

**Datasheet for #sbcw1915 UP**

Recommendations:

Please read the starter kit user manual (at least installation chapter 5), if available, and have a look at the FAQ at <http://www.alpeslasers.ch/alfaq.pdf>

**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 use with a power-supply ILX Lightwave LDX-3232 or equivalent.

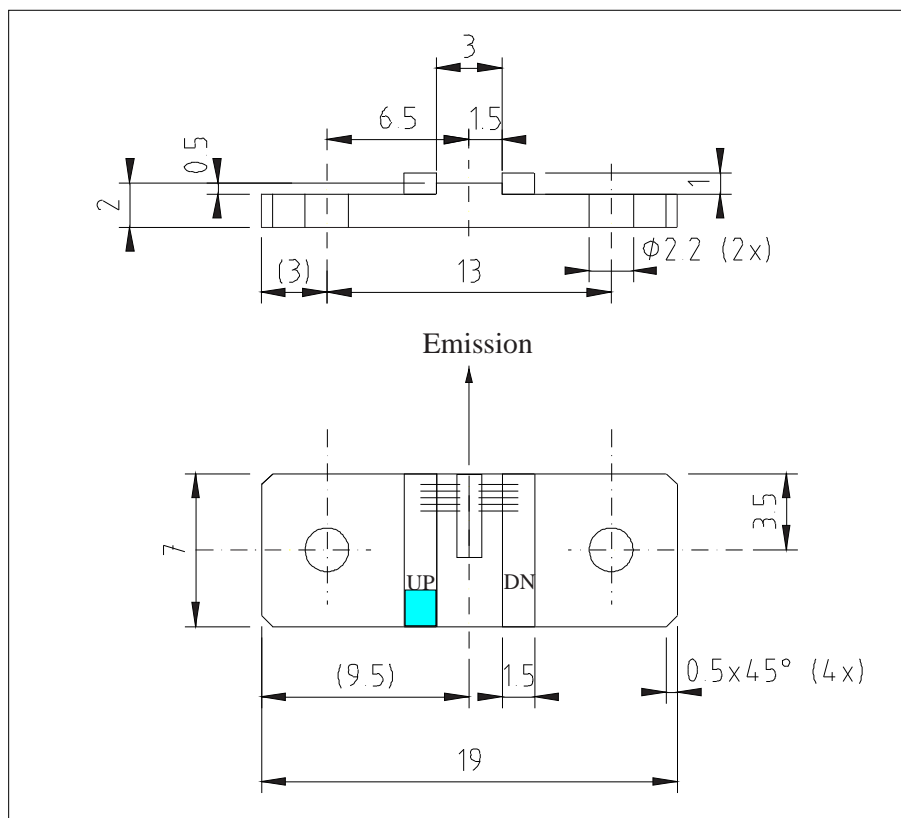


Figure 1: Support mounting for #sbcw1915 UP (please note that the laser is connected to the UP pad drawn in blue)

