

Datasheet for #sbcw24300 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 #sbcw24300 DN (please note that AlN submount numbering is A0V8H)

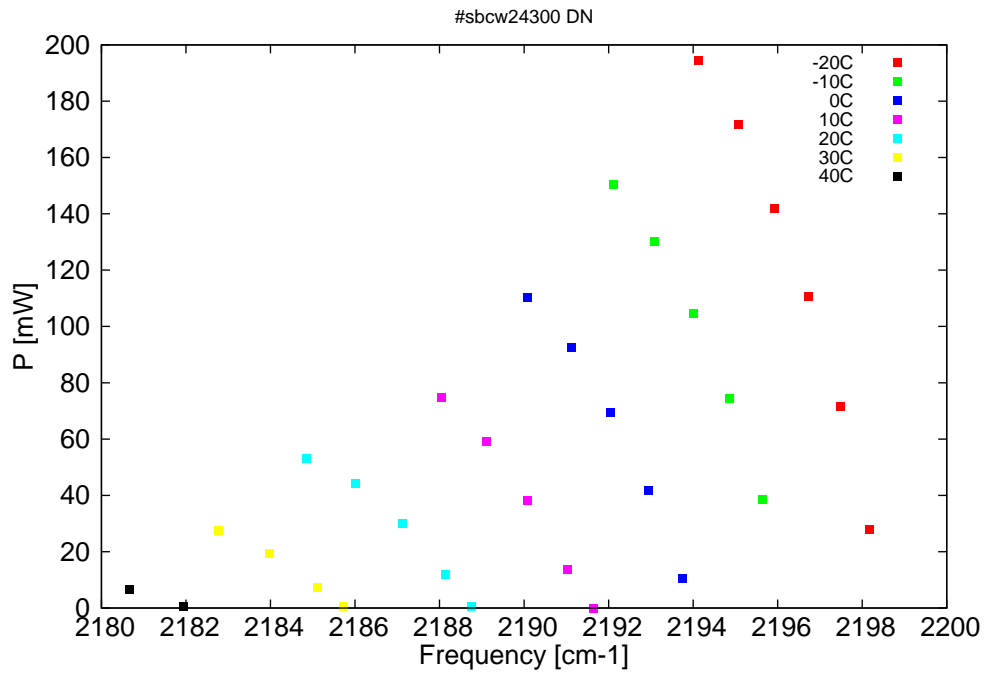


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

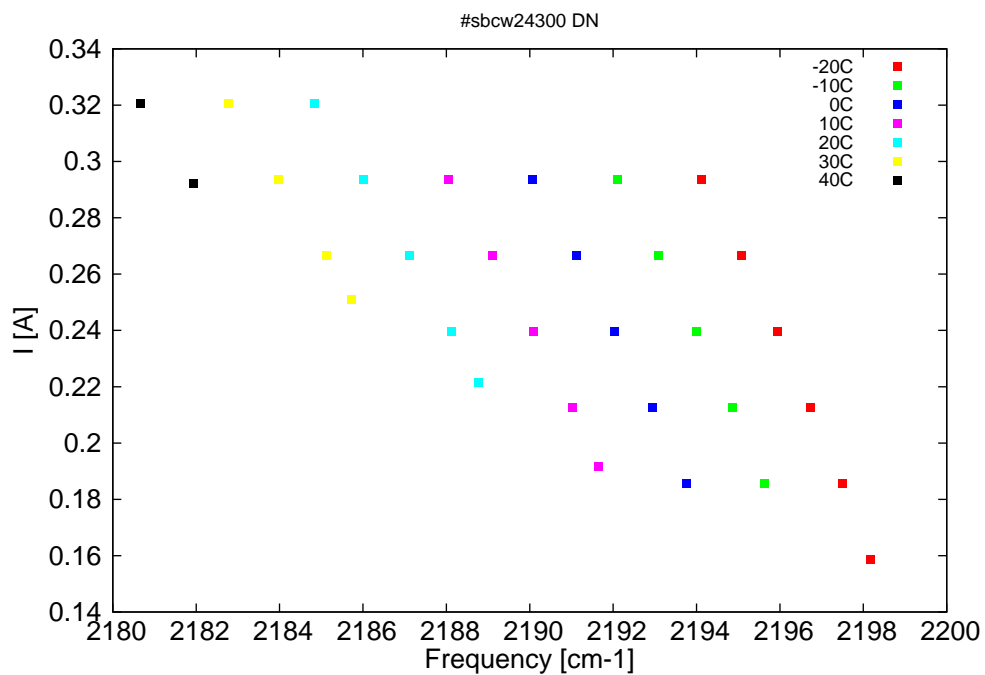


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4549.2	2198.2	27.8	-20	11.36	0.159
4550.6	2197.5	71.6	-20	11.56	0.186
4552.2	2196.7	110.6	-20	11.77	0.213
4553.9	2195.9	141.8	-20	11.98	0.24
4555.7	2195.1	171.8	-20	12.17	0.267
4557.6	2194.1	194.4	-20	12.38	0.294
4554.5	2195.6	38.6	-10	11.51	0.186
4556.1	2194.9	74.4	-10	11.73	0.213
4557.9	2194	104.5	-10	11.93	0.24
4559.8	2193.1	130.1	-10	12.13	0.267
4561.8	2192.1	150.3	-10	12.34	0.294
4558.4	2193.7	10.3	0	11.46	0.186
4560.1	2192.9	41.7	0	11.67	0.213
4562	2192	69.4	0	11.88	0.24
4563.9	2191.1	92.6	0	12.08	0.267
4566	2190.1	110.3	0	12.29	0.294
