

Datasheet for #sbcw9640 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.

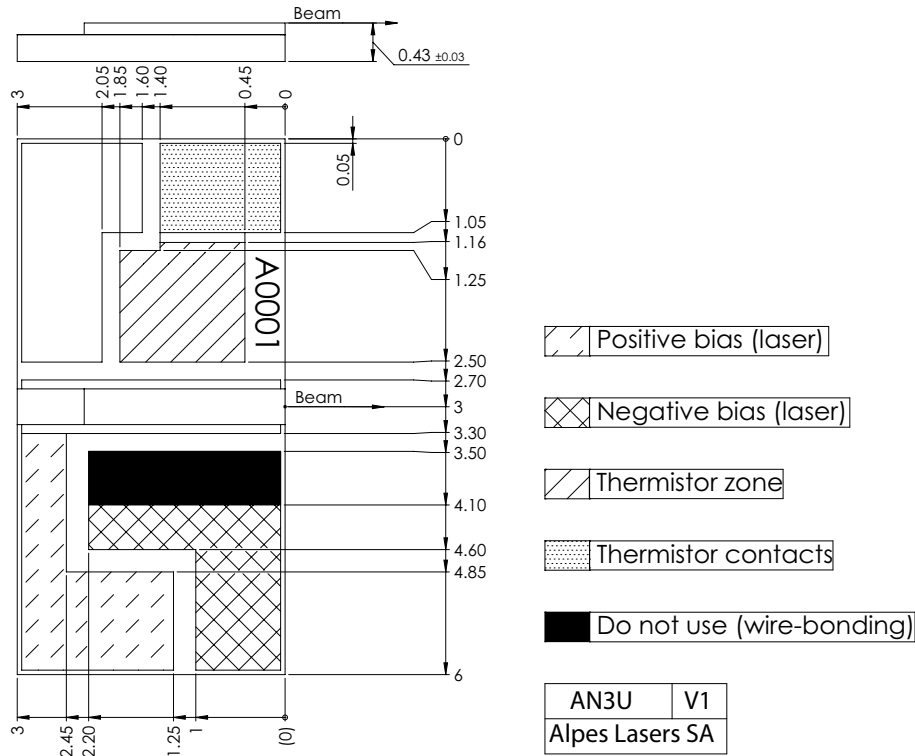


Figure 1: Support mounting for #sbcw9640 DN (please note that AlN submount numbering is A03MX)

