

Datasheet for #sbcw23678 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 #sbcw23678 DN

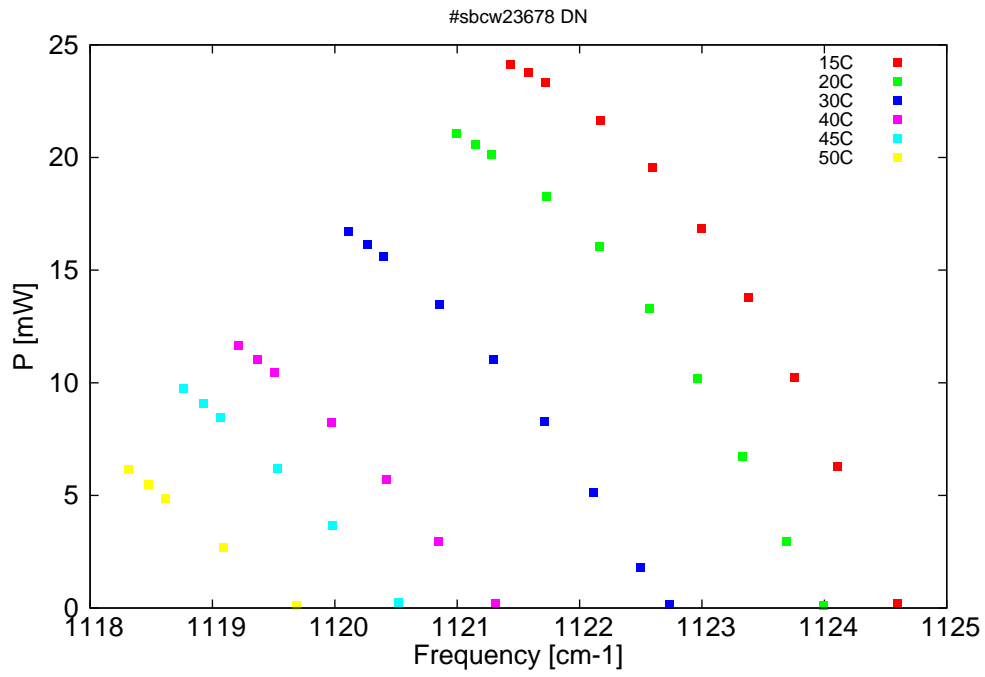


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

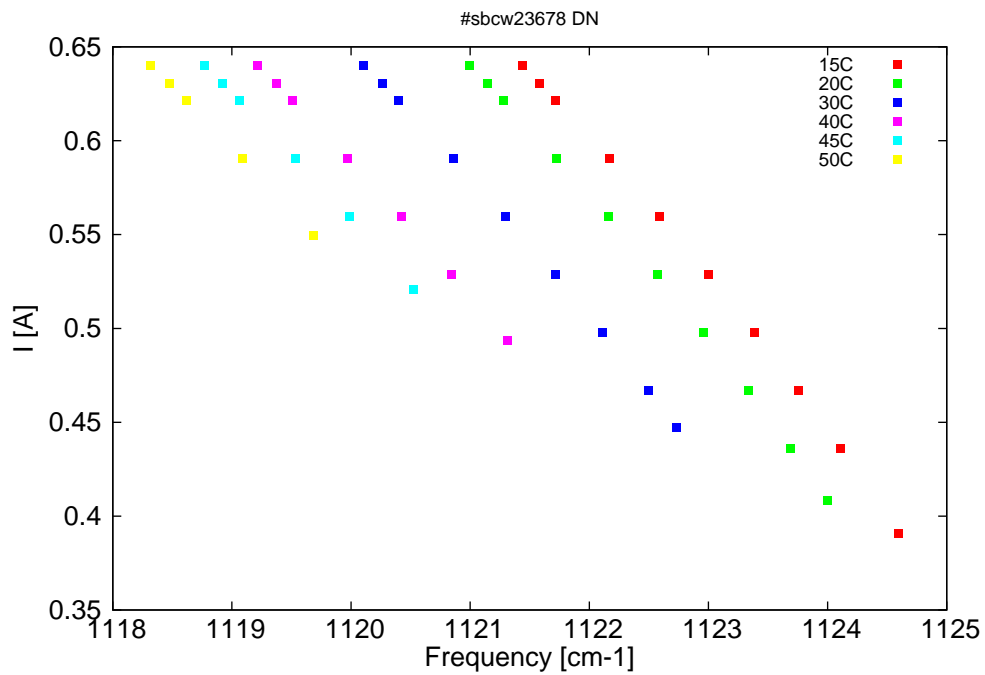


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8892.1	1124.6	0.2	15	10.25	0.391
8896	1124.1	6.3	15	10.57	0.436
8898.8	1123.8	10.3	15	10.78	0.467
8901.7	1123.4	13.8	15	10.98	0.498
8904.7	1123	16.9	15	11.19	0.529
8907.9	1122.6	19.5	15	11.38	0.559
8911.3	1122.2	21.6	15	11.57	0.59
8914.9	1121.7	23.3	15	11.77	0.621
8915.9	1121.6	23.8	15	11.82	0.63
8917.1	1121.4	24.1	15	11.88	0.64
8896.8	1124	0.1	20	10.34	0.409
8899.2	1123.7	3	20	10.54	0.436
8902.1	1123.3	6.7	20	10.74	0.467
8905	1123	10.2	20	10.94	0.498
8908.1	1122.6	13.3	20	11.15	0.529
8911.4	1122.2	16.1	20	11.35	0.559
8914.8	1121.7	18.3	20	11.54	0.59
8918.4	1121.3	20.1	20	11.73	0.621
8919.4	1121.1	20.6	20	11.79	0.63
8920.7	1121	21	20	11.85	0.64
8906.8	1122.7	0.1	30	10.53	0.447
8908.7	1122.5	1.8	30	10.67	0.467
8911.7	1122.1	5.1	30	10.87	0.498
8914.9	1121.7	8.3	30	11.08	0.529
8918.3	1121.3	11.1	30	11.27	0.559
