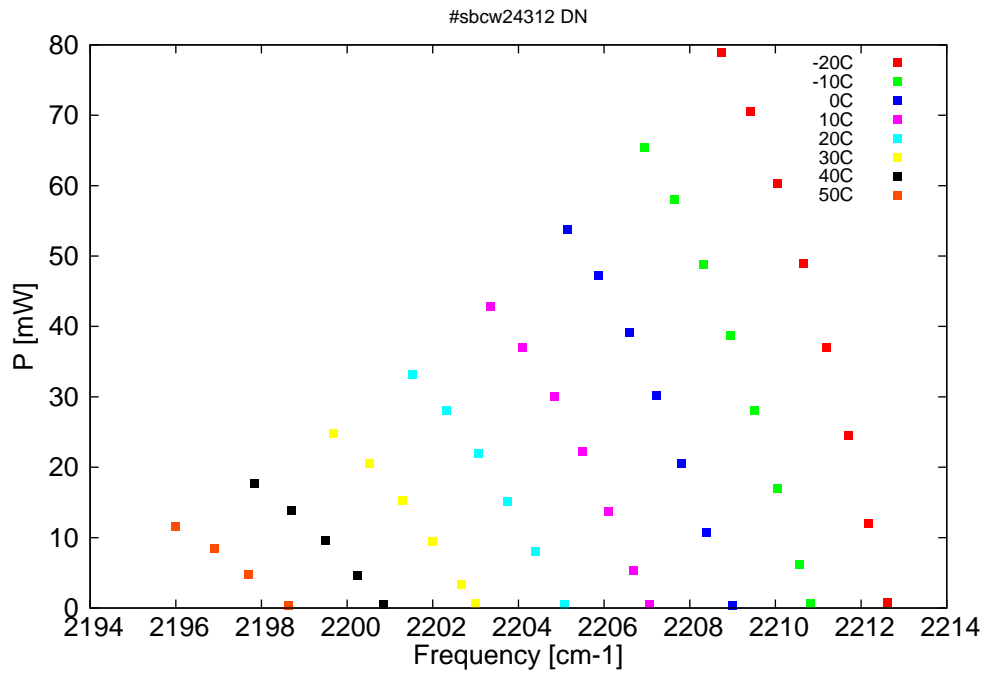


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

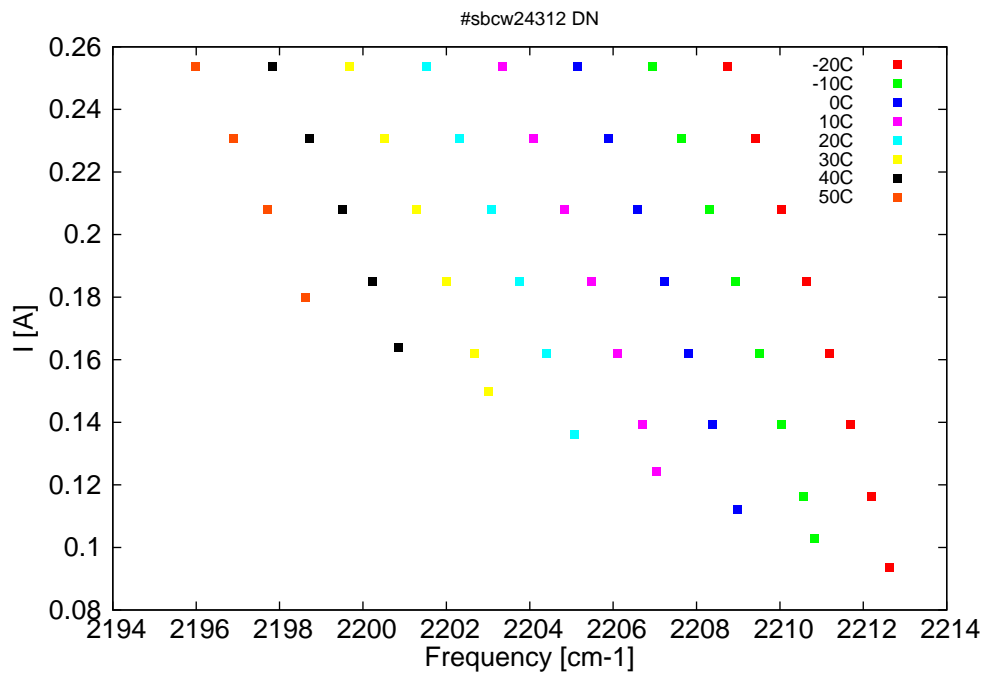


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4519.5	2212.6	0.7	-20	8.28	0.094
4520.4	2212.2	12	-20	8.5	0.116
4521.4	2211.7	24.5	-20	8.71	0.139
4522.4	2211.2	37	-20	8.91	0.162
4523.6	2210.6	48.9	-20	9.11	0.185
4524.8	2210	60.3	-20	9.32	0.208
4526.1	2209.4	70.6	-20	9.52	0.231
4527.5	2208.7	78.9	-20	9.73	0.254
4523.2	2210.8	0.6	-10	8.3	0.103
4523.7	2210.6	6.1	-10	8.43	0.116
4524.8	2210	17	-10	8.64	0.139
4525.9	2209.5	28.1	-10	8.85	0.162
4527	2208.9	38.8	-10	9.05	0.185
4528.3	2208.3	48.9	-10	9.25	0.208
4529.7	2207.6	58	-10	9.46	0.231
4531.1	2206.9	65.5	-10	9.67	0.254
4527	2209	0.4	0	8.34	0.112
4528.2	2208.4	10.7	0	8.59	0.139
4529.4	2207.8	20.5	0	8.8	0.162
4530.6	2207.2	30.2	0	9	0.185
4531.9	2206.6	39.1	0	9.21	0.208
4533.3	2205.9	47.2	0	9.42	0.231
4534.8	2205.2	53.8	0	9.63	0.254
4530.9	2207	0.5	10	8.41	0.124
4531.7	2206.7	5.3	10	8.55	0.139
4532.9	2206.1	13.7	10	8.76	0.162
