

**Datasheet for #sbcw24306 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 #sbcw24306 DN (please note that AlN submount numbering is A0VA2)

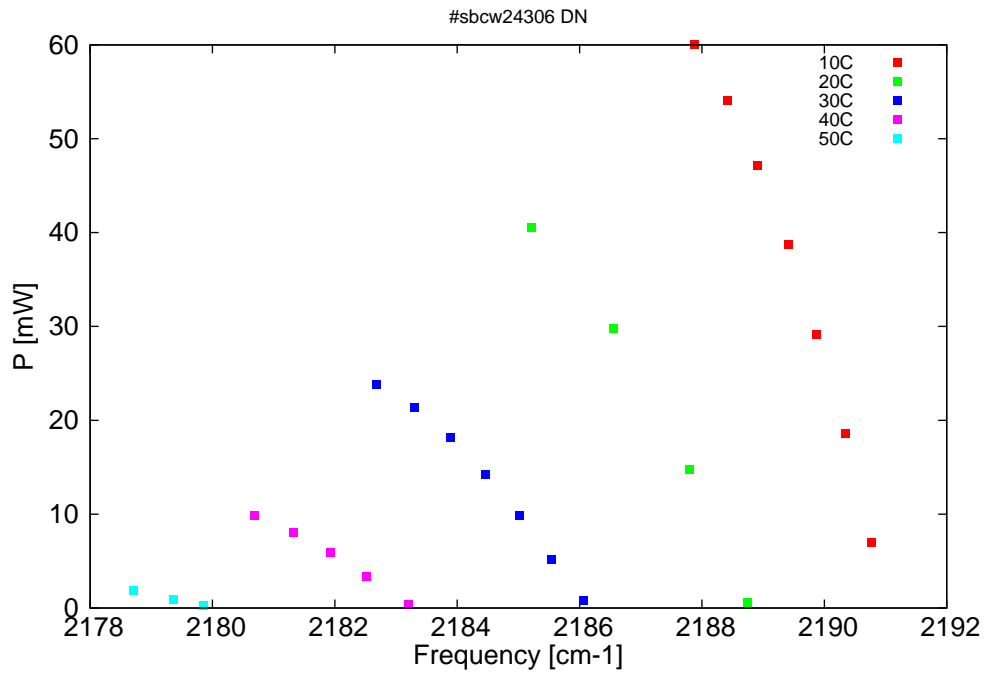


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

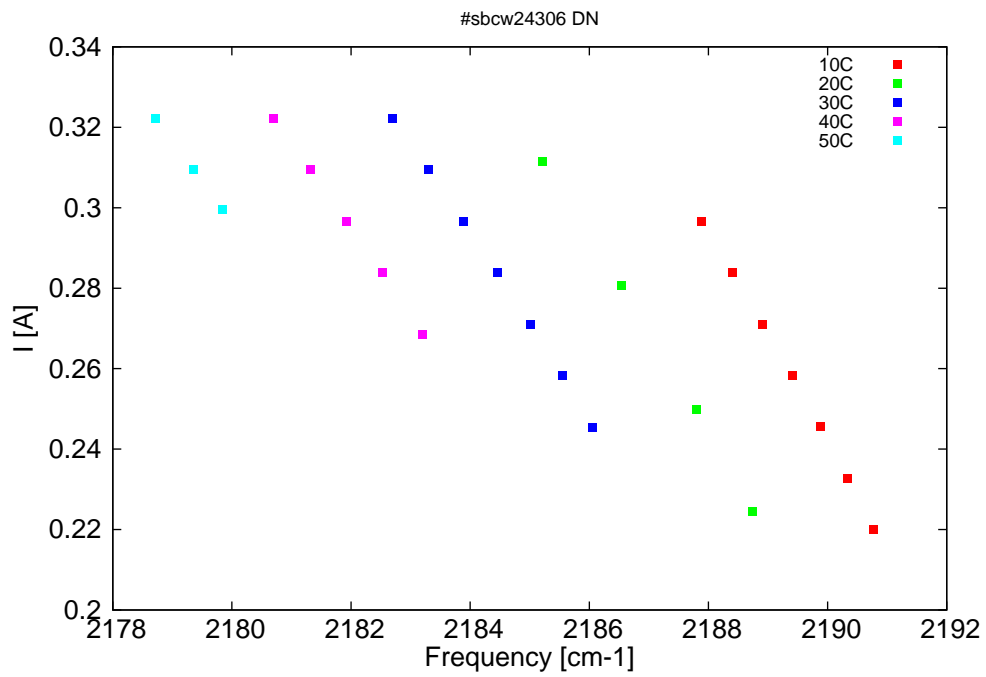


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4564.6	2190.8	7	10	11.46	0.22
4565.5	2190.3	18.6	10	11.55	0.233
4566.5	2189.9	29.2	10	11.63	0.246
4567.4	2189.4	38.8	10	11.72	0.258
4568.5	2188.9	47.1	10	11.8	0.271
4569.5	2188.4	54	10	11.89	0.284
4570.6	2187.9	60	10	11.97	0.297
4568.8	2188.7	0.6	20	11.42	0.225
4570.8	2187.8	14.8	20	11.59	0.25
4573.4	2186.5	29.8	20	11.81	0.281
4576.2	2185.2	40.5	20	12.01	0.311
4574.4	2186.1	0.8	30	11.5	0.245
4575.5	2185.5	5.1	30	11.58	0.258