4562.8	2191.7	0	10	11.47	0.192
4564.1	2191	13.5	10	11.62	0.213
4566	2190.1	38.3	10	11.83	0.24
4568.1	2189.1	59.1	10	12.03	0.267
4570.3	2188	74.9	10	12.24	0.294
4568.8	2188.8	0.6	20	11.64	0.222
4570.1	2188.1	11.9	20	11.78	0.24
4572.2	2187.1	30.1	20	11.99	0.267
4574.5	2186	44.1	20	12.19	0.294
4577	2184.8	53.1	20	12.41	0.321
4575.2	2185.7	0.7	30	11.83	0.251
4576.4	2185.1	7.4	30	11.94	0.267
4578.8	2184	19.5	30	12.15	0.294
4581.3	2182.8	27.5	30	12.36	0.321
4583.1	2181.9	0.5	40	12.12	0.292
4585.7	2180.7	6.5	40	12.34	0.321

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

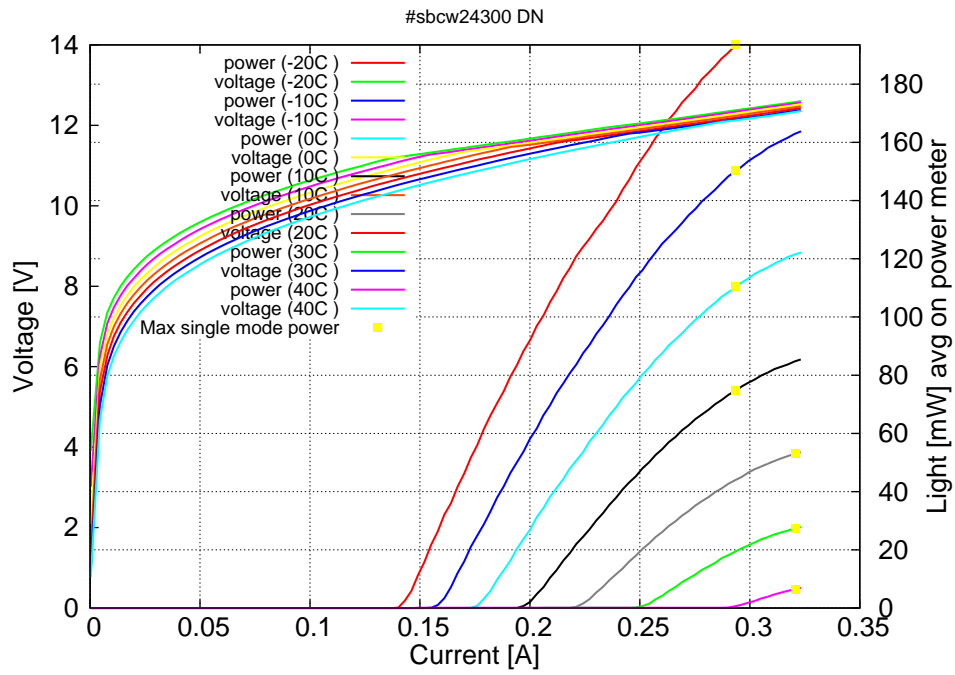


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=11.2V$ (2-wires measurements). Maximum operation current: 0.3A between -20C and 10C, 0.325A between 20C and 40C

Figure 3: spectra at different temperatures for various DC currents

