

**Datasheet for #sbcw24304 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 #sbcw24304 DN (please note that AlN submount numbering is A0V9W)

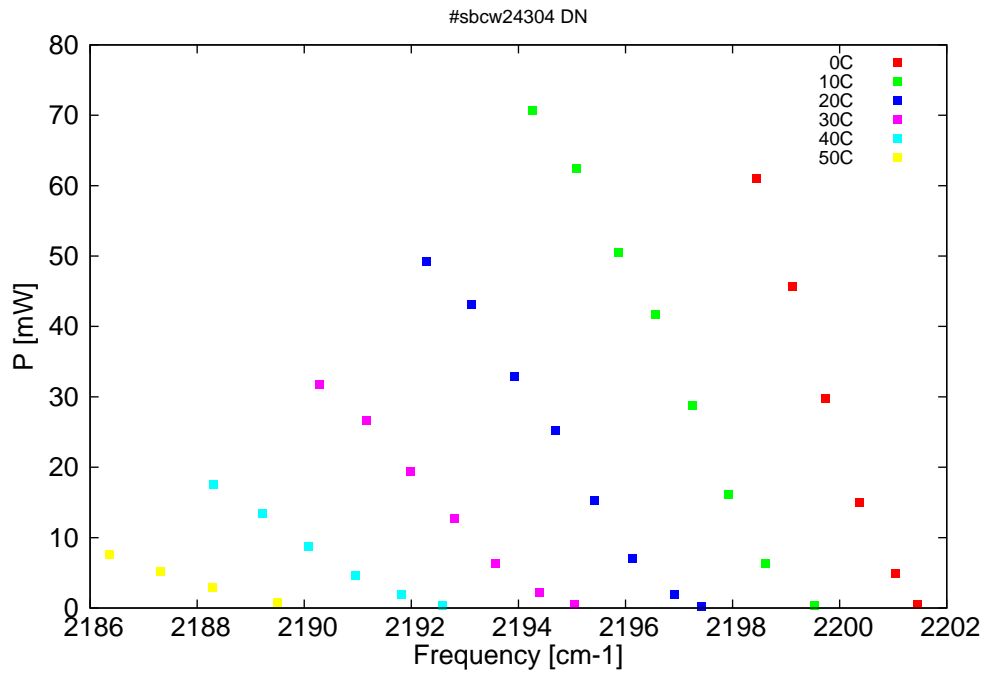


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

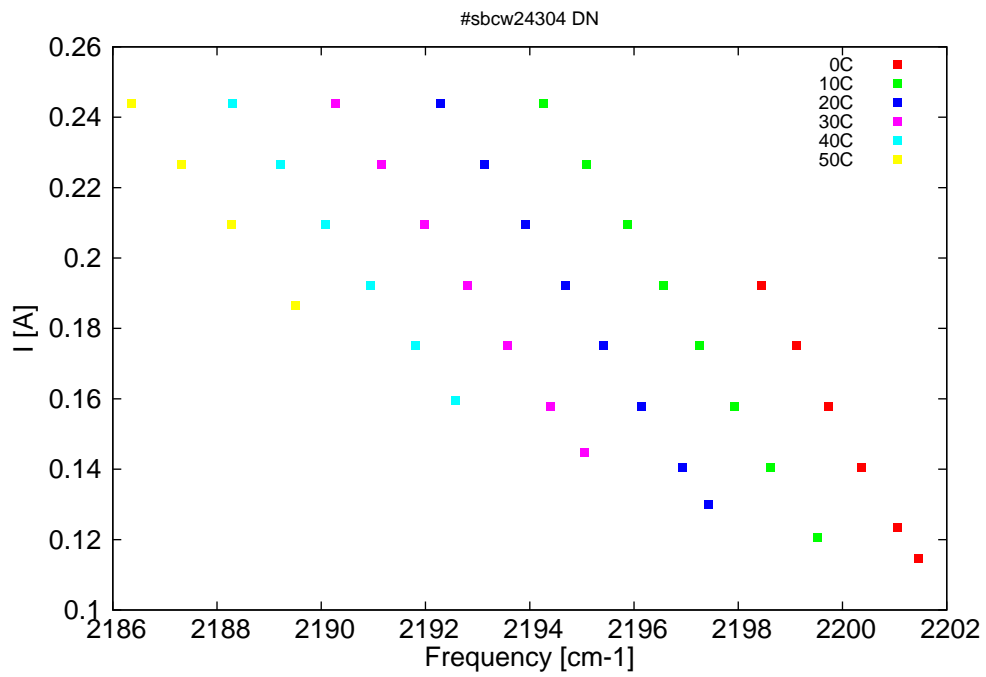


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4542.4	2201.5	0.5	0	11.3	0.115
4543.3	2201.1	4.9	0	11.36	0.123
4544.7	2200.4	15	0	11.53	0.141
4546	2199.7	29.8	0	11.7	0.158
4547.3	2199.1	45.7	0	11.88	0.175
4548.7	2198.4	61	0	12.06	0.192
4546.4	2199.5	0.4	10	11.27	0.121
4548.3	2198.6	6.3	10	11.46	0.141
4549.8	2197.9	16.2	10	11.62	0.158
4551.1	2197.3	28.7	10	11.8	0.175
4552.6	2196.6	41.8	10	11.97	0.192
4554	2195.9	50.6	10	12.18	0.21
4555.6	2195.1	62.4	10	12.33	0.227
4557.3	2194.3	70.7	10	12.52	0.244
4550.8	2197.4	0.2	20	11.31	0.13
4551.8	2196.9	1.9	20	11.42	0.141
4553.5	2196.1	7	20	11.58	0.158
4554.9	2195.4	15.3	20	11.76	0.175
4556.5	2194.7	25.2	20	11.93	0.192
