

Datasheet for #sbcw19655 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 #sbcw19655 DN

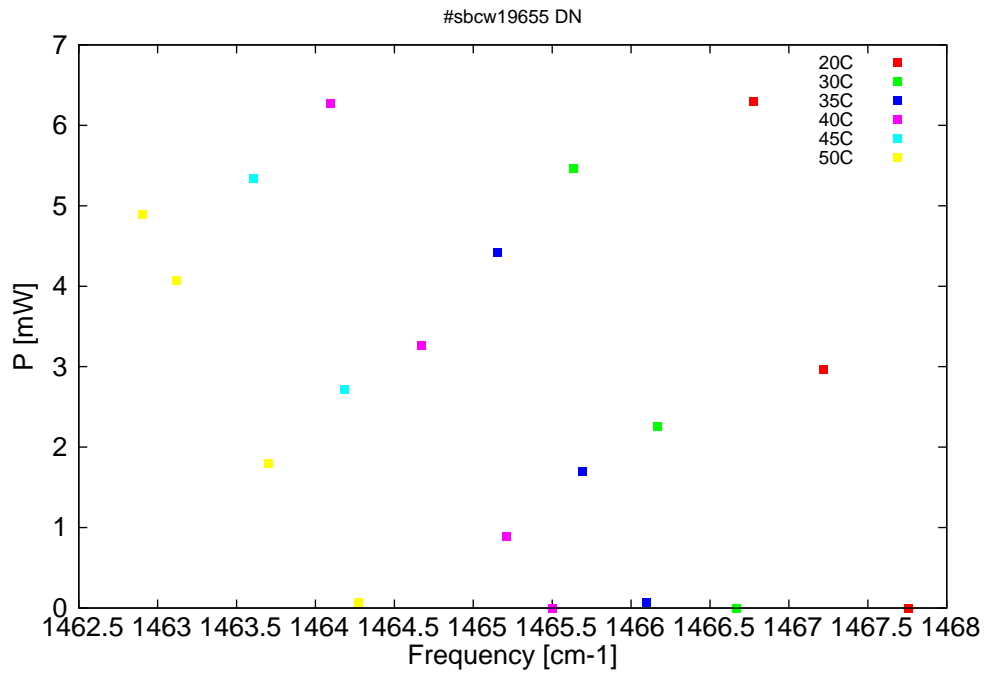


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

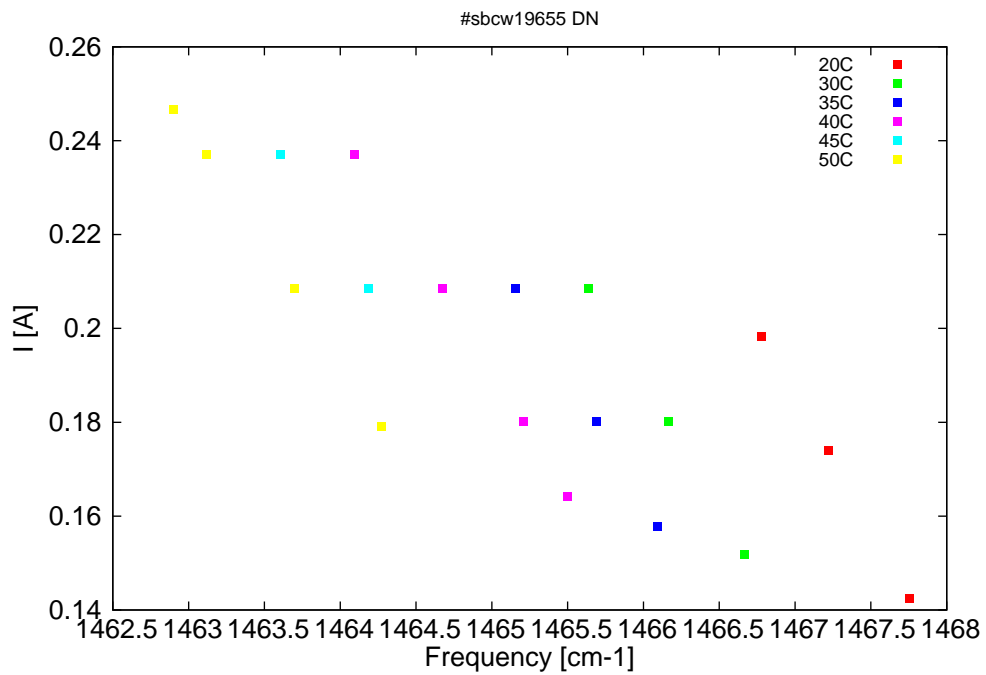


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6813.1	1467.8	0	20	11.04	0.143
6815.6	1467.2	3	20	11.55	0.174
6817.7	1466.8	6.3	20	11.92	0.198
6818.2	1466.7	0	30	11.05	0.152
6820.5	1466.2	2.3	30	11.49	0.18
6823	1465.6	5.5	30	11.92	0.209
6820.8	1466.1	0.1	35	11.06	0.158
6822.7	1465.7	1.7	35	11.41	0.18
6825.2	1465.2	4.4	35	11.84	0.209
6823.6	1465.5	0	40	11.09	0.164
6825	1465.2	0.9	40	11.34	0.18
