

**Datasheet for #sbcw12078 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 bias and positive bias on the specific zones drawn below. To use with an ILX Lightwave LDX-3232 laser driver, or equivalent.

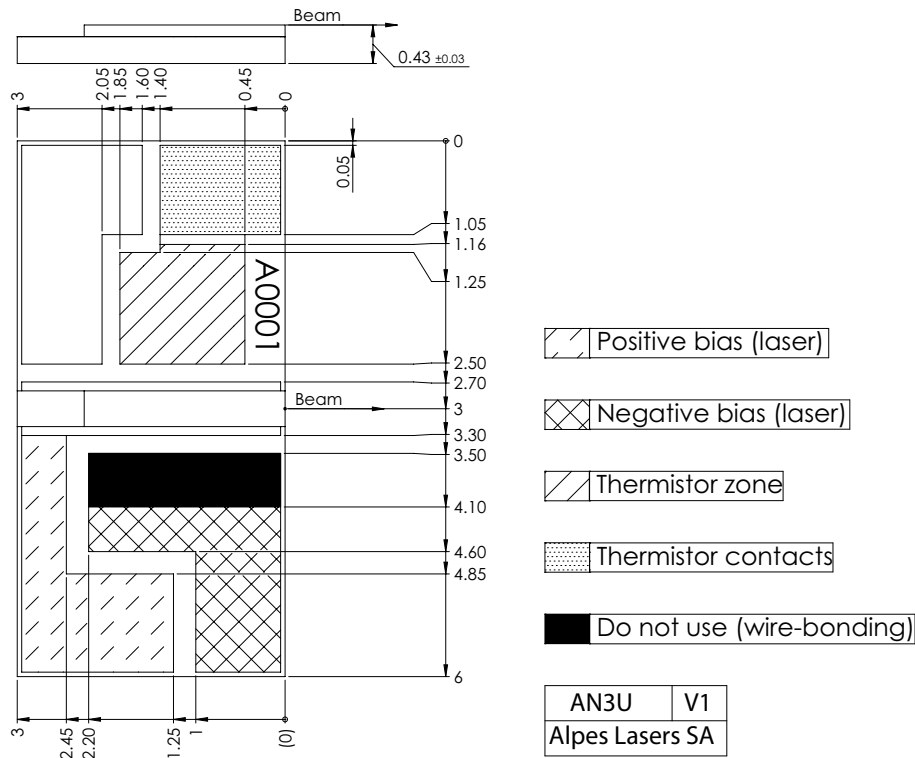


Figure 1: Support mounting for #sbcw12078 DN (please note that AlN submount numbering is A09VC)

