

Datasheet for #sbcw19645 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 #sbcw19645 DN

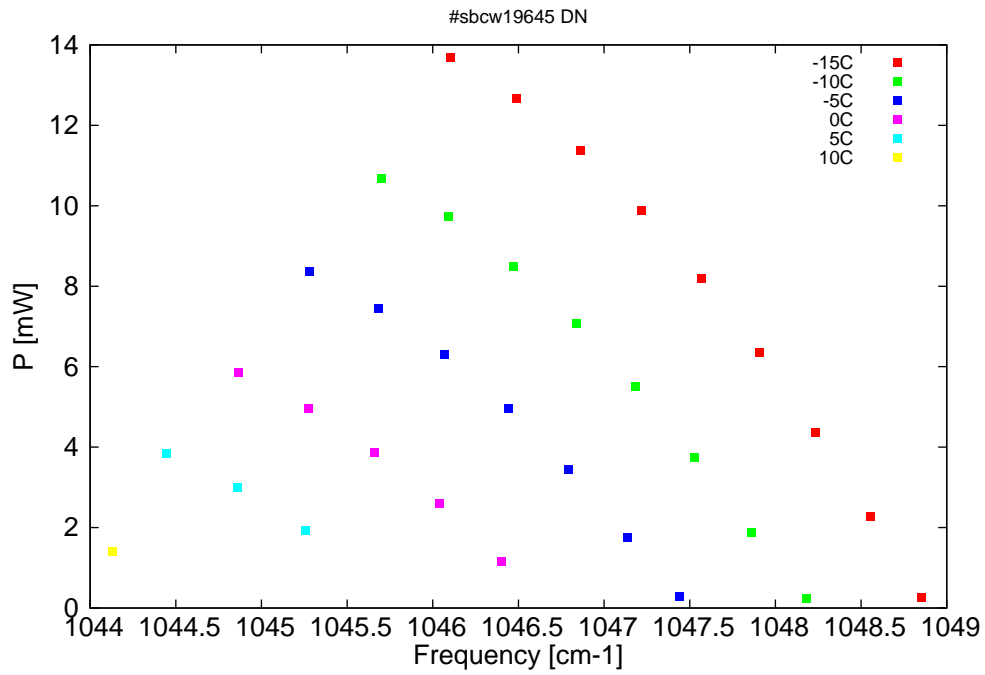


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

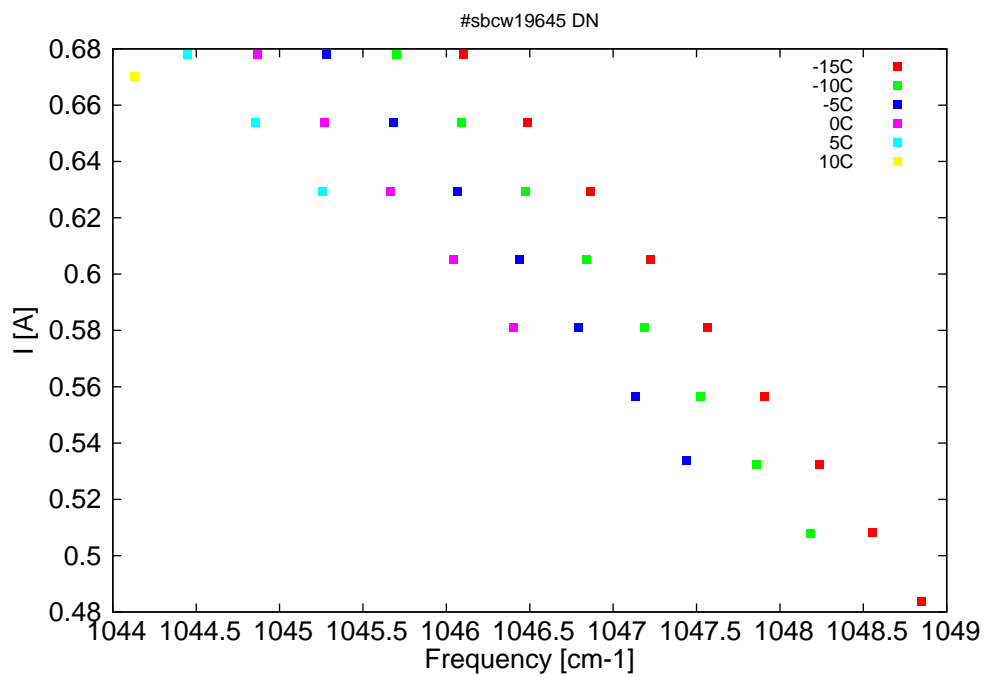


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9534.2	1048.9	0.3	-15	9.35	0.484
9536.9	1048.6	2.3	-15	9.48	0.508
9539.8	1048.2	4.4	-15	9.6	0.532
9542.8	1047.9	6.4	-15	9.73	0.557
9545.9	1047.6	8.2	-15	9.86	0.581
9549.1	1047.2	9.9	-15	9.98	0.605
9552.3	1046.9	11.4	-15	10.11	0.63
9555.8	1046.5	12.7	-15	10.23	0.654
9559.3	1046.1	13.7	-15	10.36	0.678
9540.3	1048.2	0.2	-10	9.43	0.508
9543.3	1047.9	1.9	-10	9.56	0.532
9546.3	1047.5	3.7	-10	9.69	0.557
9549.4	1047.2	5.5	-10	9.82	0.581
9552.6	1046.8	7.1	-10	9.94	0.605
9555.9	1046.5	8.5	-10	10.07	0.63
9559.4	1046.1	9.7	-10	10.2	0.654
