

**Datasheet for #sbcw18115 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.

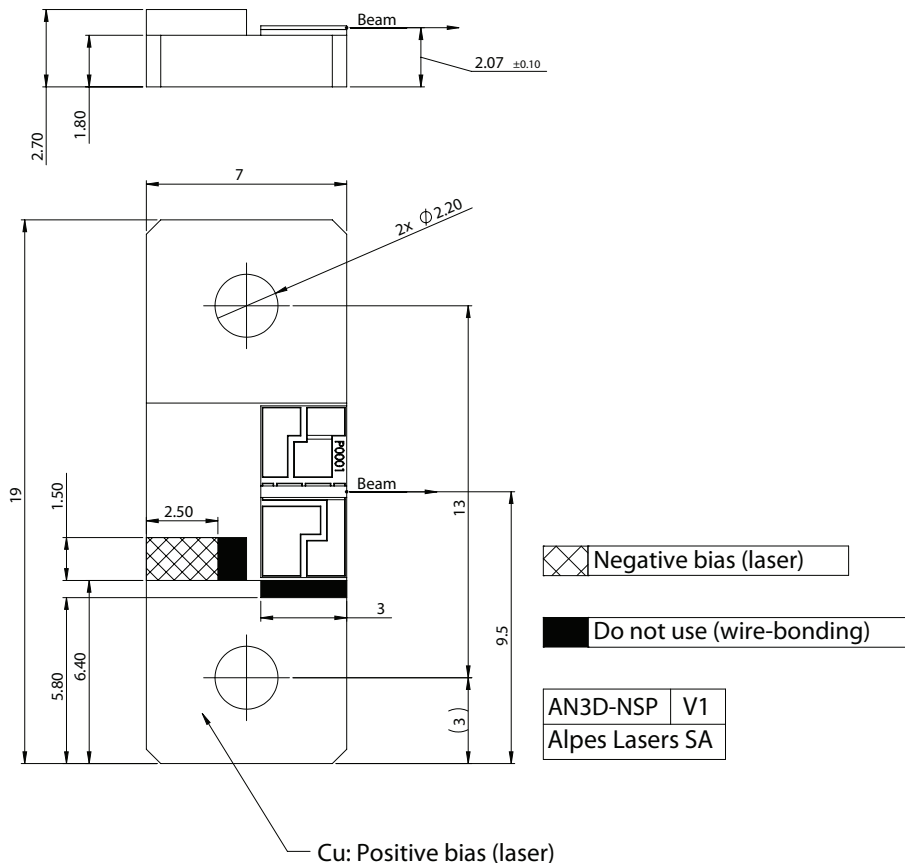


Figure 1: Mechanical and electrical interface for #sbcw18115 DN

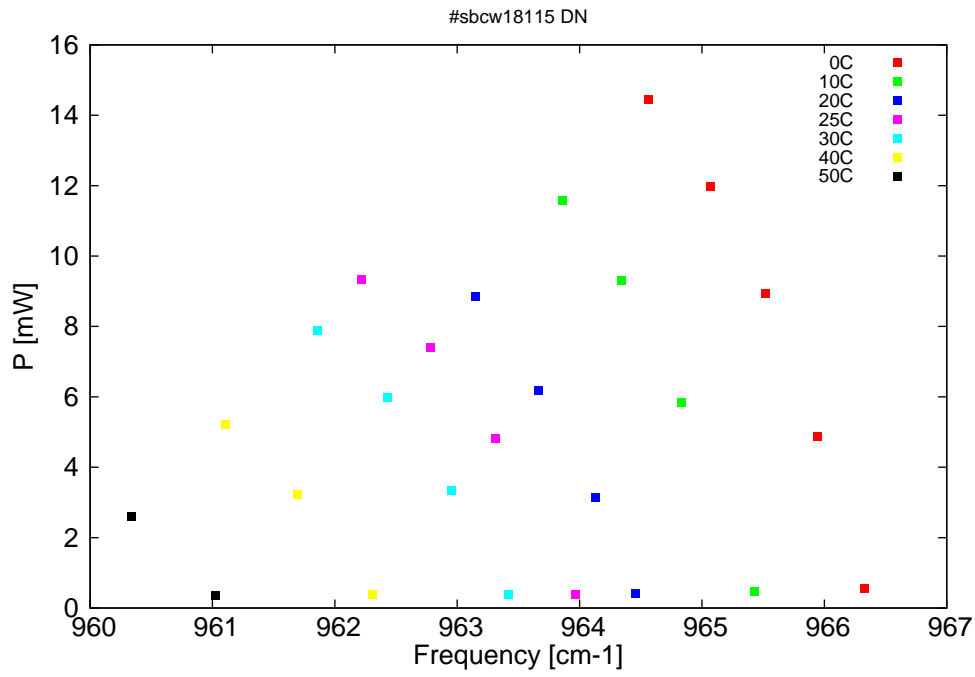


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

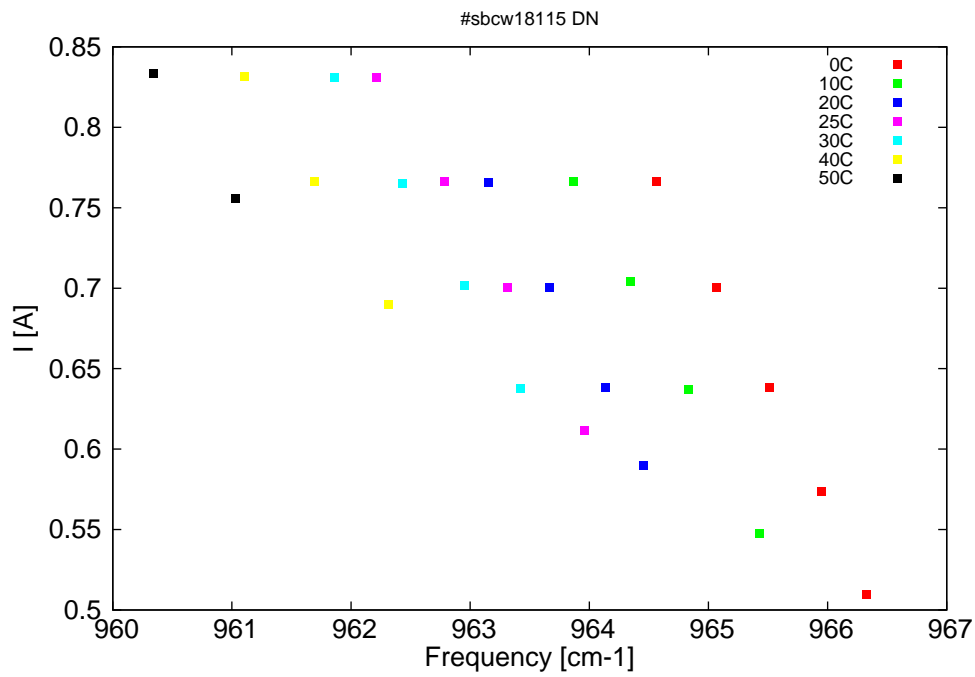


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10348.4	966.3	0.5	0	9.21	0.51
10352.6	965.9	4.9	0	9.53	0.574
10357.2	965.5	8.9	0	9.85	0.638
10362	965.1	12	0	10.16	0.701
10367.4	964.6	14.5	0	10.49	0.767
10358.1	965.4	0.5	10	9.33	0.547
10364.5	964.8	5.8	10	9.78	0.637
10369.8	964.3	9.3	10	10.12	0.704
10374.9	963.9	11.6	10	10.43	0.767
10368.5	964.5	0.4	20	9.48	0.59
10372	964.1	3.1	20	9.73	0.639
10377.1	963.7	6.2	20	10.04	0.701
10382.6	963.2	8.9	20	10.37	0.766
