

**Datasheet for #sbcw24318 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw24318 DN

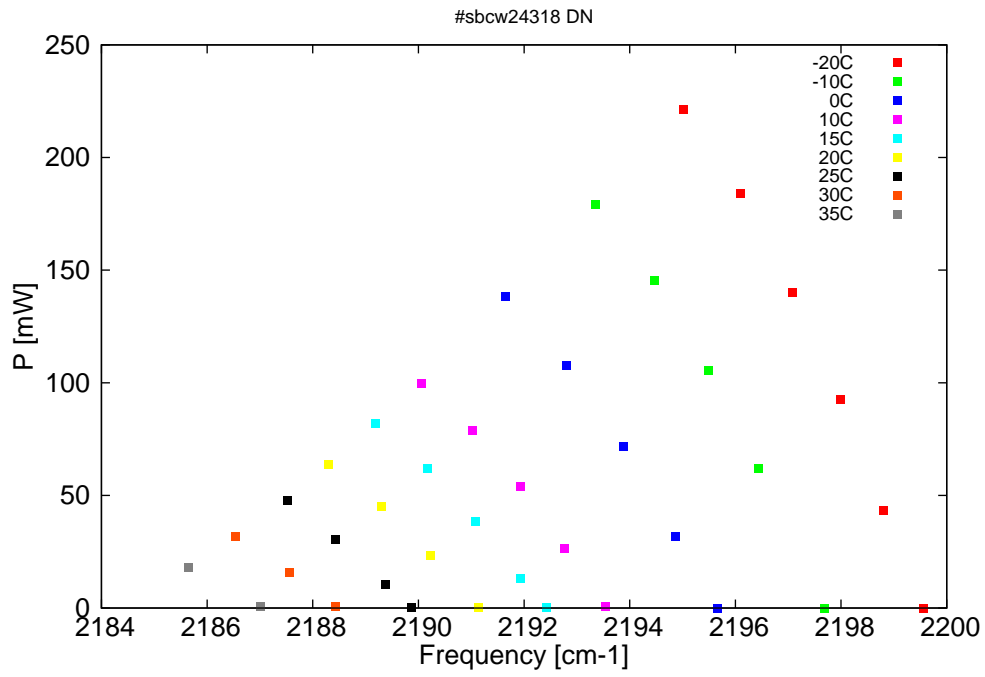


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

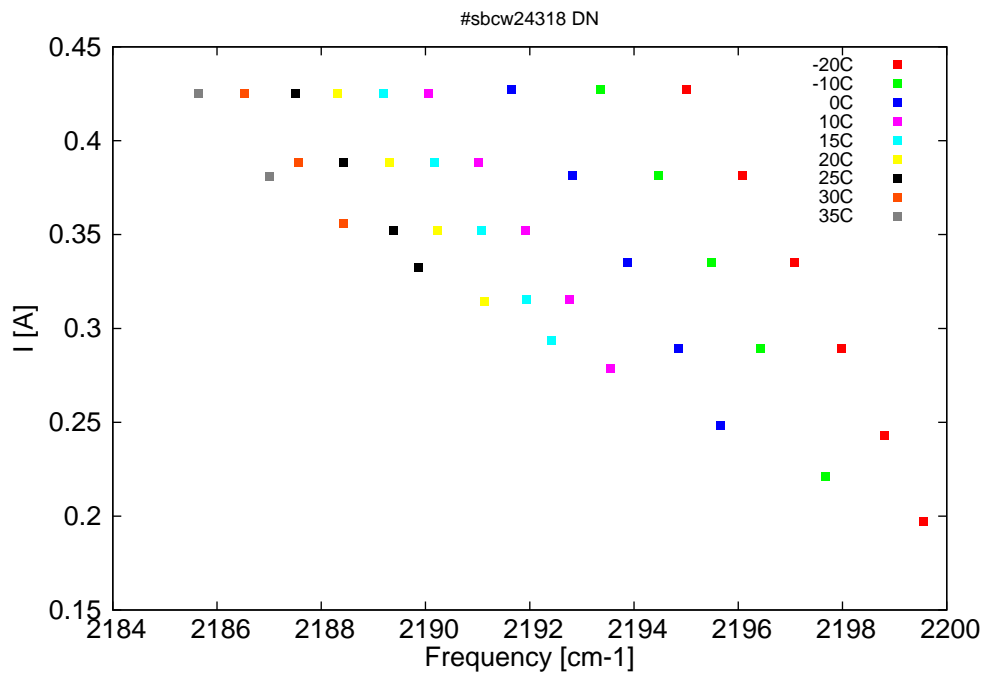


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4546.4	2199.6	0	-20	8.15	0.197
4547.9	2198.8	43.3	-20	8.36	0.243
4549.6	2198	92.8	-20	8.56	0.289
4551.5	2197.1	140.2	-20	8.76	0.335
4553.6	2196.1	184.1	-20	8.95	0.381
4555.8	2195	221.1	-20	9.14	0.427
4550.2	2197.7	0	-10	8.23	0.221
4552.8	2196.4	61.9	-10	8.53	0.289
4554.8	2195.5	105.4	-10	8.73	0.335
4556.9	2194.5	145.5	-10	8.93	0.381
4559.2	2193.4	179	-10	9.13	0.427
4554.4	2195.7	0	0	8.32	0.248
4556.1	2194.9	31.7	0	8.5	0.289
4558.1	2193.9	71.8	0	8.71	0.335
4560.4	2192.8	107.7	0	8.91	0.381
4562.8	2191.7	138.1	0	9.11	0.427
4558.8	2193.5	0.5	10	8.44	0.279
4560.5	2192.8	26.6	10	8.62	0.315
4562.2	2191.9	53.8	10	8.78	0.352
