

**Datasheet for #sbcw11274 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.

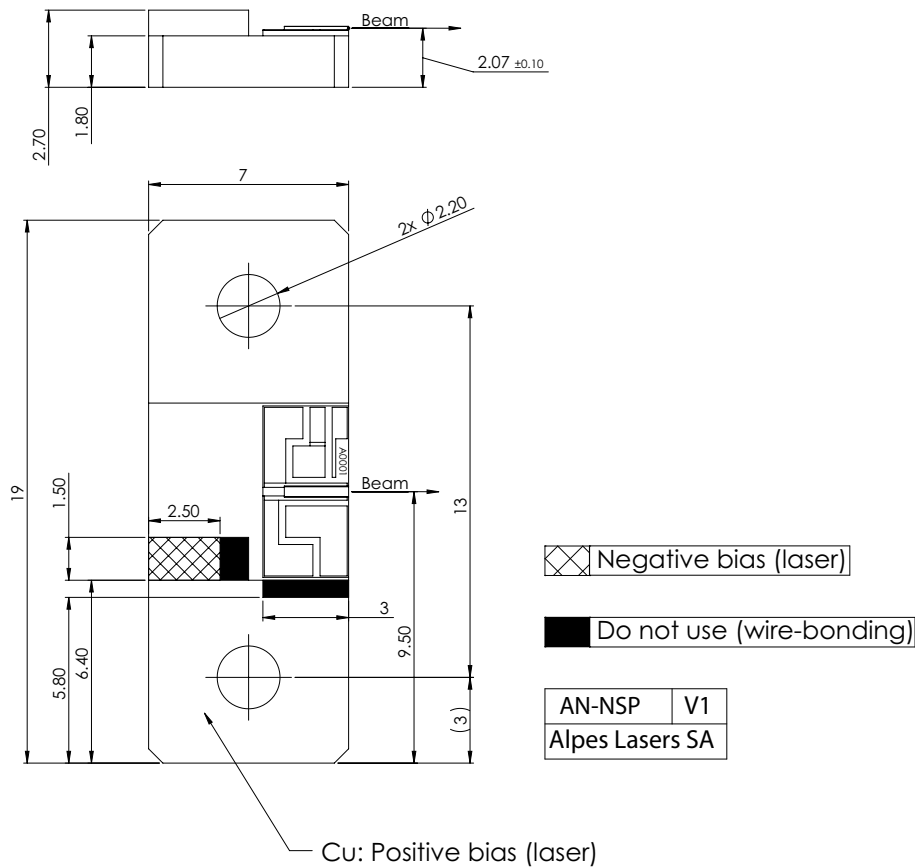


Figure 1: Support mounting for #sbcw11274 DN

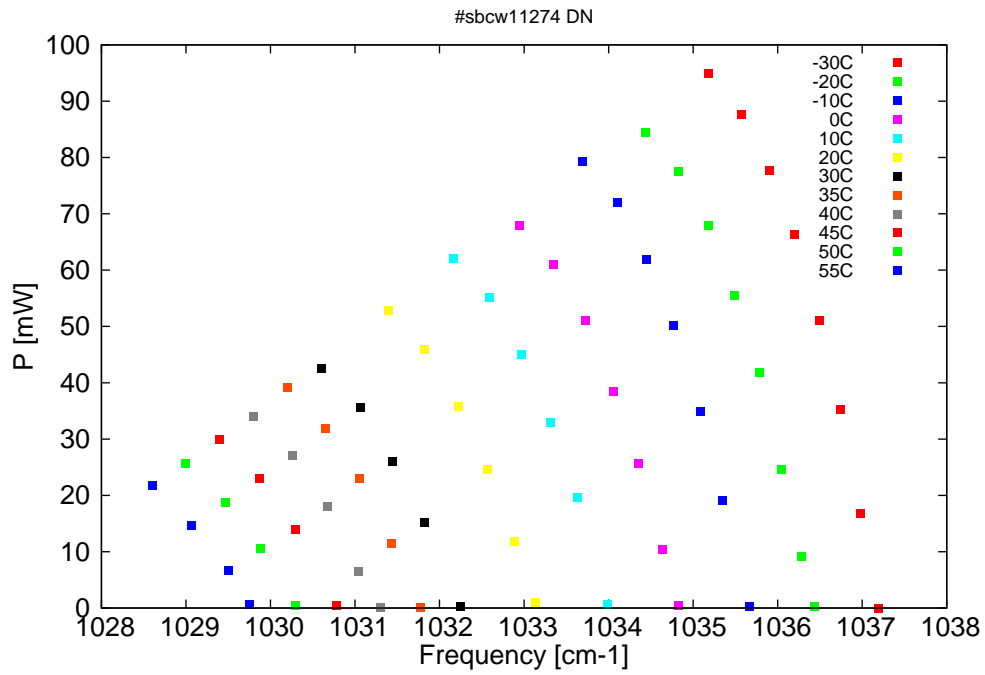


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

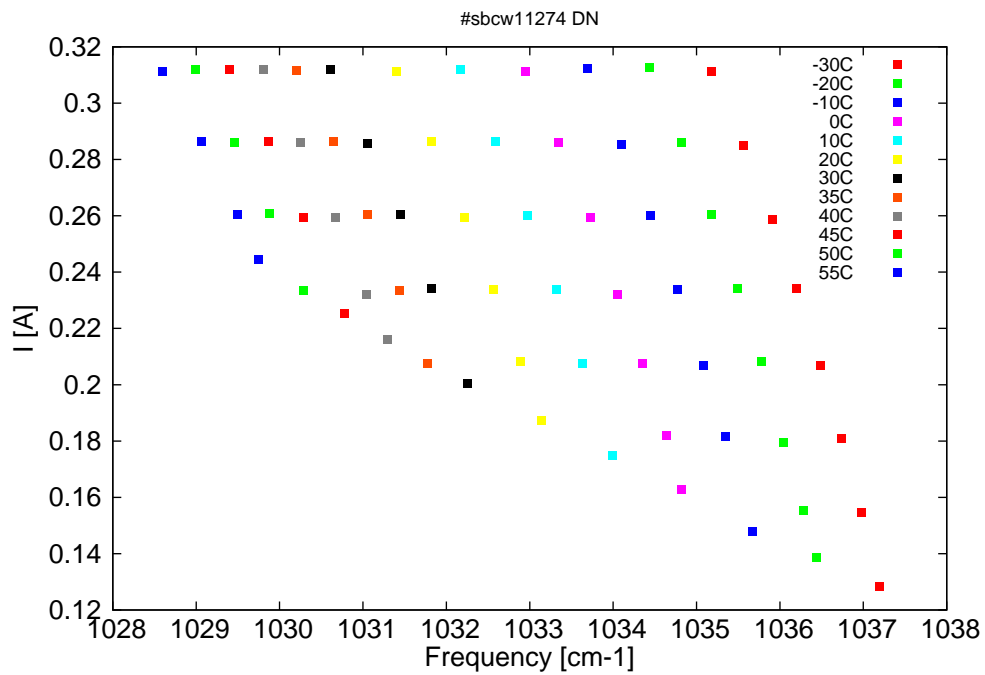


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9641.4	1037.2	0	-30	8.7	0.13
9643.4	1037	16.7	-30	9	0.15
9645.6	1036.7	35.3	-30	9.4	0.18
9647.9	1036.5	51.1	-30	9.7	0.21
9650.6	1036.2	66.3	-30	10	0.23
9653.4	1035.9	77.7	-30	10.3	0.26
9656.5	1035.6	87.6	-30	10.7	0.28
9660.1	1035.2	94.9	-30	11	0.31
9648.5	1036.4	0.3	-20	8.8	0.14
9649.9	1036.3	9.2	-20	9	0.16
9652.1	1036	24.6	-20	9.3	0.18
9654.5	1035.8	41.9	-20	9.6	0.21
9657.2	1035.5	55.6	-20	9.9	0.23
9660.2	1035.2	67.8	-20	10.3	0.26
9663.5	1034.8	77.6	-20	10.6	0.29
9667.1	1034.4	84.5	-20	11	0.31
9655.6	1035.7	0.2	-10	8.8	0.15
9658.6	1035.3	19.1	-10	9.2	0.18