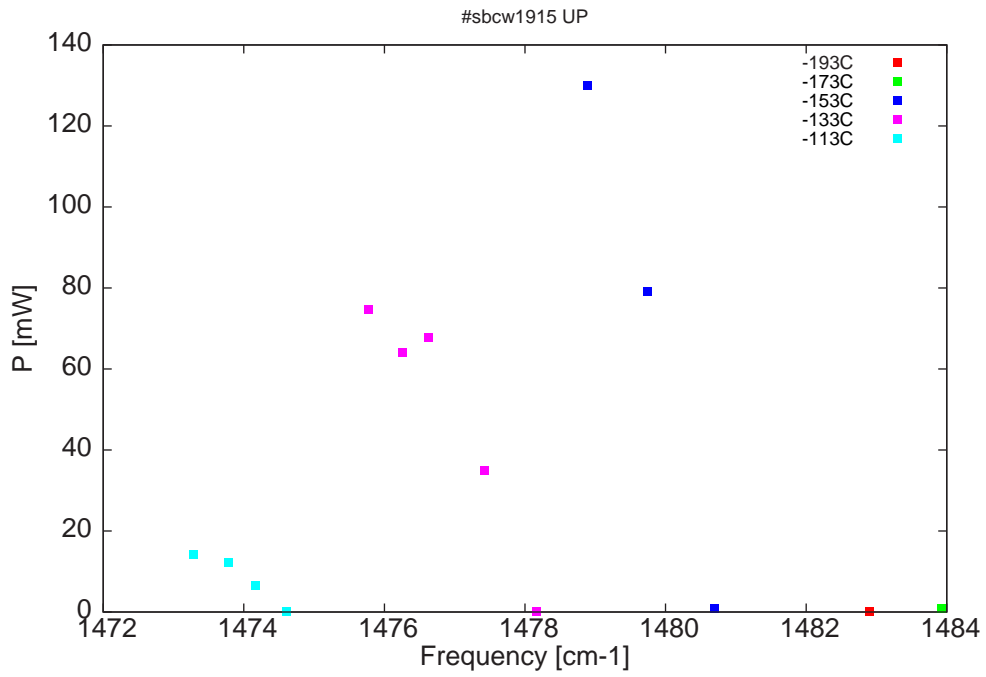


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

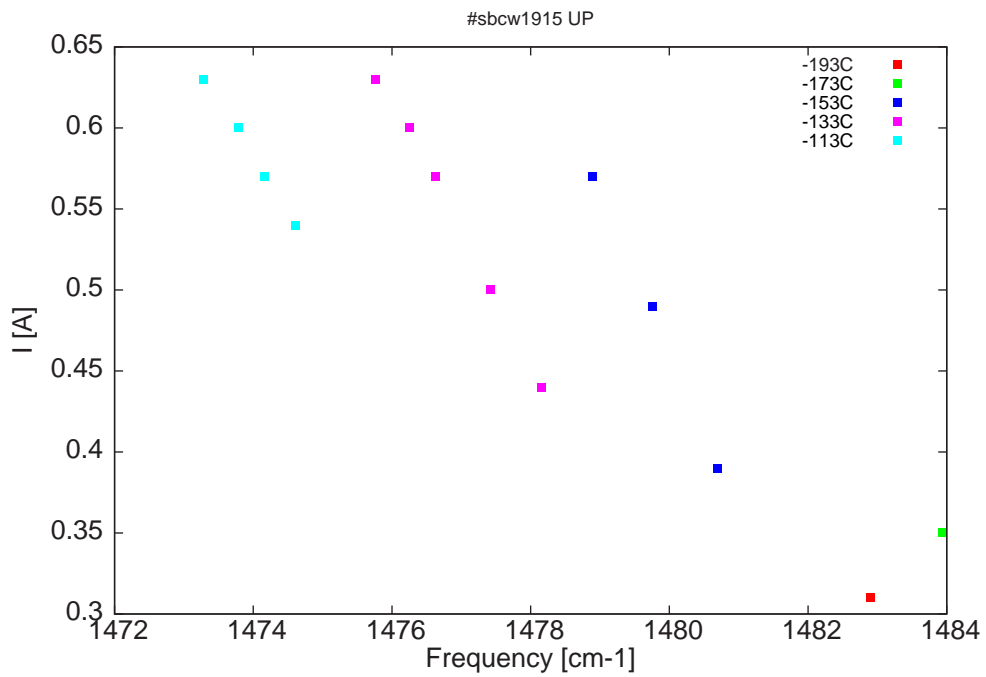


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6743.5	1482.9	0.1	-193	10	0.31
6738.9	1483.9	0.9	-173	9.7	0.35
6753.6	1480.7	0.8	-153	9.5	0.39
6757.9	1479.8	79.2	-153	9.6	0.49
6761.8	1478.9	130	-153	9.7	0.57
6765.2	1478.2	0.1	-133	9.3	0.44
6768.5	1477.4	34.9	-133	9.4	0.5
6772.2	1476.6	67.7	-133	9.5	0.57
6773.9	1476.3	64	-133	9.5	0.6
6776.1	1475.8	74.6	-133	9.6	0.63
6781.4	1474.6	0.1	-113	9.2	0.54
6783.5	1474.2	6.4	-113	9.2	0.57
6785.2	1473.8	12.3	-113	9.3	0.6
6787.6	1473.3	14.2	-113	9.3	0.63