4576.6	2185	9.8	30	11.67	0.271
4577.8	2184.5	14.2	30	11.75	0.284
4579	2183.9	18.1	30	11.84	0.297
4580.2	2183.3	21.3	30	11.93	0.309
4581.5	2182.7	23.8	30	12.01	0.322
4580.4	2183.2	0.4	40	11.6	0.268
4581.9	2182.5	3.3	40	11.71	0.284
4583.1	2181.9	5.9	40	11.8	0.297
4584.4	2181.3	8.1	40	11.88	0.309
4585.7	2180.7	9.8	40	11.97	0.322
4587.5	2179.8	0.2	50	11.76	0.3
4588.5	2179.4	0.9	50	11.83	0.309
4589.9	2178.7	1.9	50	11.91	0.322

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

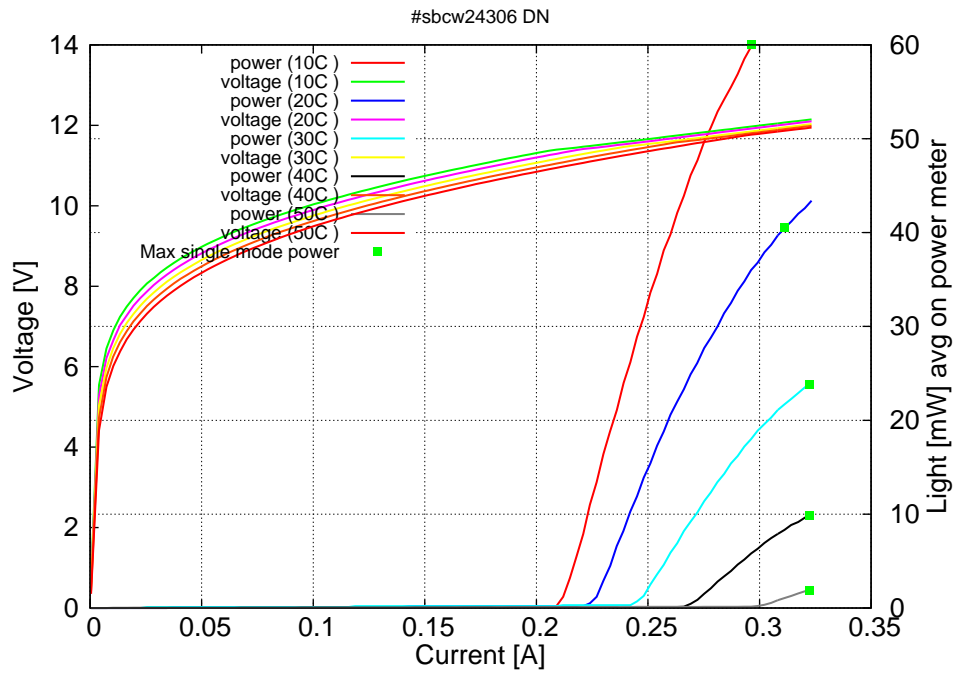


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 10C:  $I_{th}=0.21A$  /  $V_{th}=11.4V$  (2-wires measurements). Maximum operation current: 0.30A at 10C, 0.31A at 20C, 0.325A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