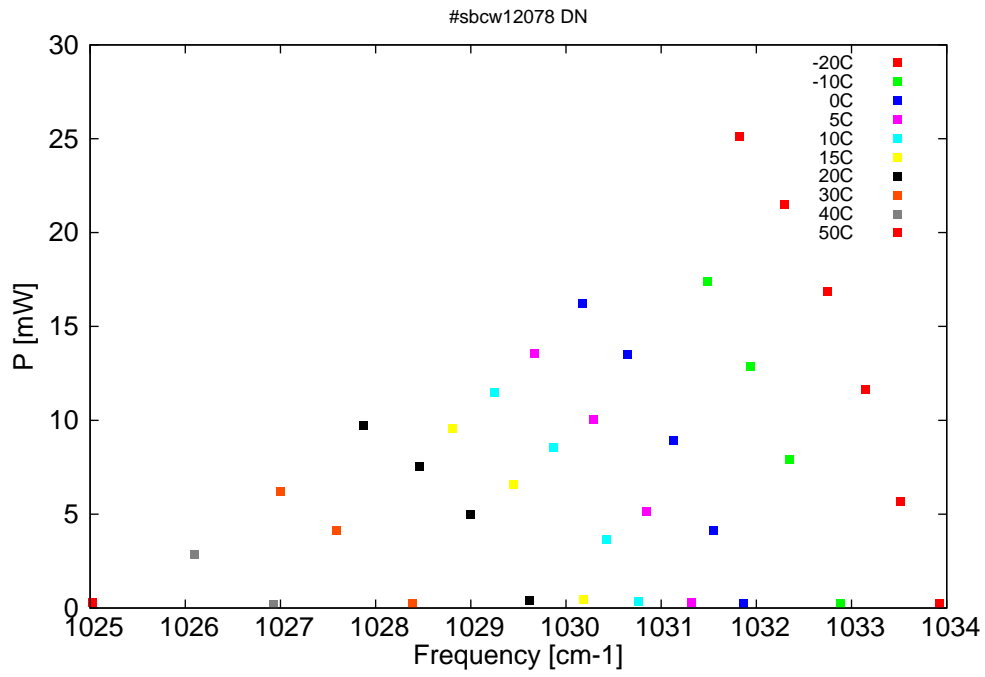


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

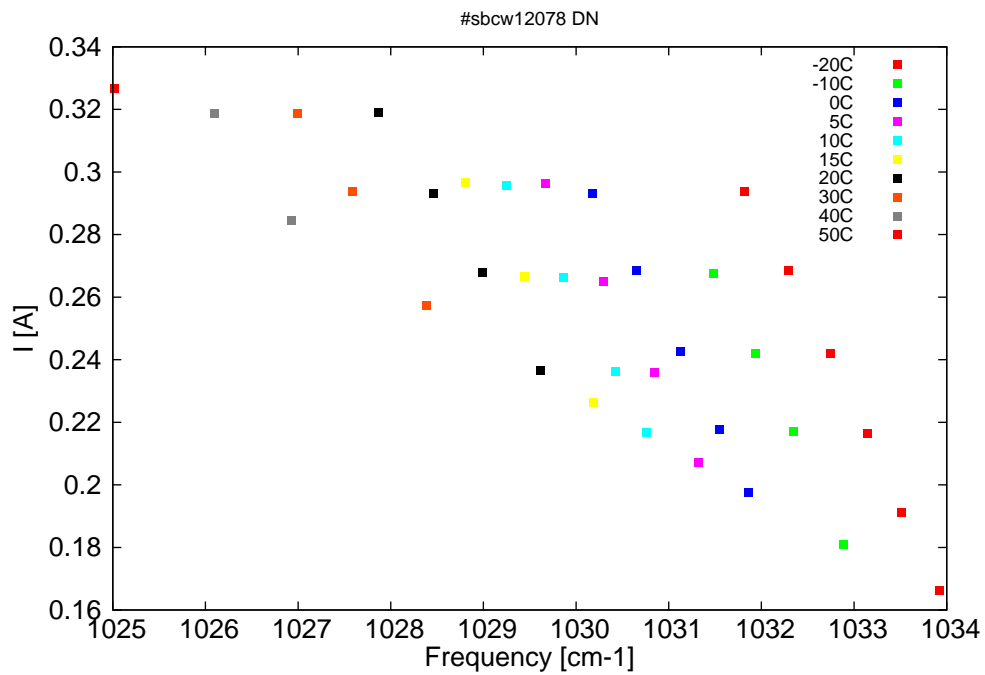


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9671.9	1033.9	0.2	-20	9.5	0.17
9675.7	1033.5	5.7	-20	9.8	0.19
9679.2	1033.1	11.6	-20	10.2	0.22
9682.9	1032.7	16.9	-20	10.5	0.24
9687.2	1032.3	21.5	-20	10.9	0.27
9691.6	1031.8	25.1	-20	11.2	0.29
9681.7	1032.9	0.3	-10	9.6	0.18
9686.7	1032.3	7.9	-10	10.1	0.22
9690.5	1031.9	12.9	-10	10.4	0.24
9694.7	1031.5	17.4	-10	10.8	0.27
9691.2	1031.9	0.3	0	9.7	0.2
9694.1	1031.6	4.1	0	10	0.22
9698.1	1031.1	8.9	0	10.3	0.24
9702.6	1030.6	13.5	0	10.7	0.27
9707.1	1030.2	16.2	0	11	0.29
9696.3	1031.3	0.3	5	9.8	0.21
9700.8	1030.8	5.1	5	10.2	0.24
9706	1030.3	10	5	10.6	0.26
9711.8	1029.7	13.6	5	11	0.3
9701.6	1030.8	0.3	10	9.9	0.22
9704.8	1030.4	3.7	10	10.1	0.24