Table 1 : singlemode optical output power as function of operating parameters

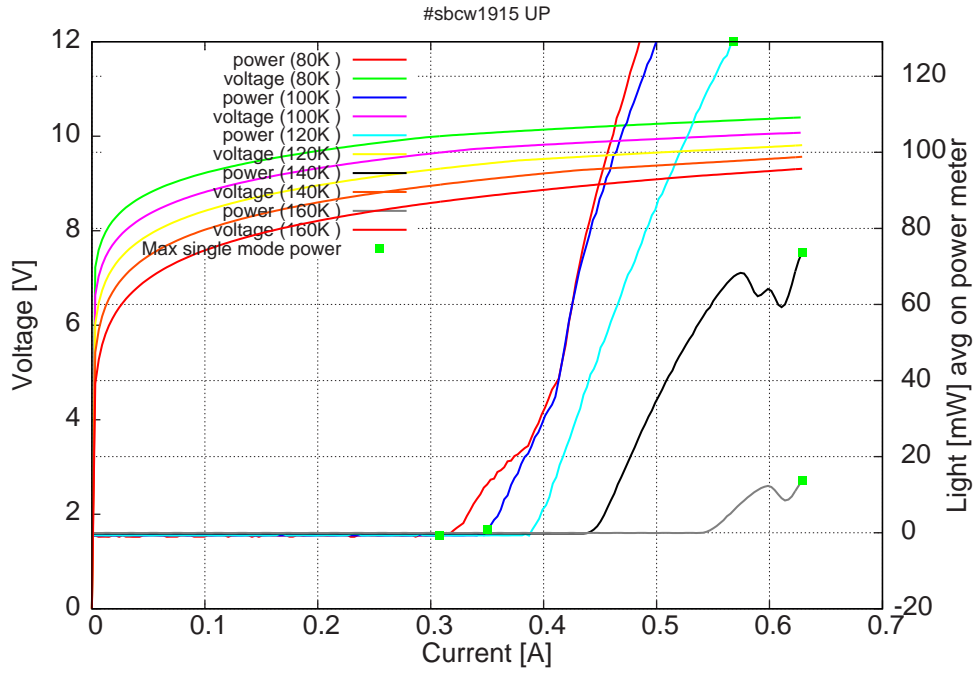


Figure 4: peak voltage and average power vs peak current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

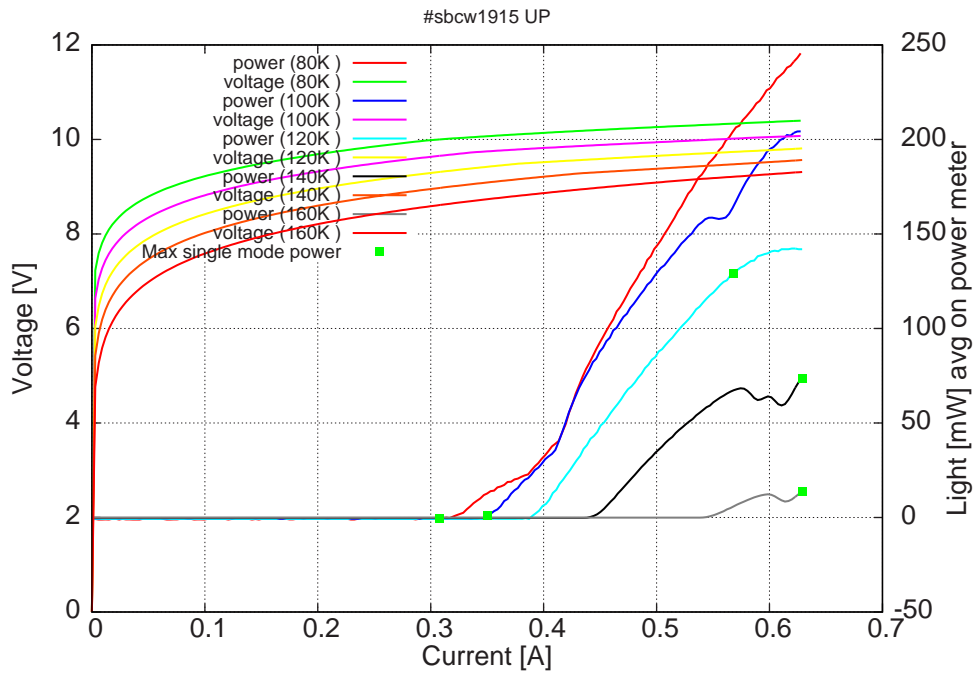


Figure 5: peak voltage and average power vs peak current in continuous-wave operation (including the multimode region)

Note: at 80K:  $I_{th}=310\text{mA}$  /  $V_{th}= 10.0\text{V}$  (2-wires measurements). Maximum operation current: 630mA for all temperatures.



