

Datasheet for #sbcw19658 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.

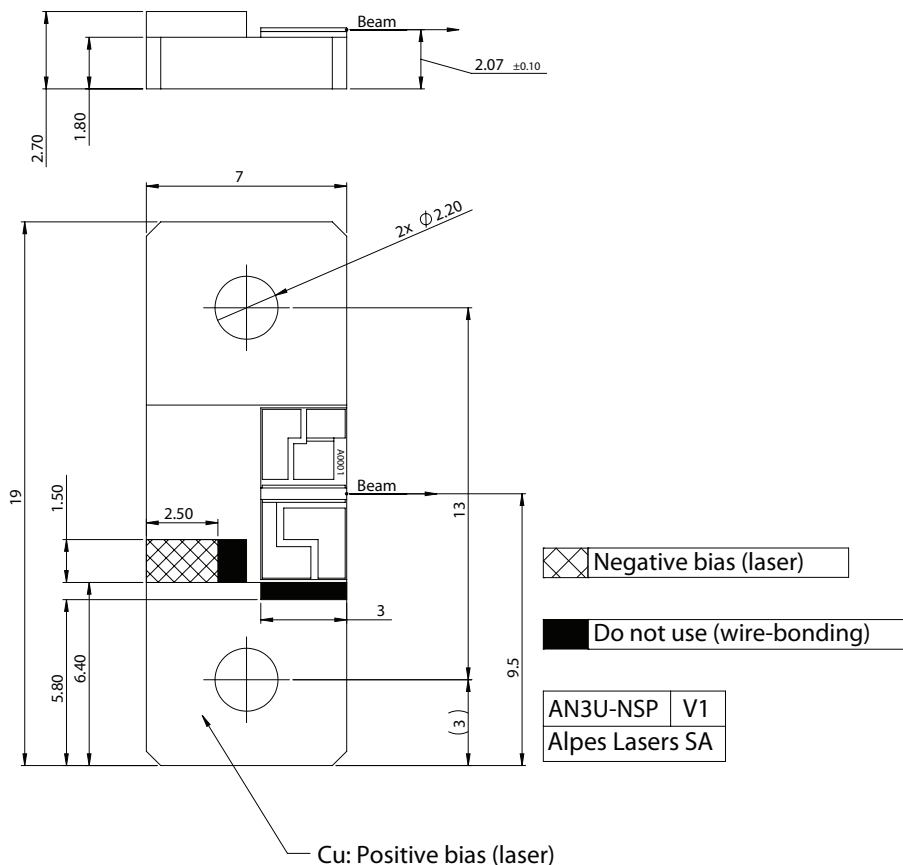


Figure 1: Mechanical and electrical interface for #sbcw19658 DN

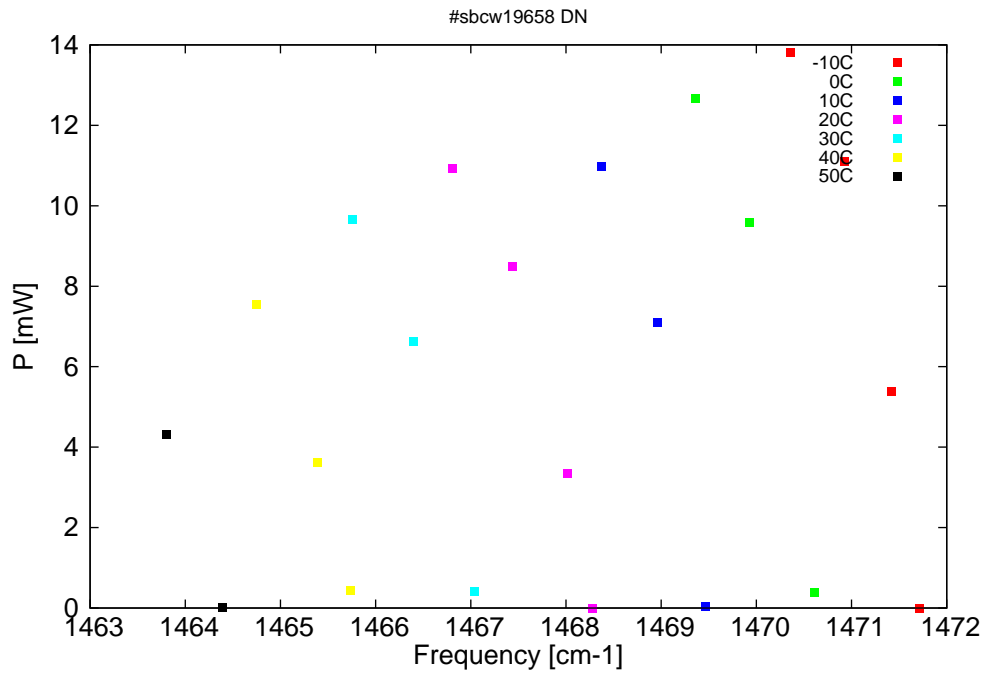


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

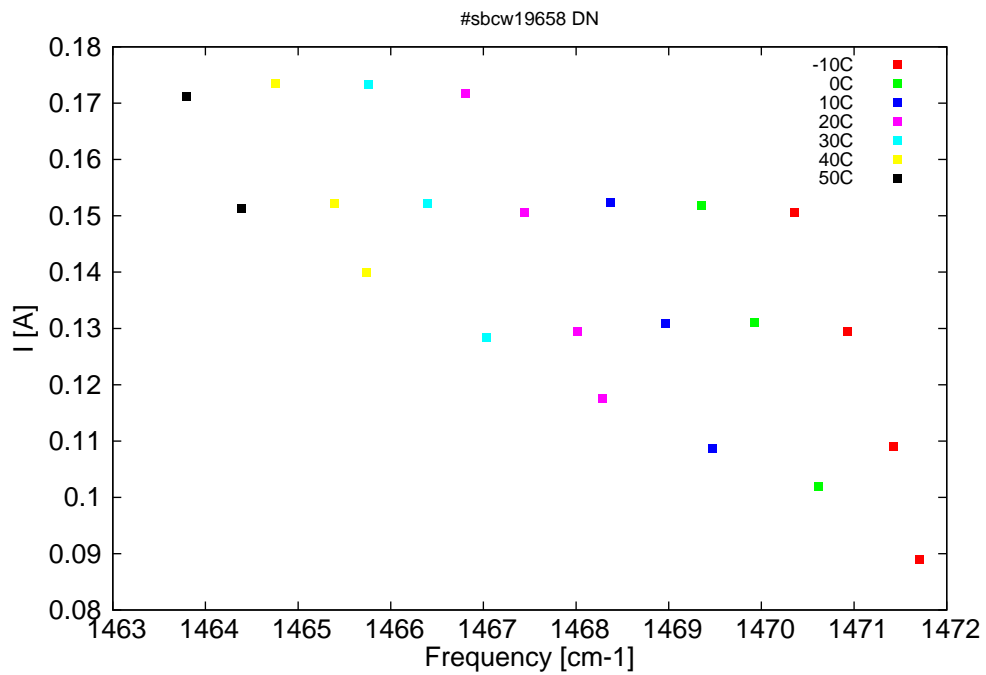


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [ $\text{cm}^{-1}$ ]	P[mW]	Temp[ $^{\circ}\text{C}$ ]	$U_{LASER}$ [V]	I[A]
6794.8	1471.7	0	-10	10.57	0.089
6796.1	1471.4	5.4	-10	10.9	0.109
6798.4	1470.9	11.1	-10	11.31	0.129
6801.1	1470.4	13.8	-10	11.72	0.151
6799.9	1470.6	0.4	0	10.63	0.102
6803.1	1469.9	9.6	0	11.22	0.131
6805.7	1469.4	12.7	0	11.62	0.152
6805.2	1469.5	0	10	10.66	0.109
6807.5	1469	7.1	10	11.09	0.131
