

Datasheet for #sbcw7647 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.

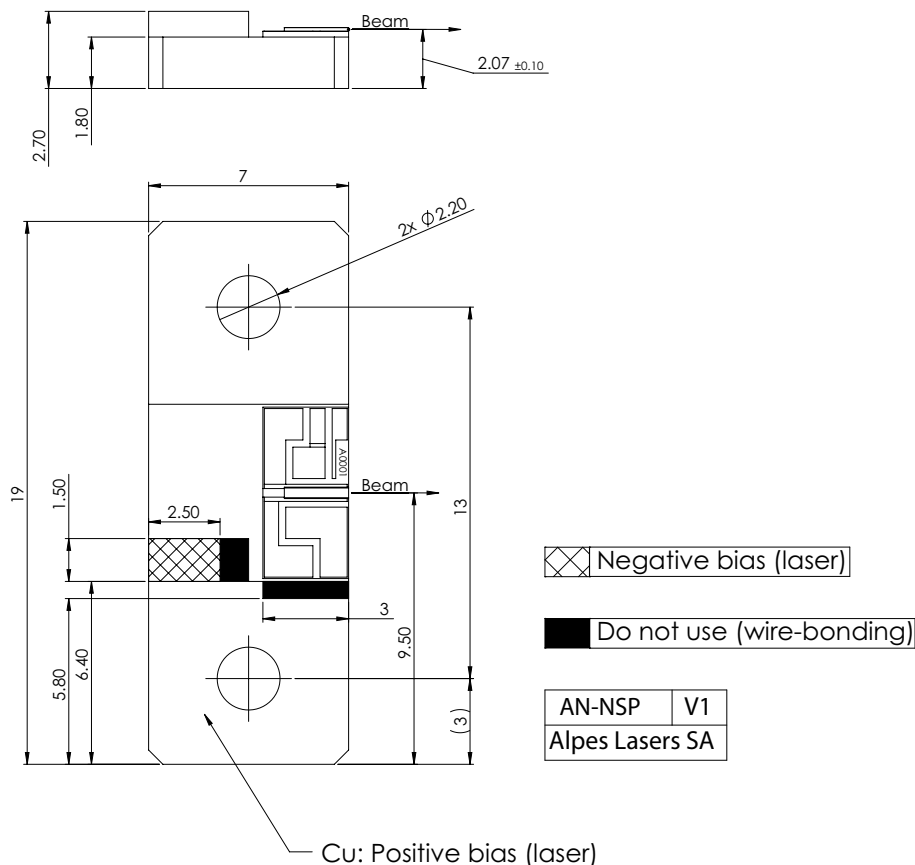


Figure 1: Mechanical and electrical interface for #sbcw7647 DN

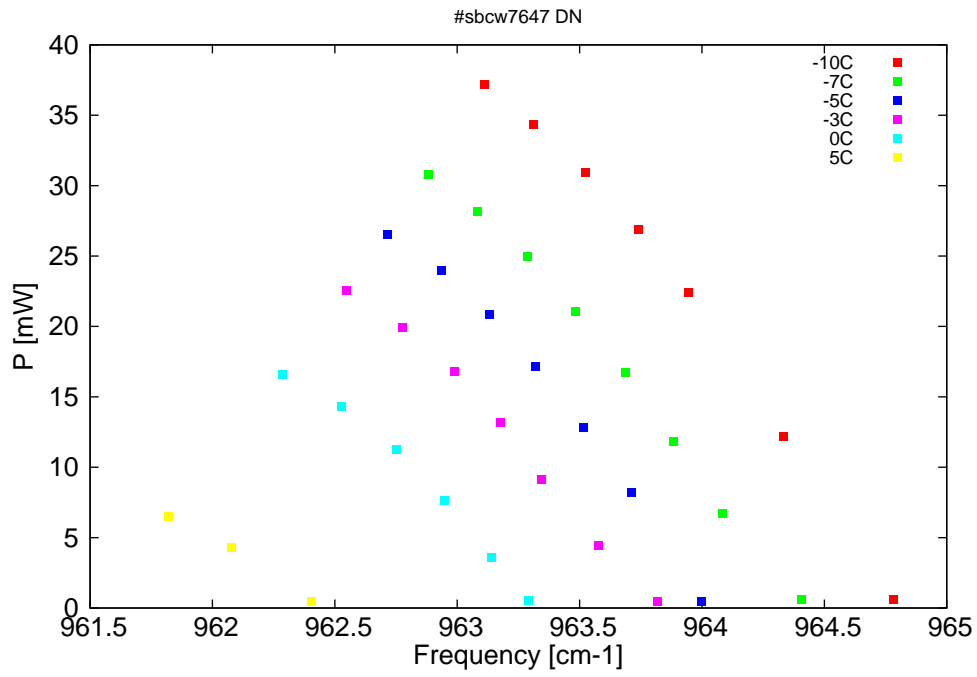


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

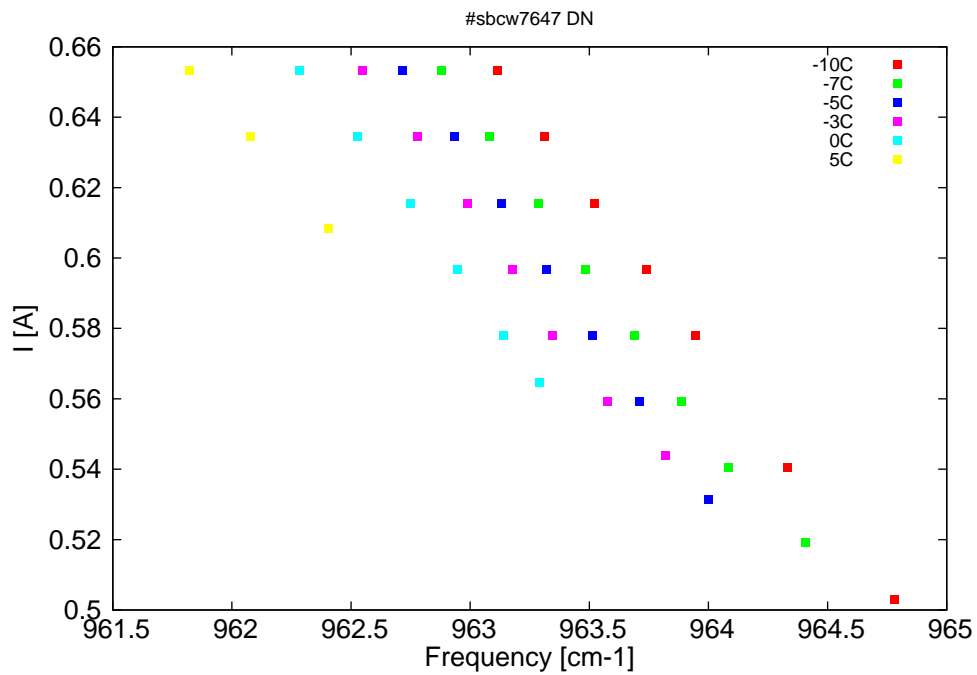


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10365	964.8	0.6	-10	8.94	0.503
10369.9	964.3	12.2	-10	9.16	0.54
10374.1	963.9	22.4	-10	9.38	0.578
10376.2	963.7	26.9	-10	9.49	0.597
10378.6	963.5	31	-10	9.61	0.616
10380.8	963.3	34.3	-10	9.73	0.634
10383	963.1	37.2	-10	9.86	0.653
10369.1	964.4	0.6	-7	9.03	0.519