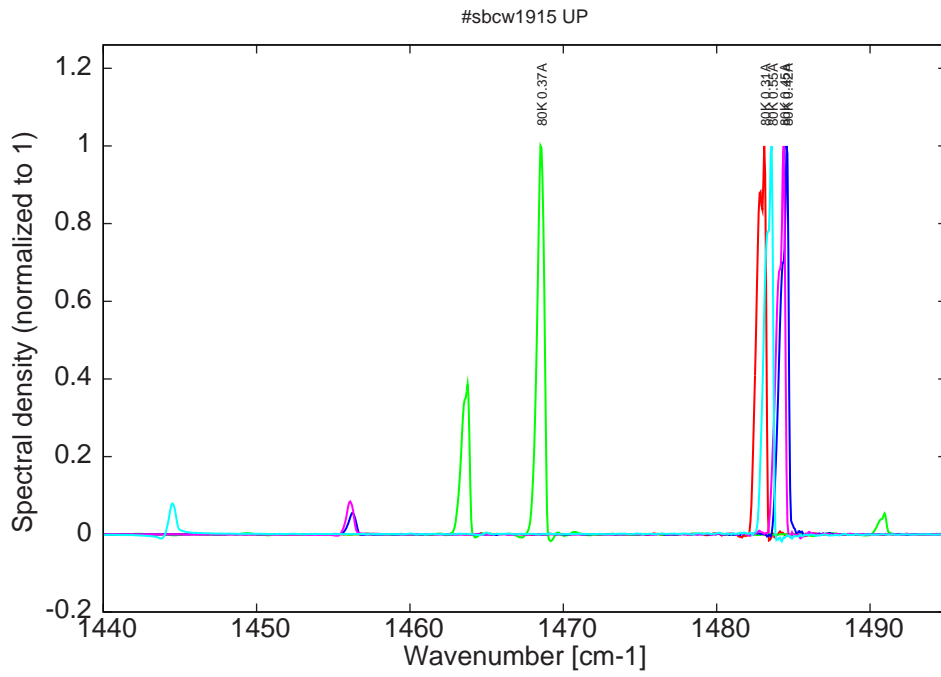


Figure 6: spectra at 80K for various DC currents

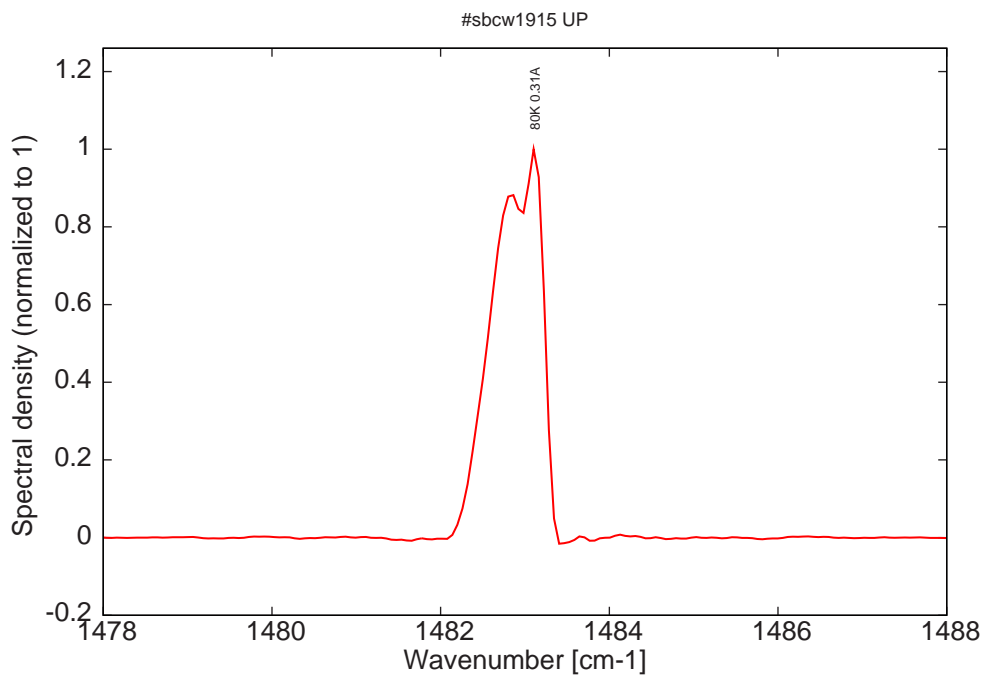


Figure 7: monomode spectrum at 80K at 0.31A (but on another mode compared to higher temperatures, see Fig.1)