10373.8	964	0.4	25	9.56	0.612
10380.8	963.3	4.8	25	10.01	0.7
10386.5	962.8	7.4	25	10.35	0.767
10392.7	962.2	9.3	25	10.68	0.831
10379.7	963.4	0.4	30	9.67	0.638
10384.7	963	3.4	30	9.99	0.702
10390.4	962.4	6	30	10.32	0.765
10396.5	961.9	7.9	30	10.66	0.831
10391.6	962.3	0.4	40	9.88	0.69
10398.3	961.7	3.2	40	10.27	0.767
10404.7	961.1	5.2	40	10.62	0.831
10405.5	961	0.4	50	10.18	0.756
10413	960.3	2.6	50	10.58	0.833

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

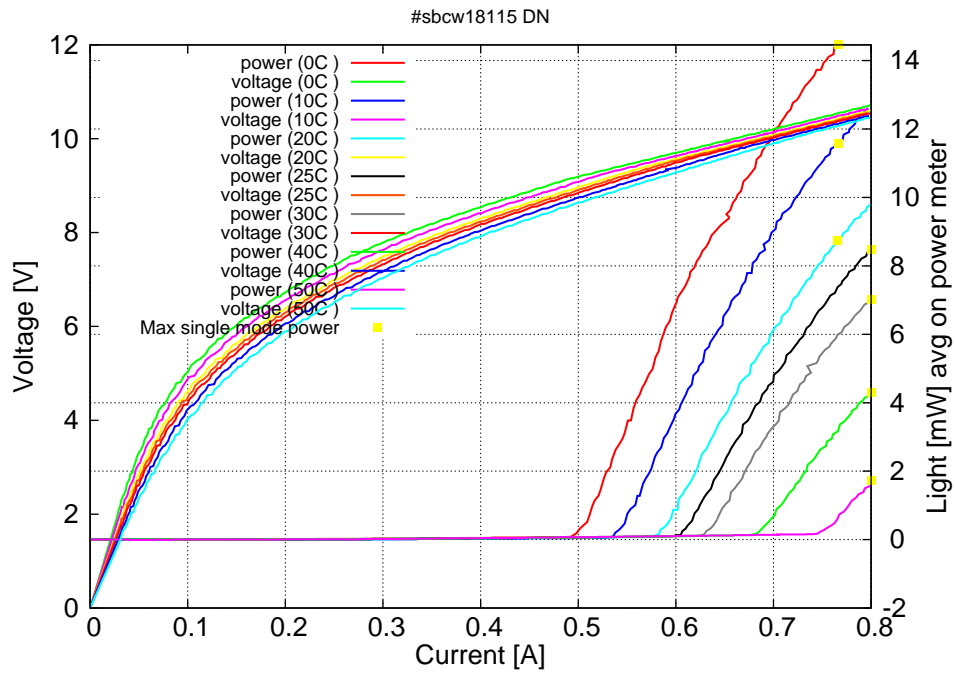


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C:  $I_{th}=0.49A$  /  $V_{th}=9.2V$  (2-wires measurements). Maximum operation current: 0.800A between 0C and 20C, 0.84A between 25C and 50C.

Figure 3: spectra at different temperatures for various DC currents