9563	1045.7	10.7	-10	10.33	0.678
9547.1	1047.4	0.3	-5	9.53	0.534
9549.9	1047.1	1.8	-5	9.65	0.557
9553	1046.8	3.4	-5	9.78	0.581
9556.2	1046.4	5	-5	9.91	0.605
9559.6	1046.1	6.3	-5	10.04	0.63
9563.1	1045.7	7.4	-5	10.17	0.654
9566.8	1045.3	8.4	-5	10.3	0.678
9556.6	1046.4	1.2	0	9.74	0.581
9559.8	1046	2.6	0	9.87	0.605
9563.3	1045.7	3.9	0	10	0.63
9566.9	1045.3	5	0	10.14	0.654
9570.6	1044.9	5.9	0	10.27	0.678
9567	1045.3	1.9	5	9.97	0.63
9570.7	1044.9	3	5	10.11	0.654
9574.5	1044.4	3.8	5	10.24	0.678
9577.4	1044.1	1.4	10	10.16	0.67

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

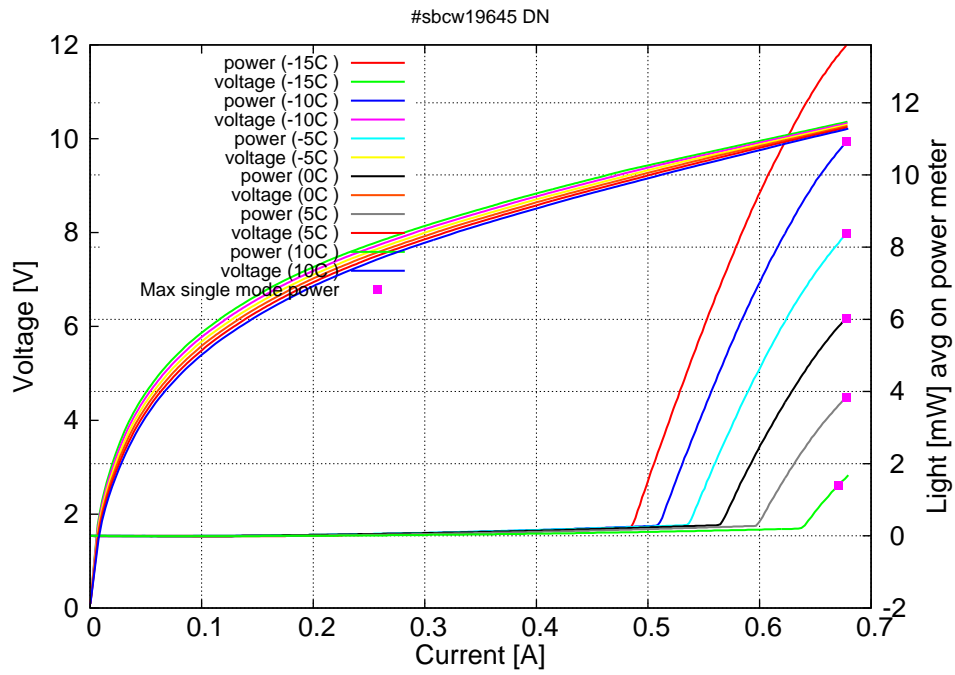


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.50A$ / $V_{th}=9.4V$ (2-wires measurements). Maximum operation current: 0.68A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