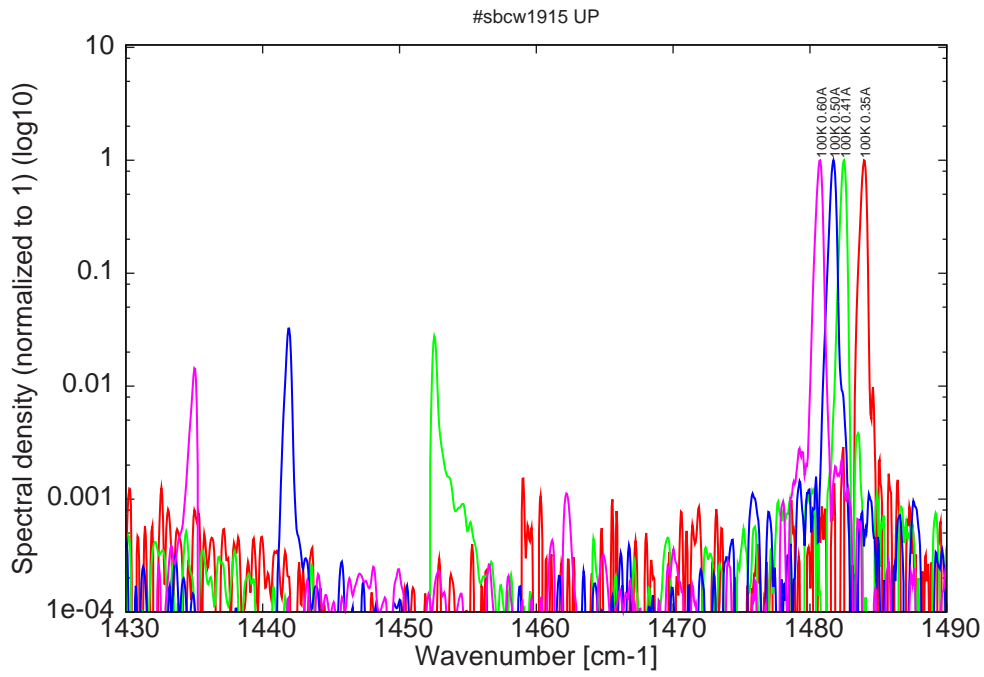


Figure 8: spectra at 100K for various DC currents

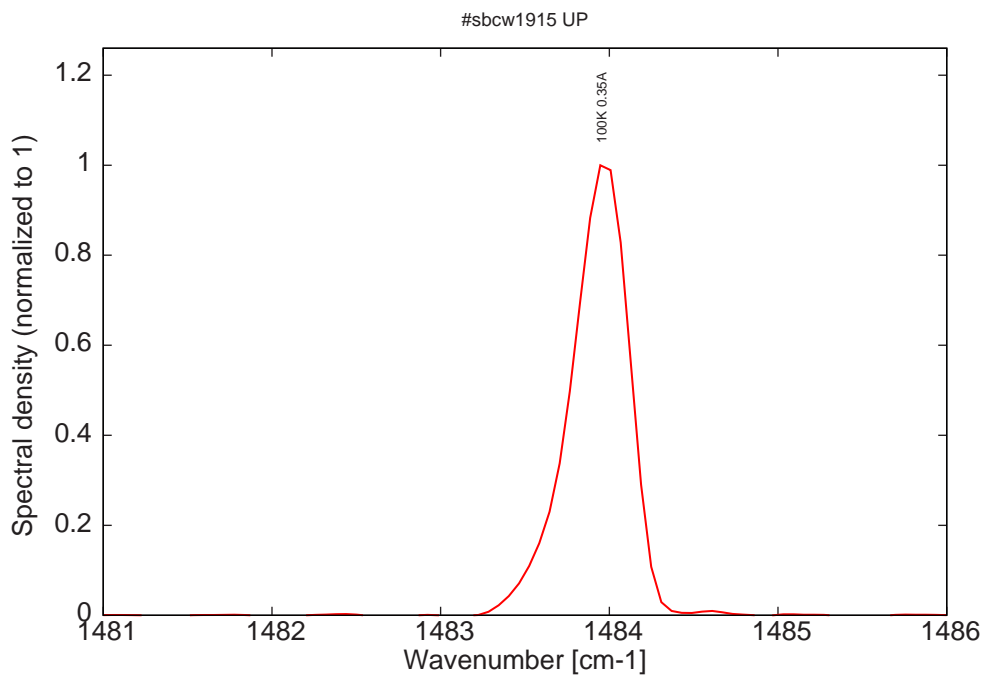


Figure 9: monomode spectrum at 100K at 0.35A (see Fig.1)

Figure 9: spectra between 120K and 160K for various DC currents (all monomode)