9661.1	1035.1	34.9	-10	9.5	0.21
9663.9	1034.8	50.1	-10	9.9	0.23
9667	1034.5	62	-10	10.2	0.26
9670.2	1034.1	72.1	-10	10.5	0.29
9674.1	1033.7	79.3	-10	10.9	0.31
9663.5	1034.8	0.5	0	8.9	0.16
9665.2	1034.6	10.3	0	9.2	0.18
9667.8	1034.4	25.7	0	9.5	0.21
9670.7	1034.1	38.4	0	9.8	0.23
9673.8	1033.7	51.1	0	10.1	0.26
9677.3	1033.3	61	0	10.5	0.29
9681.1	1032.9	67.8	0	10.8	0.31
9671.3	1034	0.6	10	9	0.17
9674.7	1033.6	19.6	10	9.4	0.21
9677.6	1033.3	32.9	10	9.7	0.23
9680.8	1033	45.1	10	10.1	0.26
9684.4	1032.6	55.1	10	10.4	0.29
9688.3	1032.2	62.1	10	10.8	0.31
9679.3	1033.1	0.9	20	9.1	0.19
9681.6	1032.9	11.9	20	9.4	0.21
9684.6	1032.6	24.6	20	9.7	0.23
9687.8	1032.2	35.8	20	10	0.26
9691.6	1031.8	46	20	10.3	0.29
9695.6	1031.4	52.8	20	10.7	0.31
9687.6	1032.3	0.2	30	9.2	0.2
9691.6	1031.8	15.3	30	9.6	0.23
9695.1	1031.4	26	30	10	0.26
9698.8	1031.1	35.6	30	10.3	0.29
9703	1030.6	42.5	30	10.6	0.31
9692	1031.8	0.1	35	9.3	0.21
9695.2	1031.4	11.5	35	9.6	0.23