6827.5	1464.7	3.3	40	11.76	0.209
6830.2	1464.1	6.3	40	12.16	0.237
6829.7	1464.2	2.7	45	11.67	0.209
6832.4	1463.6	5.3	45	12.08	0.237
6829.3	1464.3	0.1	50	11.16	0.179
6832	1463.7	1.8	50	11.59	0.209
6834.7	1463.1	4.1	50	11.99	0.237
6835.7	1462.9	4.9	50	12.12	0.247

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

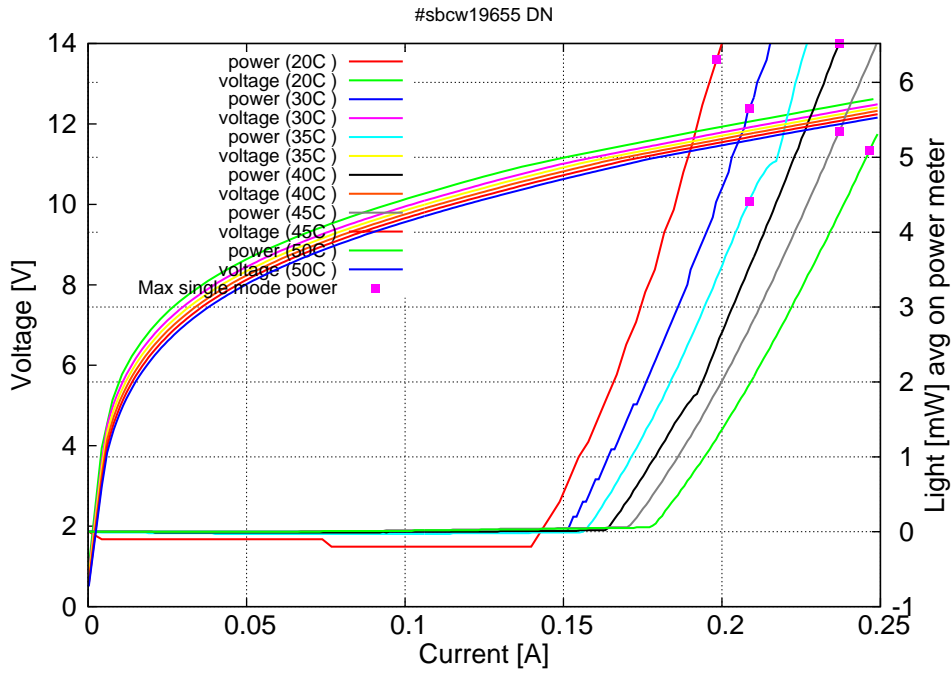


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 20C: $I_{th}=0.14A$ / $V_{th}=11.0V$ (2-wires measurements). Maximum operation current: 0.20A at 20C, 0.21A at 30C and 35C, 0.24A at 40C and 45C, 0.25A at 50C.

Figure 3: spectra at different temperatures for various DC currents