8921.7	1120.9	13.5	30	11.47	0.59
8925.4	1120.4	15.6	30	11.66	0.621
8926.5	1120.3	16.1	30	11.72	0.63
8927.7	1120.1	16.7	30	11.78	0.64
8918.1	1121.3	0.2	40	10.77	0.493
8921.8	1120.8	3	40	11	0.529
8925.2	1120.4	5.7	40	11.2	0.559
8928.8	1120	8.2	40	11.39	0.59
8932.5	1119.5	10.5	40	11.58	0.621
8933.6	1119.4	11.1	40	11.64	0.63
8934.9	1119.2	11.7	40	11.7	0.64
8924.4	1120.5	0.2	45	10.9	0.521
8928.7	1120	3.6	45	11.16	0.559
8932.3	1119.5	6.2	45	11.35	0.59
8936	1119.1	8.5	45	11.54	0.621
8937.2	1118.9	9.1	45	11.6	0.63
8938.4	1118.8	9.7	45	11.66	0.64
8931.1	1119.7	0.1	50	11.05	0.55
8935.8	1119.1	2.7	50	11.32	0.59
8939.6	1118.6	4.9	50	11.51	0.621
8940.7	1118.5	5.5	50	11.56	0.63
8942	1118.3	6.1	50	11.62	0.64

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$\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{LASER}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

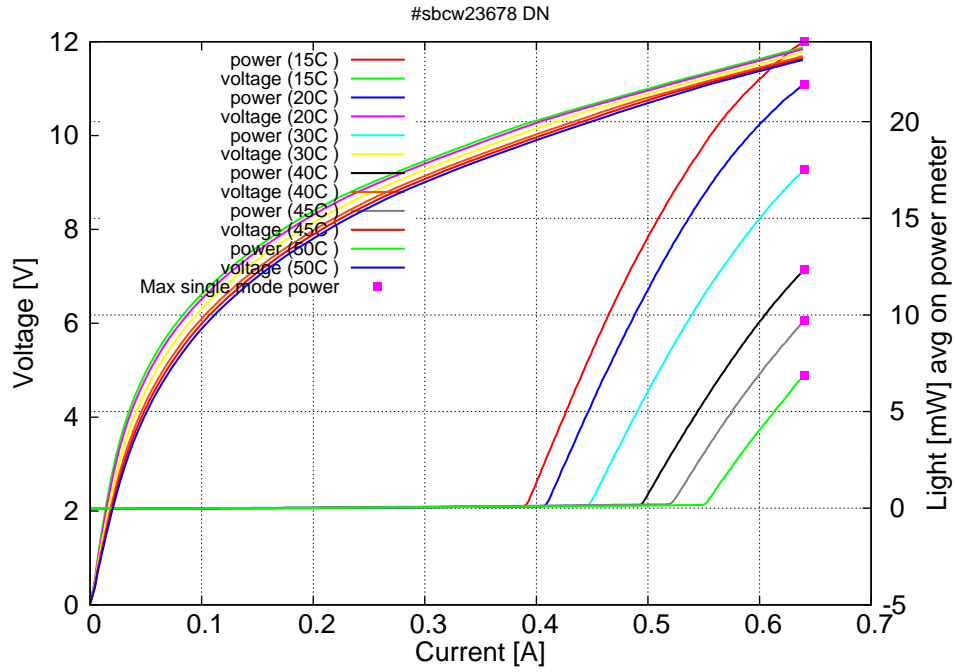


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 15C: $I_{th}=0.38\text{A}$ / $V_{th}=10.2\text{V}$ (2-wires measurements). Maximum operation current: 0.64A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