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9698.8	1031.1	23	35	9.9	0.26
9702.6	1030.7	32	35	10.3	0.29
9706.8	1030.2	39.1	35	10.6	0.31
9696.5	1031.3	0.2	40	9.4	0.22
9698.9	1031	6.6	40	9.6	0.23
9702.4	1030.7	18	40	9.9	0.26
9706.3	1030.3	27.1	40	10.2	0.29
9710.6	1029.8	34.1	40	10.6	0.31
9701.4	1030.8	0.4	45	9.5	0.23
9706	1030.3	14	45	9.9	0.26
9710	1029.9	23	45	10.2	0.29
9714.4	1029.4	29.9	45	10.6	0.31
9706	1030.3	0.4	50	9.5	0.23
9709.9	1029.9	10.6	50	9.9	0.26
9713.8	1029.5	18.7	50	10.2	0.29
9718.2	1029	25.7	50	10.5	0.31
9711.1	1029.7	0.6	55	9.6	0.24
9713.5	1029.5	6.6	55	9.8	0.26
9717.5	1029.1	14.7	55	10.2	0.29
9722	1028.6	21.7	55	10.5	0.31

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

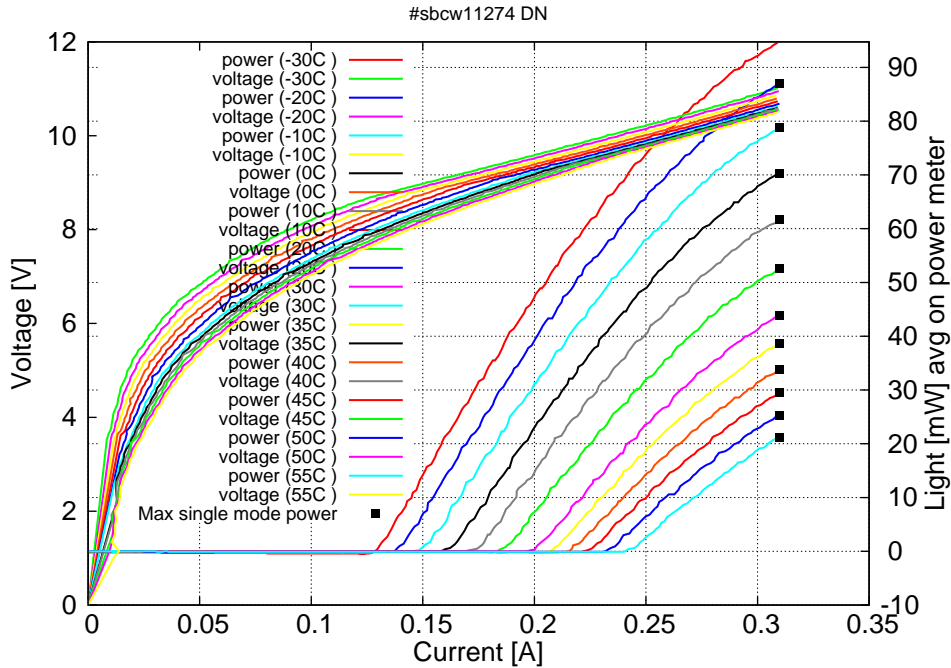


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -30C:  $I_{th}=0.13A$  /  $V_{th}=8.7V$  (2-wires measurements). Maximum operation current: 0.31A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