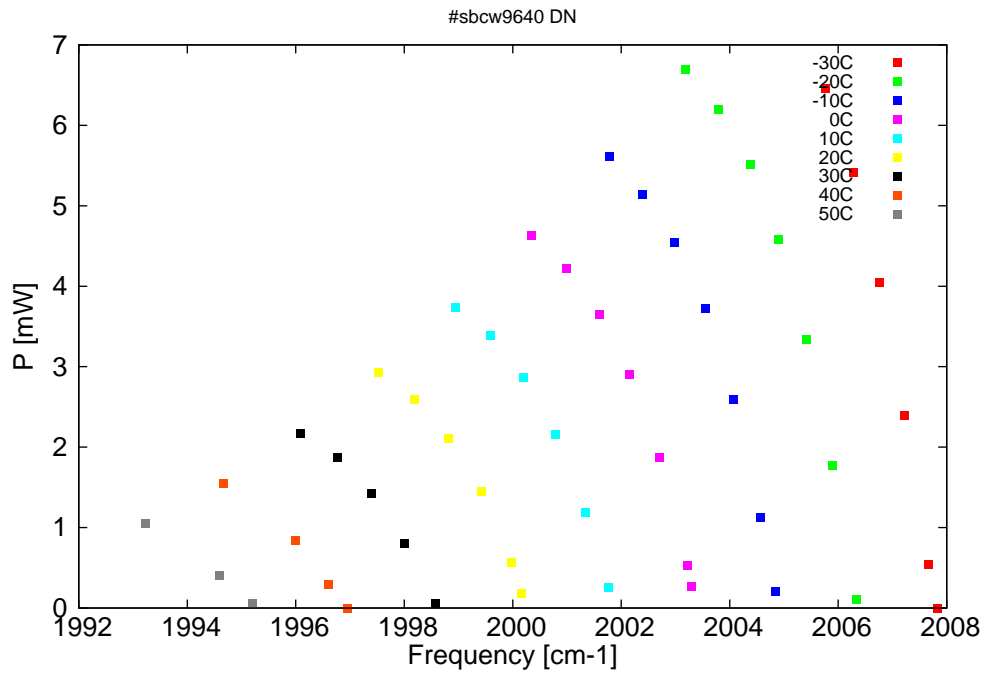


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

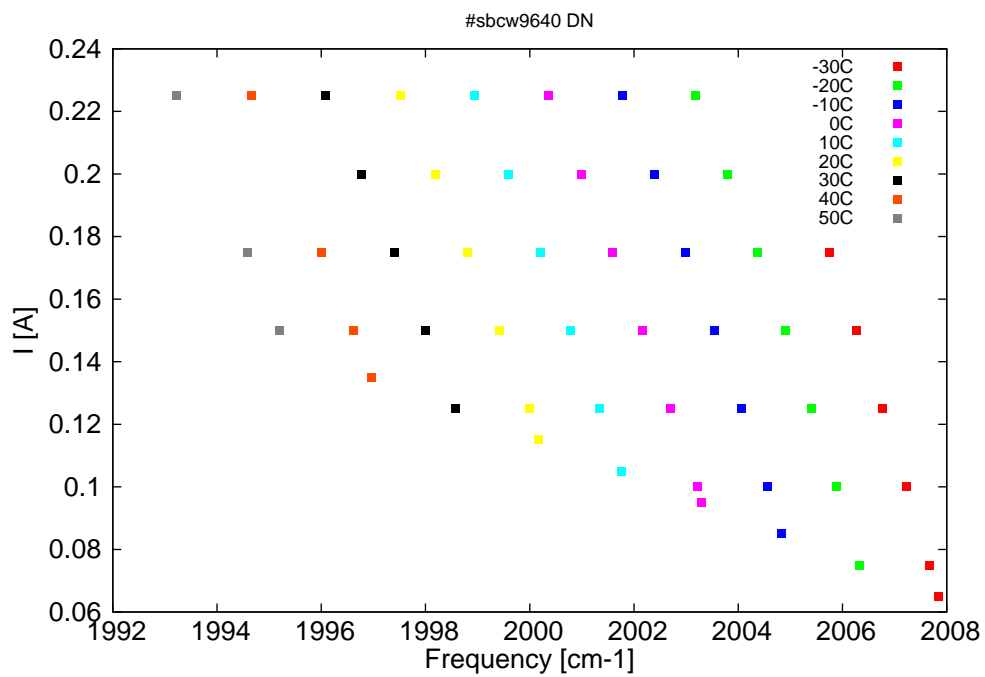


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4980.5	2007.8	0	-30	10.2	0.07
4980.9	2007.7	0.5	-30	10.4	0.08
4982	2007.2	2.4	-30	10.8	0.1
4983.2	2006.8	4	-30	11.2	0.13
4984.4	2006.3	5.4	-30	11.6	0.15
4985.6	2005.8	6.5	-30	12	0.18
4984.2	2006.3	0.1	-20	10.2	0.08
4985.3	2005.9	1.8	-20	10.7	0.1
4986.5	2005.4	3.3	-20	11.1	0.13
4987.8	2004.9	4.6	-20	11.5	0.15
4989.1	2004.4	5.5	-20	11.8	0.18
4990.5	2003.8	6.2	-20	12.2	0.2
4992.1	2003.2	6.7	-20	12.5	0.23
4987.9	2004.8	0.2	-10	10.3	0.09
4988.6	2004.6	1.1	-10	10.6	0.1
4989.8	2004.1	2.6	-10	11	0.13
4991.1	2003.6	3.7	-10	11.4	0.15
4992.6	2003	4.5	-10	11.7	0.18
4994	2002.4	5.1	-10	12.1	0.2
4995.5	2001.8	5.6	-10	12.4	0.23
4991.8	2003.3	0.3	0	10.4	0.1
4992	2003.2	0.5	0	10.5	0.1
4993.3	2002.7	1.9	0	10.9	0.13
4994.6	2002.2	2.9	0	11.2	0.15
4996	2001.6	3.6	0	11.6	0.18
4997.5	2001	4.2	0	11.9	0.2
4999.1	2000.4	4.6	0	12.3	0.23
4995.6	2001.8	0.3	10	10.4	0.11
4996.7	2001.3	1.2	10	10.8	0.13