10372.5	964.1	6.7	-7	9.15	0.54
10374.7	963.9	11.9	-7	9.27	0.559
10376.8	963.7	16.7	-7	9.38	0.578
10379	963.5	21.1	-7	9.49	0.597
10381.1	963.3	25	-7	9.61	0.616
10383.3	963.1	28.2	-7	9.74	0.634
10385.5	962.9	30.8	-7	9.86	0.653
10373.5	964	0.5	-5	9.1	0.532
10376.6	963.7	8.2	-5	9.27	0.559
10378.7	963.5	12.8	-5	9.38	0.578
10380.8	963.3	17.2	-5	9.49	0.597
10382.8	963.1	20.8	-5	9.61	0.616
10384.9	962.9	23.9	-5	9.74	0.634
10387.3	962.7	26.6	-5	9.87	0.653
10375.4	963.8	0.5	-3	9.17	0.544
10378	963.6	4.4	-3	9.27	0.559
10380.5	963.3	9.1	-3	9.38	0.578
10382.3	963.2	13.2	-3	9.5	0.597
10384.3	963	16.8	-3	9.62	0.616
10386.6	962.8	19.9	-3	9.74	0.634
10389.1	962.5	22.6	-3	9.87	0.653
10381.1	963.3	0.6	0	9.3	0.565
10382.7	963.1	3.6	0	9.38	0.578
10384.8	962.9	7.6	0	9.5	0.597
10386.9	962.8	11.2	0	9.62	0.616
10389.3	962.5	14.3	0	9.74	0.634
10391.9	962.3	16.6	0	9.88	0.653
10390.6	962.4	0.5	5	9.58	0.608
10394.2	962.1	4.3	5	9.75	0.634
10396.9	961.8	6.5	5	9.88	0.653

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

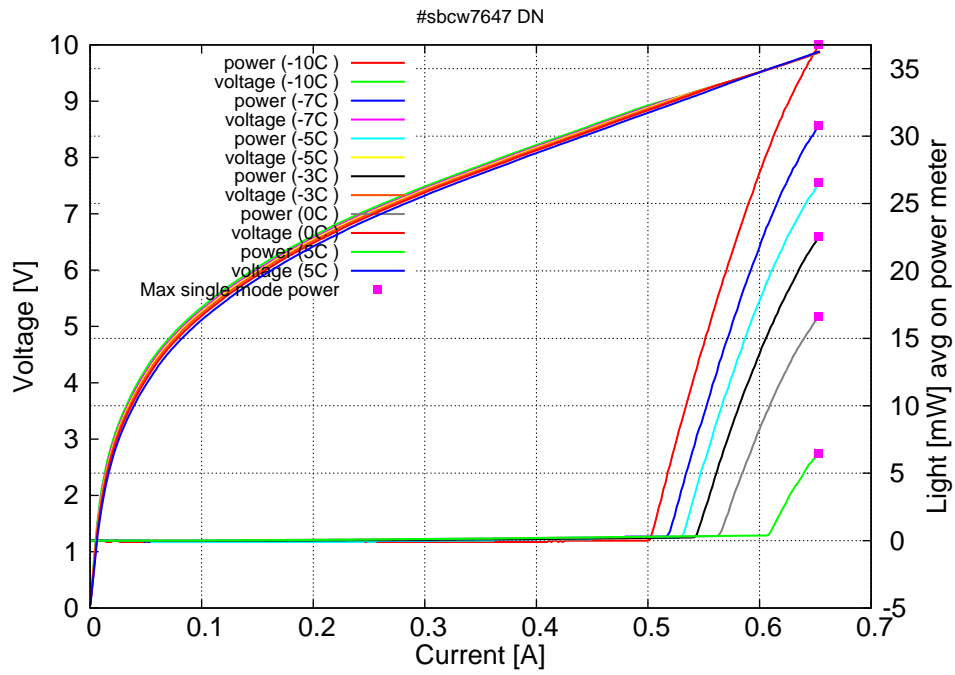


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.49A$  /  $V_{th}=8.9V$  (2-wires measurements). Maximum operation current: 0.655A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