6810.2	1468.4	11	10	11.5	0.152
6810.7	1468.3	0	20	10.72	0.118
6811.9	1468	3.3	20	10.94	0.13
6814.6	1467.4	8.5	20	11.36	0.151
6817.5	1466.8	10.9	20	11.76	0.172
6816.5	1467	0.4	30	10.8	0.128
6819.4	1466.4	6.6	30	11.27	0.152
6822.4	1465.8	9.7	30	11.67	0.173
6822.5	1465.7	0.4	40	10.9	0.14
6824.1	1465.4	3.6	40	11.14	0.152
6827.1	1464.8	7.5	40	11.55	0.173
6828.8	1464.4	0	50	11.01	0.151
6831.5	1463.8	4.3	50	11.4	0.171

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

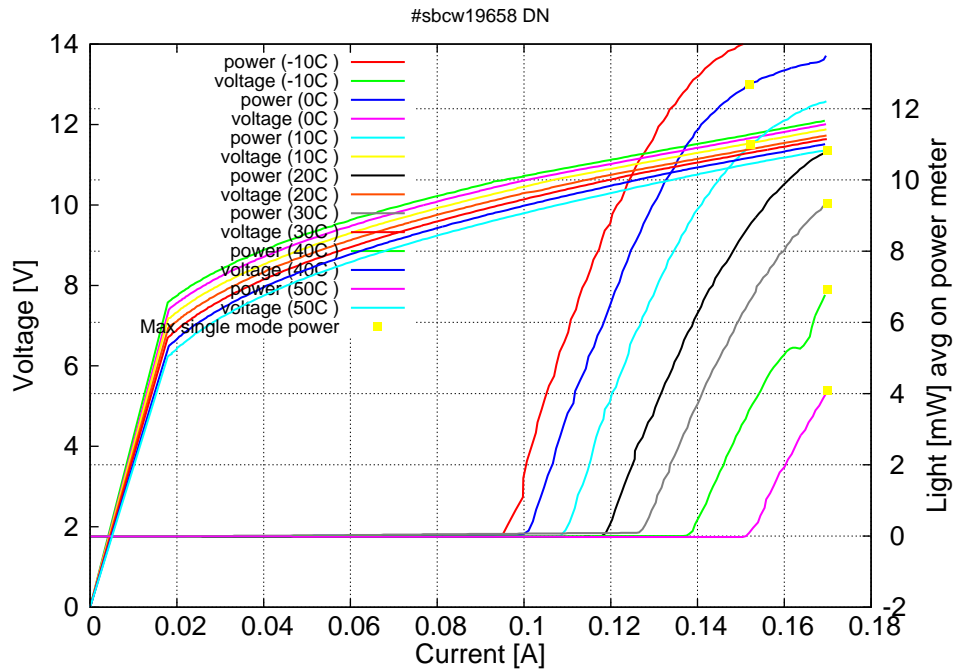


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.09A$  /  $V_{th}=10.5V$  (2-wires measurements). Maximum operation current: 0.15A between -10C and 10C, 0.17A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