4998	2000.8	2.2	10	11.1	0.15
4999.5	2000.2	2.9	10	11.5	0.18
5001	1999.6	3.4	10	11.8	0.2
5002.7	1998.9	3.7	10	12.2	0.23
4999.6	2000.2	0.2	20	10.5	0.12
5000	2000	0.6	20	10.6	0.13
5001.4	1999.4	1.4	20	11	0.15
5003	1998.8	2.1	20	11.4	0.18
5004.5	1998.2	2.6	20	11.7	0.2
5006.2	1997.5	2.9	20	12	0.23
5003.6	1998.6	0.1	30	10.5	0.13
5005	1998	0.8	30	10.9	0.15
5006.5	1997.4	1.4	30	11.2	0.18
5008.1	1996.8	1.9	30	11.6	0.2
5009.8	1996.1	2.2	30	11.9	0.23
5007.6	1997	0	40	10.6	0.14
5008.5	1996.6	0.3	40	10.8	0.15
5010	1996	0.8	40	11.1	0.18
5013.4	1994.7	1.5	40	11.8	0.23
5012	1995.2	0.1	50	10.7	0.15

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λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
5013.6	1994.6	0.4	50	11	0.18
5017	1993.2	1.1	50	11.6	0.23

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

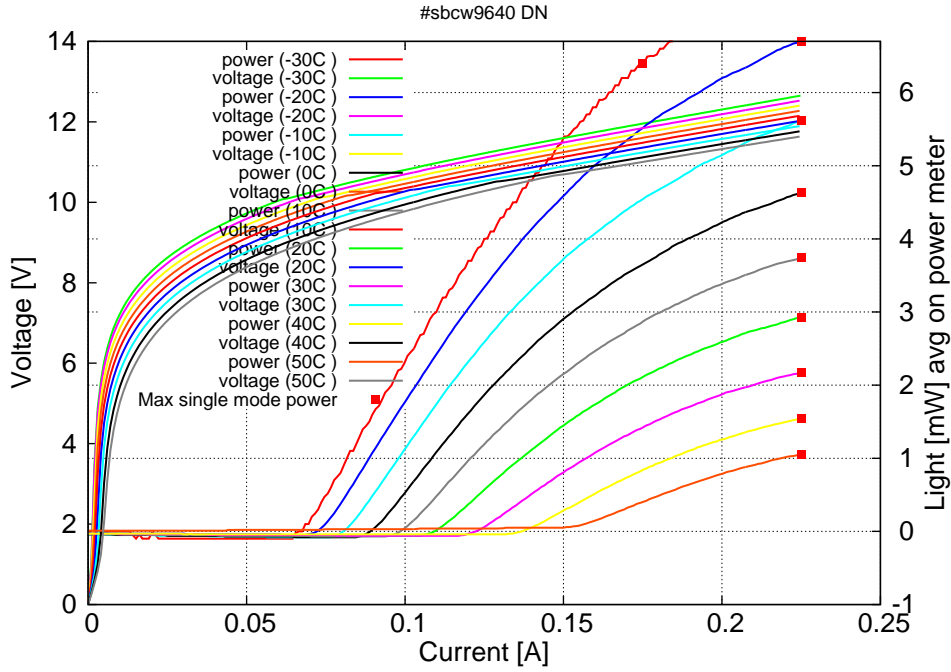


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -30C: $I_{th}=0.06\text{A}$ / $V_{th}=10.0\text{V}$ (2-wires measurements). Maximum operation current: 0.175A at -30C, 0.225A between -20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