4558.1	2193.9	32.9	20	12.11	0.21
4559.7	2193.1	43.1	20	12.28	0.227
4561.5	2192.3	49.3	20	12.47	0.244
4555.7	2195	0.5	30	11.43	0.145
4557.1	2194.4	2.2	30	11.56	0.158
4558.8	2193.6	6.3	30	11.74	0.175
4560.4	2192.8	12.7	30	11.91	0.192
4562.1	2192	19.4	30	12.08	0.21
4563.8	2191.2	26.6	30	12.26	0.227
4565.6	2190.3	31.7	30	12.45	0.244
4560.8	2192.6	0.4	40	11.59	0.16
4562.4	2191.8	1.9	40	11.75	0.175
4564.2	2191	4.7	40	11.93	0.192
4566	2190.1	8.8	40	12.11	0.21
4567.8	2189.2	13.5	40	12.28	0.227
4569.8	2188.3	17.5	40	12.47	0.244
4567.3	2189.5	0.8	50	11.82	0.186
4569.8	2188.3	2.9	50	12.06	0.21
4571.8	2187.3	5.1	50	12.23	0.227
4573.8	2186.4	7.6	50	12.42	0.244

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

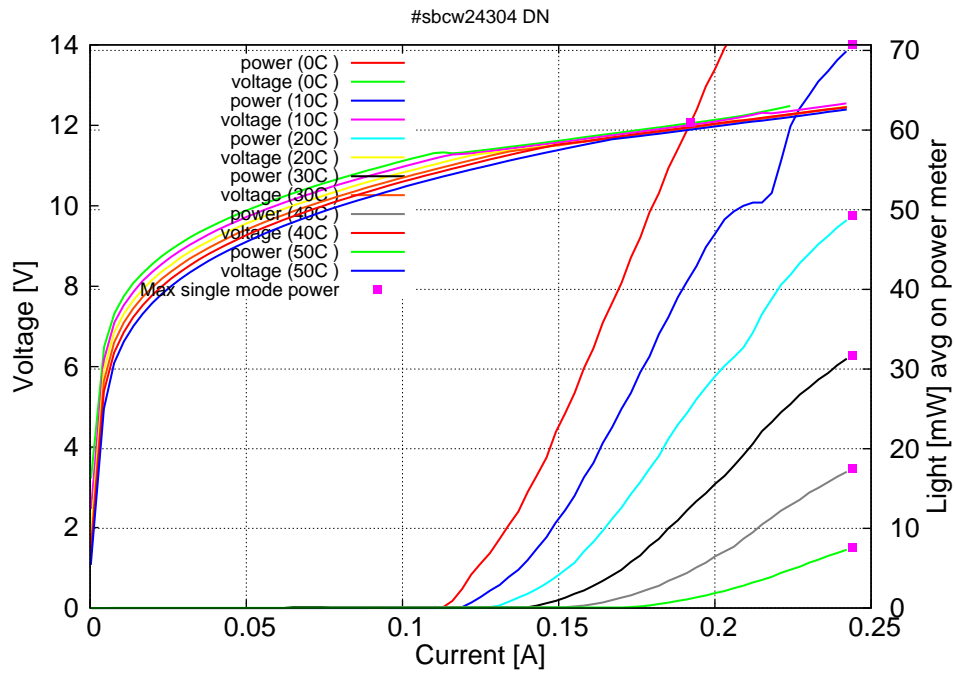


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C:  $I_{th}=0.11A$  /  $V_{th}=11.3V$  (2-wires measurements). Maximum operation current: 0.19A at 0C, 0.245A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