9710	1029.9	8.6	10	10.6	0.27
9715.8	1029.3	11.5	10	11	0.3
9707	1030.2	0.5	15	10	0.23
9714	1029.4	6.6	15	10.5	0.27
9720	1028.8	9.6	15	10.9	0.3
9712.3	1029.6	0.4	20	10.1	0.24
9718.3	1029	5	20	10.5	0.27
9723.2	1028.5	7.6	20	10.8	0.29
9728.8	1027.9	9.7	20	11.2	0.32
9724	1028.4	0.2	30	10.3	0.26
9731.5	1027.6	4.1	30	10.8	0.29
9737.1	1027	6.2	30	11.1	0.32
9737.8	1026.9	0.2	40	10.6	0.28
9745.7	1026.1	2.9	40	11	0.32
9755.9	1025	0.3	50	11.1	0.33

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

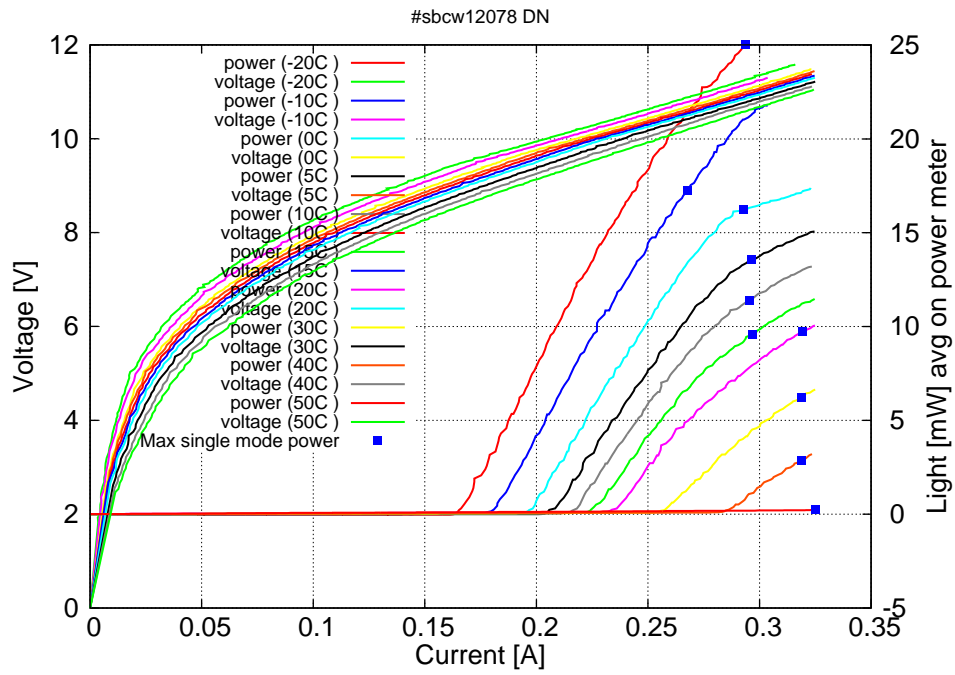


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.165A$  /  $V_{th}=9.5V$  (2-wires measurements). Maximum operation current: 0.29A between -20C and 0C, 0.3A between 5C and 15C, 0.325 between 20C and 50C

Figure 3: spectra at different temperatures for various DC currents