4534.1	2205.5	22.3	10	8.97	0.185
4535.5	2204.8	30	10	9.17	0.208
4537	2204.1	37	10	9.38	0.231
4538.6	2203.3	42.9	10	9.6	0.254
4535	2205.1	0.5	20	8.49	0.136
4536.4	2204.4	8	20	8.72	0.162
4537.7	2203.8	15.2	20	8.93	0.185
4539.1	2203.1	22	20	9.14	0.208
4540.7	2202.3	28.1	20	9.36	0.231
4542.3	2201.5	33.1	20	9.57	0.254
4539.3	2203	0.6	30	8.58	0.15
4539.9	2202.7	3.3	30	8.7	0.162
4541.3	2202	9.5	30	8.9	0.185
4542.8	2201.3	15.3	30	9.11	0.208
4544.4	2200.5	20.5	30	9.33	0.231
4546.1	2199.7	24.8	30	9.55	0.254
4543.7	2200.8	0.5	40	8.69	0.164
4545	2200.2	4.7	40	8.88	0.185
4546.5	2199.5	9.6	40	9.09	0.208
4548.1	2198.7	13.9	40	9.31	0.231
4549.9	2197.8	17.7	40	9.53	0.254
4548.3	2198.6	0.4	50	8.82	0.18
4550.2	2197.7	4.8	50	9.07	0.208

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4551.9	2196.9	8.4	50	9.29	0.231
4553.7	2196	11.6	50	9.51	0.254

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

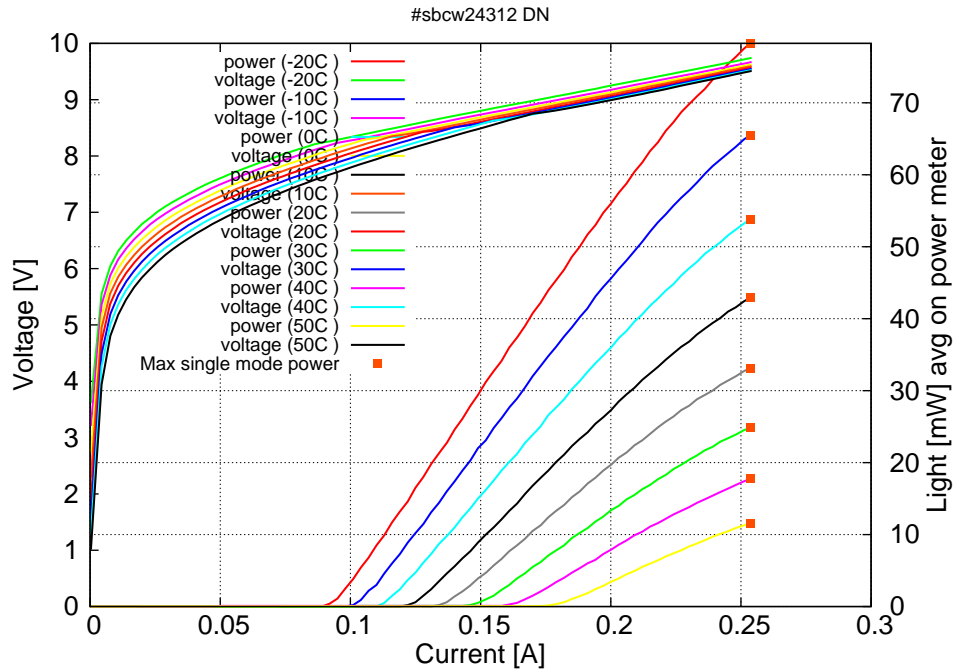


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.255A for all temperatures.