4564.1	2191	78.6	10	8.95	0.389
4566.1	2190.1	99.7	10	9.12	0.425
4561.2	2192.4	0.1	15	8.5	0.294
4562.2	2191.9	13.1	15	8.6	0.315
4564	2191.1	38.5	15	8.77	0.352
4565.9	2190.2	61.8	15	8.94	0.389
4567.9	2189.2	81.9	15	9.11	0.425
4563.8	2191.1	0.4	20	8.58	0.314
4565.7	2190.2	23.4	20	8.76	0.352
4567.7	2189.3	45.2	20	8.93	0.389
4569.7	2188.3	63.9	20	9.1	0.425
4566.5	2189.9	0.3	25	8.66	0.332
4567.5	2189.4	10.4	25	8.75	0.352
4569.5	2188.4	30.3	25	8.92	0.389
4571.4	2187.5	47.8	25	9.1	0.425
4569.5	2188.4	0.5	30	8.76	0.356
4571.3	2187.6	15.6	30	8.91	0.389
4573.5	2186.5	31.9	30	9.09	0.425
4572.5	2187	0.6	35	8.87	0.381
4575.3	2185.6	18.1	35	9.08	0.425

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

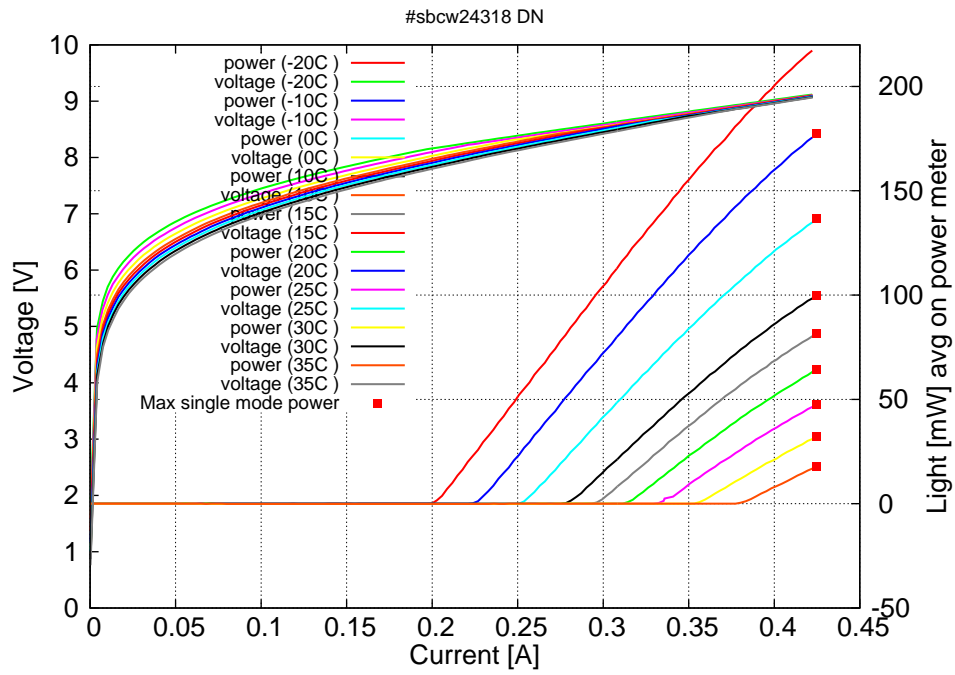


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.20A$  /  $V_{th}=8.2V$  (2-wires measurements). Maximum operation current: 0.425A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

