

**Datasheet for #sbcw24933 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.

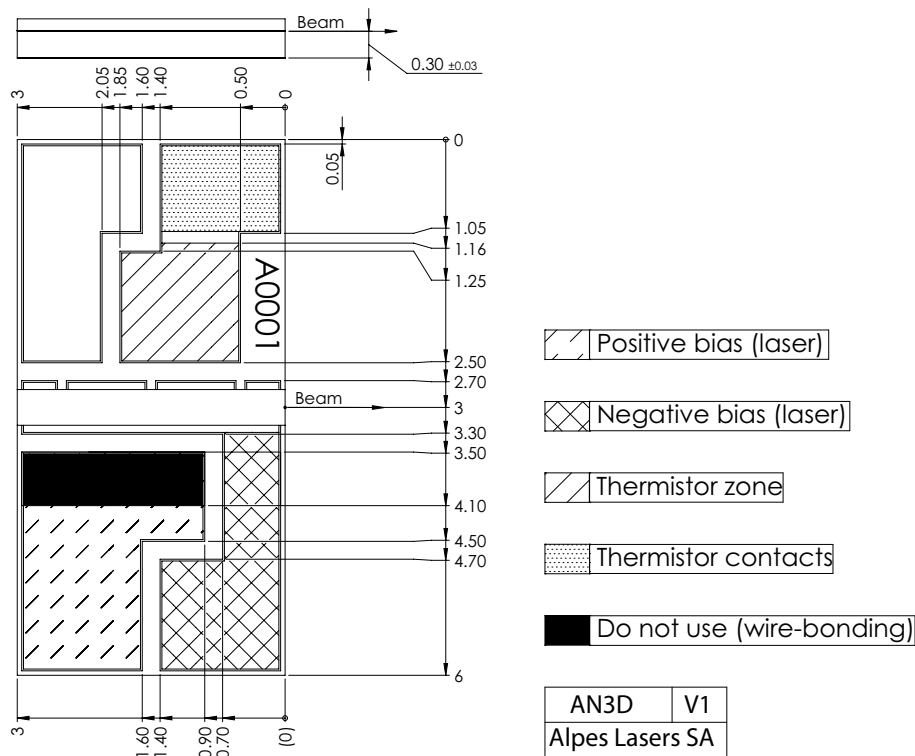


Figure 1: Mechanical and electrical interface for #sbcw24933 DN (please note that AlN submount numbering is P2840)

