

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

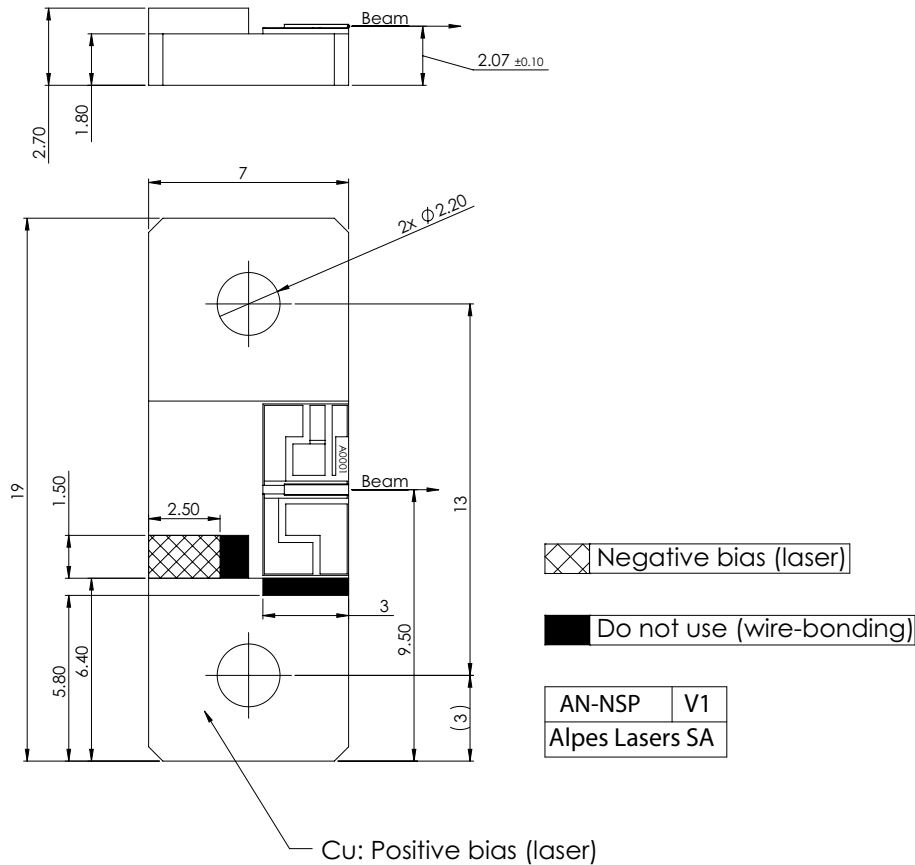


Figure 1: Mechanical and electrical interface for #sbcw7647 DN

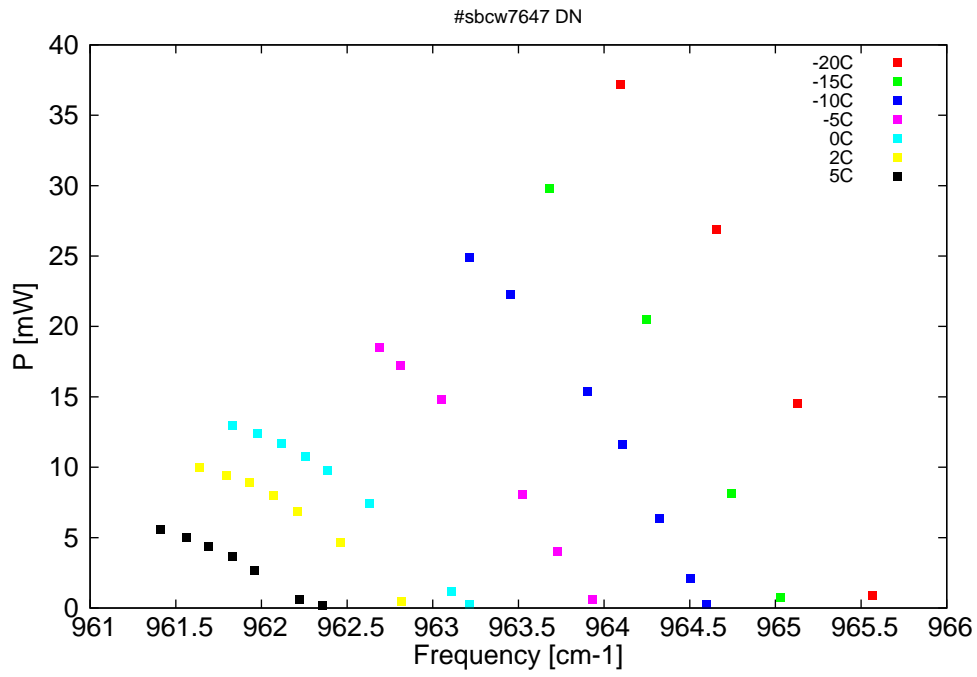


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

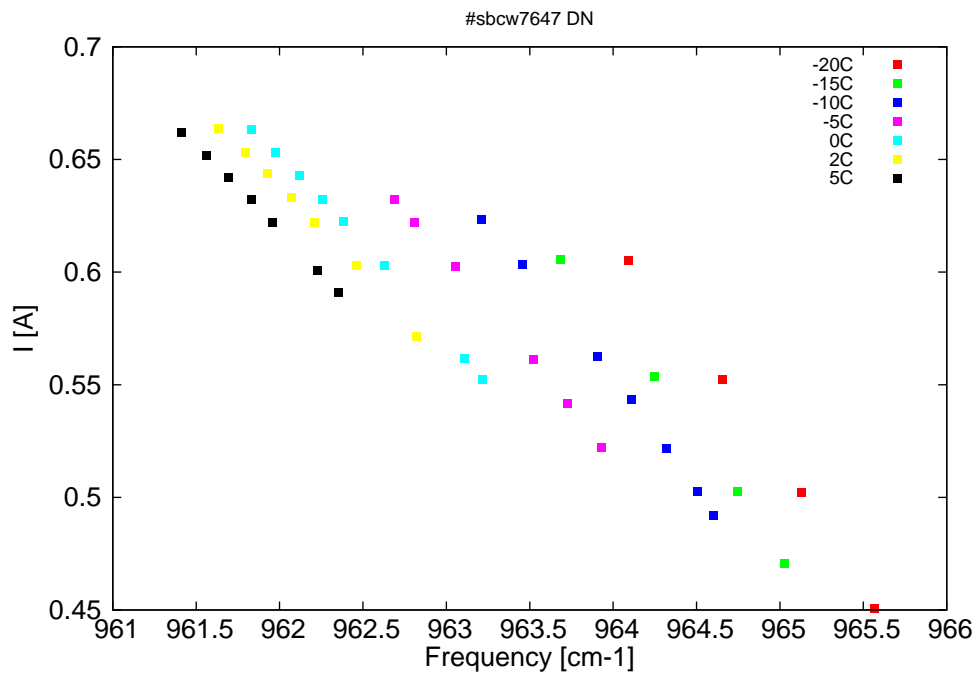


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10356.6	965.6	0.9	-20	8.8	0.45
10361.3	965.1	14.5	-20	9.1	0.5
10366.4	964.7	26.9	-20	9.4	0.55
10372.4	964.1	37.2	-20	9.7	0.61
10362.4	965	0.8	-15	8.9	0.47
10365.4	964.7	8.2	-15	9.1	0.5
10370.7	964.3	20.5	-15	9.4	0.55
10376.9	963.7	29.8	-15	9.7	0.61
10367	964.6	0.3	-10	9	0.49
