

**Datasheet for #sbcw25114 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 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.

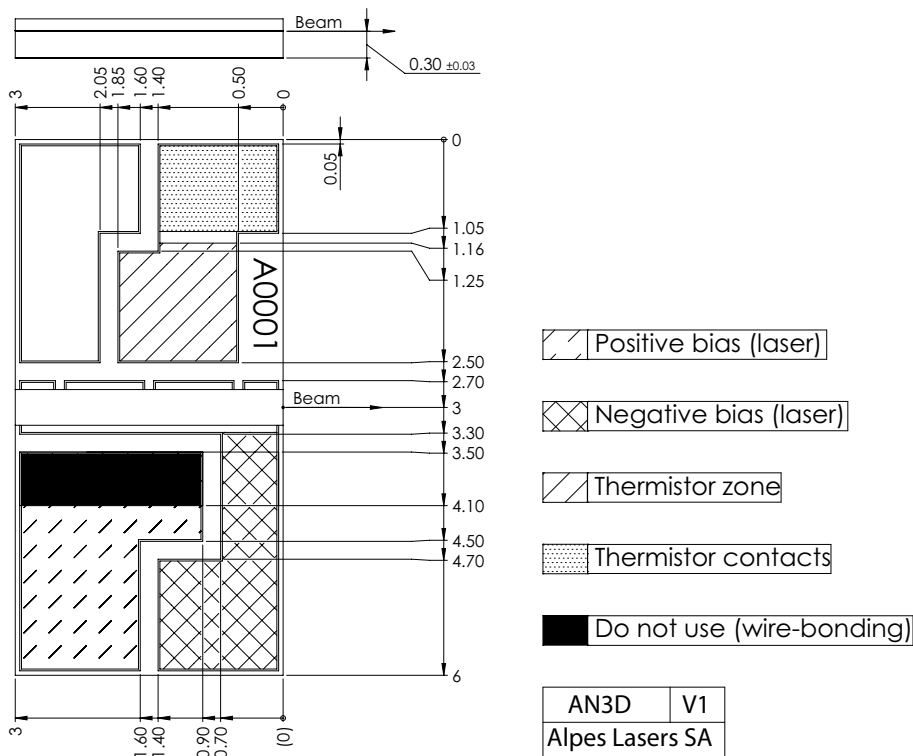


Figure 1: Mechanical and electrical interface for #sbcw25114 DN (please note that AlN submount numbering is P4101)