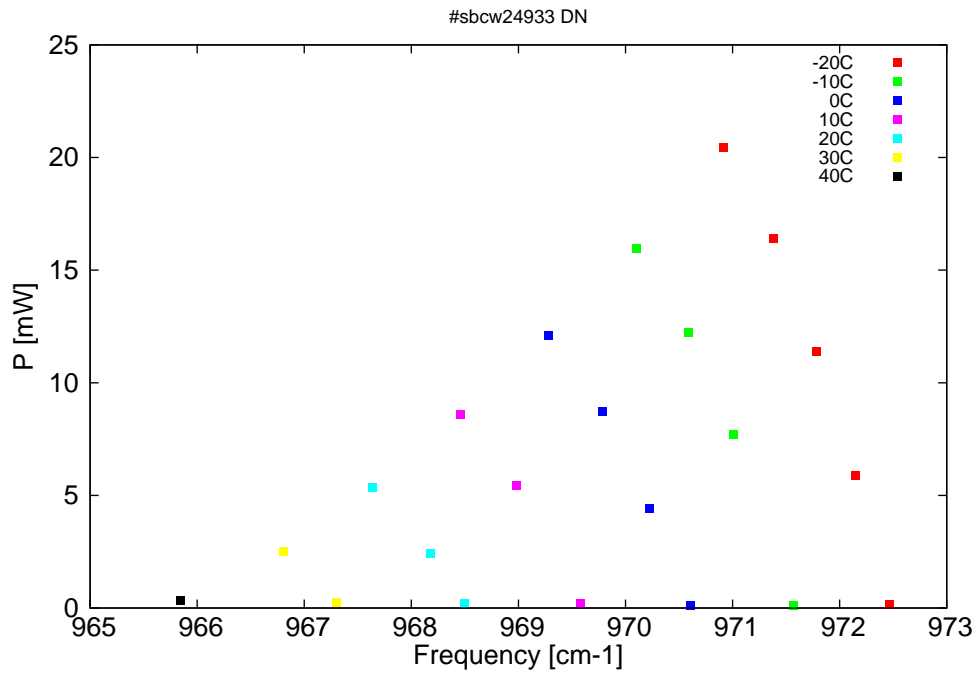


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

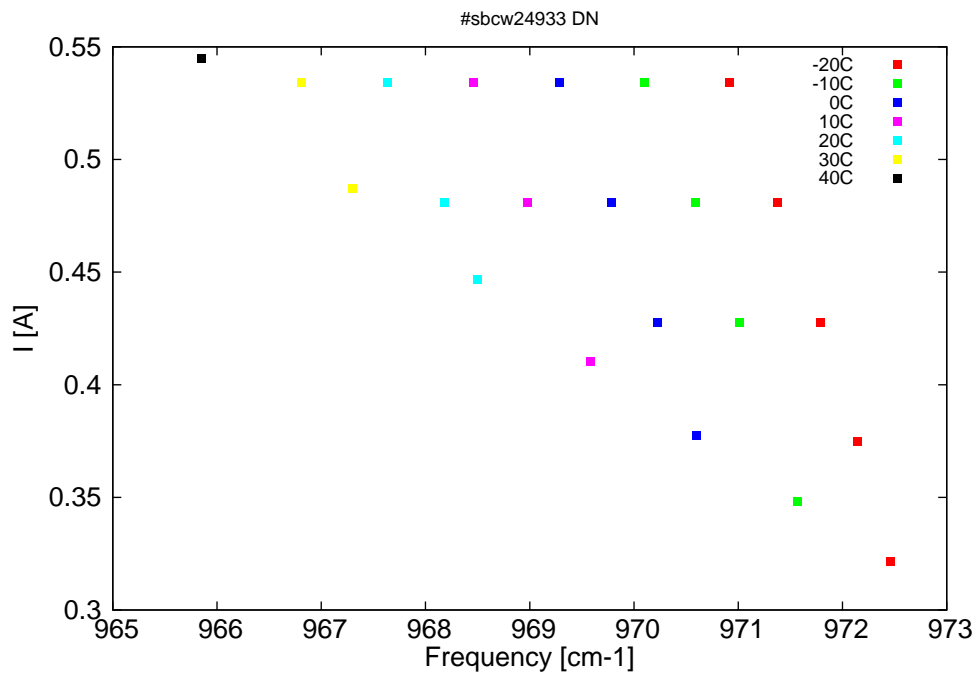


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10283.2	972.5	0.1	-20	8.48	0.321
10286.5	972.1	5.9	-20	8.82	0.375
10290.3	971.8	11.4	-20	9.17	0.428
10294.6	971.4	16.4	-20	9.55	0.481
10299.6	970.9	20.4	-20	9.97	0.534
10292.7	971.6	0.1	-10	8.61	0.348
10298.5	971	7.7	-10	9.15	0.428
10303	970.6	12.2	-10	9.54	0.481
10308.2	970.1	16	-10	9.97	0.534
10302.9	970.6	0.1	0	8.79	0.378
10306.9	970.2	4.4	0	9.14	0.428
10311.6	969.8	8.7	0	9.54	0.481
10316.9	969.3	12.1	0	9.98	0.534
10313.7	969.6	0.2	10	9.01	0.41
10320.1	969	5.4	10	9.55	0.481
10325.6	968.5	8.6	10	9.99	0.534
10325.3	968.5	0.2	20	9.28	0.447
10328.7	968.2	2.4	20	9.55	0.481
10334.4	967.6	5.3	20	10	0.534
10338	967.3	0.2	30	9.6	0.487
10343.3	966.8	2.5	30	10.01	0.534
10353.6	965.8	0.3	40	10.11	0.545

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

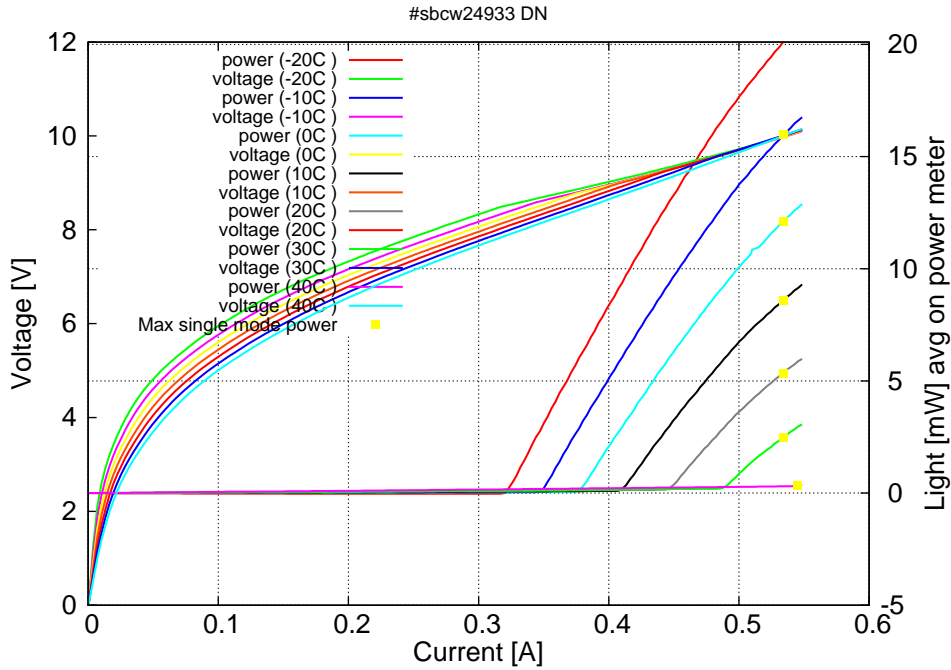


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.31A$  /  $V_{th}=8.4V$  (2-wires measurements). Maximum operation current: 0.550A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