10368	964.5	2.1	-10	9.1	0.5
10370	964.3	6.4	-10	9.2	0.52
10372.3	964.1	11.6	-10	9.3	0.54
10374.5	963.9	15.4	-10	9.4	0.56
10379.3	963.5	22.3	-10	9.7	0.6
10381.9	963.2	24.9	-10	9.8	0.62
10374.2	963.9	0.6	-5	9.2	0.52
10376.4	963.7	4	-5	9.3	0.54
10378.6	963.5	8.1	-5	9.4	0.56
10383.7	963.1	14.8	-5	9.7	0.6
10386.3	962.8	17.2	-5	9.8	0.62
10387.6	962.7	18.5	-5	9.9	0.63
10381.9	963.2	0.2	0	9.4	0.55
10383.1	963.1	1.2	0	9.4	0.56
10388.2	962.6	7.4	0	9.7	0.6
10390.9	962.4	9.8	0	9.8	0.62
10392.3	962.3	10.8	0	9.9	0.63
10393.7	962.1	11.7	0	10	0.64
10395.3	962	12.4	0	10.1	0.65
10396.9	961.8	12.9	0	10.2	0.66
10386.2	962.8	0.4	2	9.5	0.57
10390	962.5	4.6	2	9.7	0.6
10392.8	962.2	6.9	2	9.8	0.62
10394.3	962.1	8	2	9.9	0.63
10395.8	961.9	8.9	2	10	0.64
10397.2	961.8	9.4	2	10.1	0.65
10398.9	961.6	10	2	10.2	0.66
10391.2	962.4	0.2	5	9.6	0.59
10392.6	962.2	0.6	5	9.7	0.6
10395.4	962	2.6	5	9.8	0.62
10396.8	961.8	3.7	5	9.9	0.63
10398.3	961.7	4.4	5	10	0.64
10399.8	961.6	5	5	10.1	0.65
10401.4	961.4	5.6	5	10.1	0.66

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

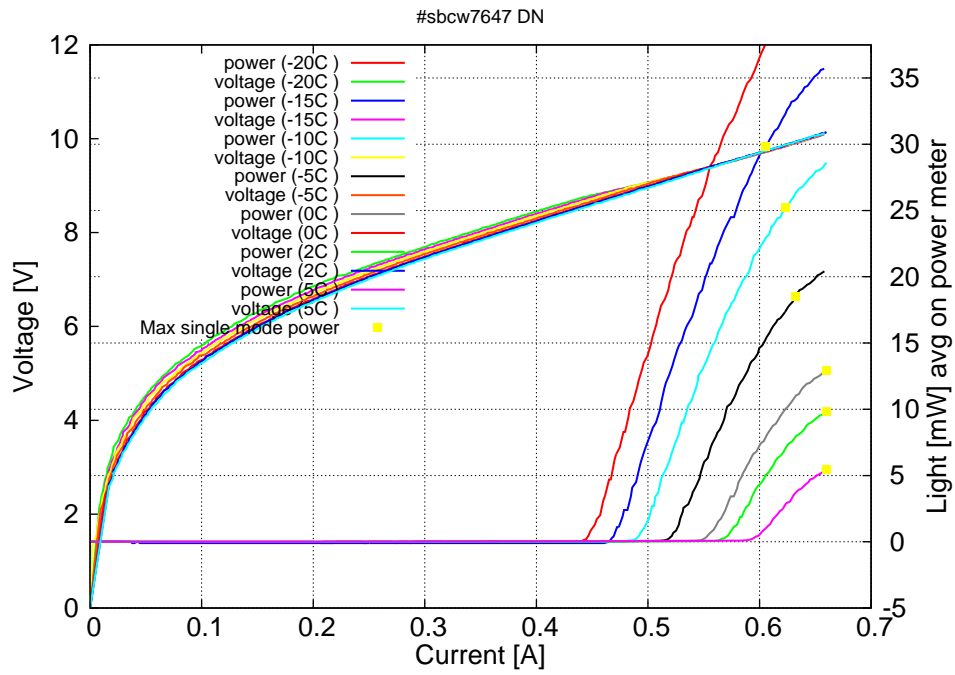


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.45A$  /  $V_{th}=8.8V$  (2-wires measurements). Maximum operation current: 0.61A between -20C and -15C, 0.625A at -10C, 0.635A at -5C, 0.66A between 0C and 5C.