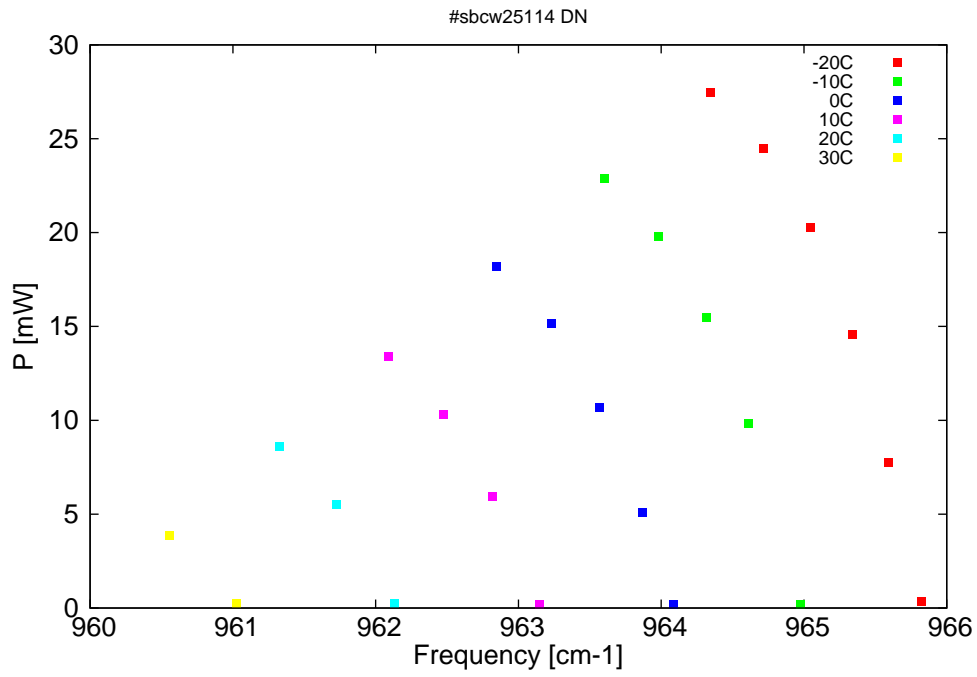


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

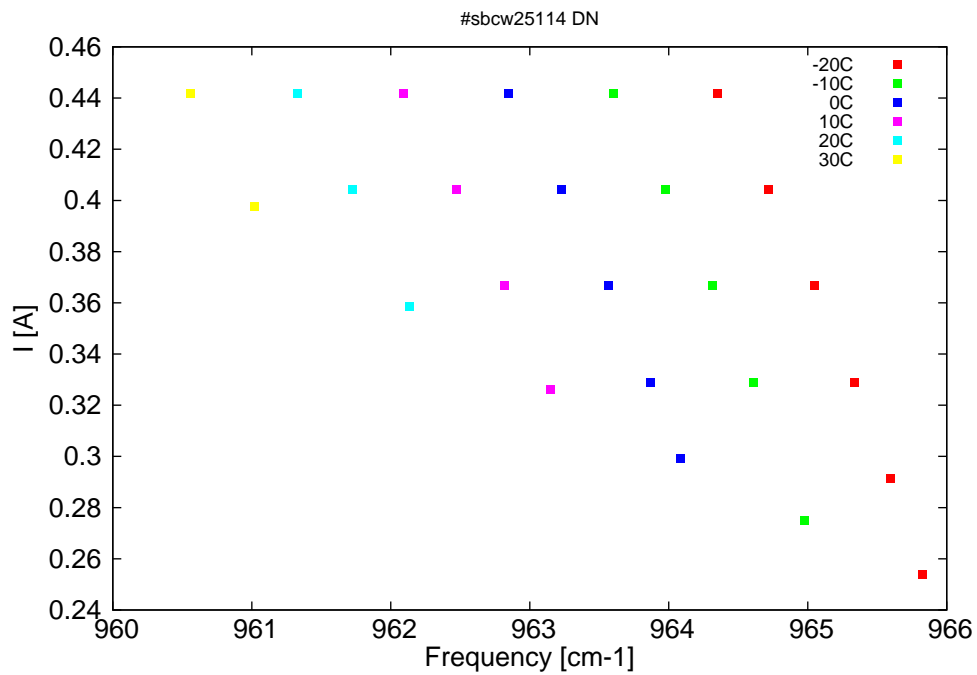


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10353.9	965.8	0.3	-20	8.57	0.254
10356.3	965.6	7.7	-20	8.91	0.291
10359.1	965.3	14.6	-20	9.27	0.329
10362.2	965	20.3	-20	9.67	0.367
10365.7	964.7	24.5	-20	10.11	0.404
10369.7	964.3	27.5	-20	10.57	0.442
10363	965	0.2	-10	8.71	0.275
10366.9	964.6	9.8	-10	9.21	0.329
10370.1	964.3	15.5	-10	9.61	0.367
10373.7	964	19.8	-10	10.04	0.404
10377.7	963.6	22.9	-10	10.5	0.442
10372.5	964.1	0.2	0	8.88	0.299
10374.8	963.9	5.1	0	9.17	0.329
10378.1	963.6	10.7	0	9.56	0.367
10381.8	963.2	15.2	0	9.98	0.404
10385.9	962.8	18.2	0	10.43	0.442
10382.6	963.1	0.2	10	9.1	0.326
10386.1	962.8	6	10	9.51	0.367
10389.9	962.5	10.3	10	9.93	0.404
10394	962.1	13.4	10	10.37	0.442
10393.6	962.1	0.3	20	9.38	0.359
10398	961.7	5.5	20	9.87	0.404
10402.3	961.3	8.6	20	10.31	0.442
10405.6	961	0.2	30	9.75	0.398
10410.6	960.6	3.9	30	10.25	0.442

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

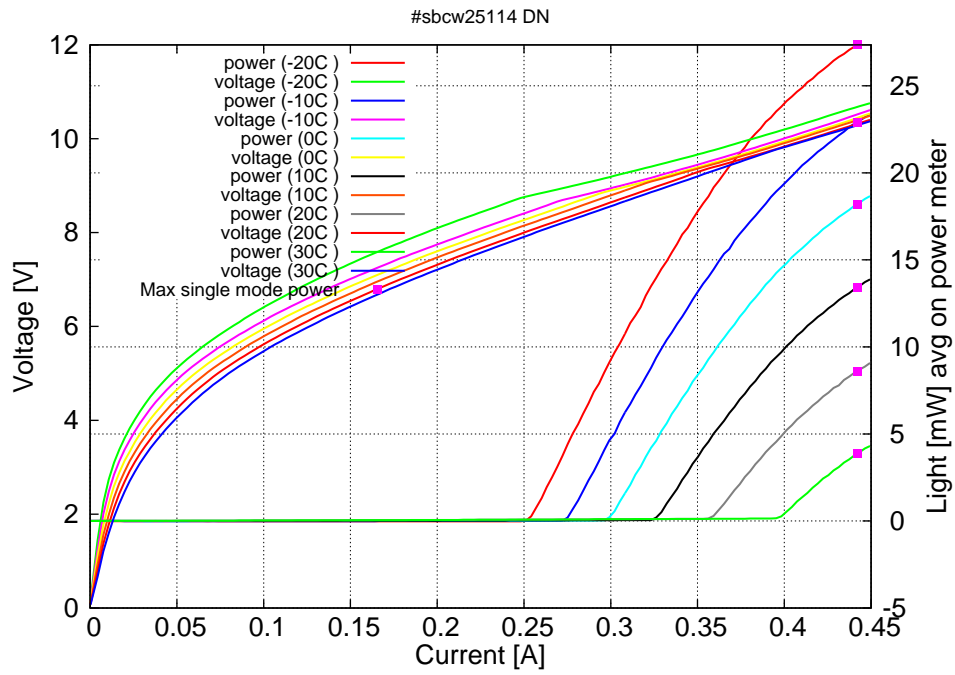


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.25A$  /  $V_{th}=8.5V$  (2-wires measurements). Maximum operation current: 0.450A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

