

**Datasheet for #sbcw24940 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.

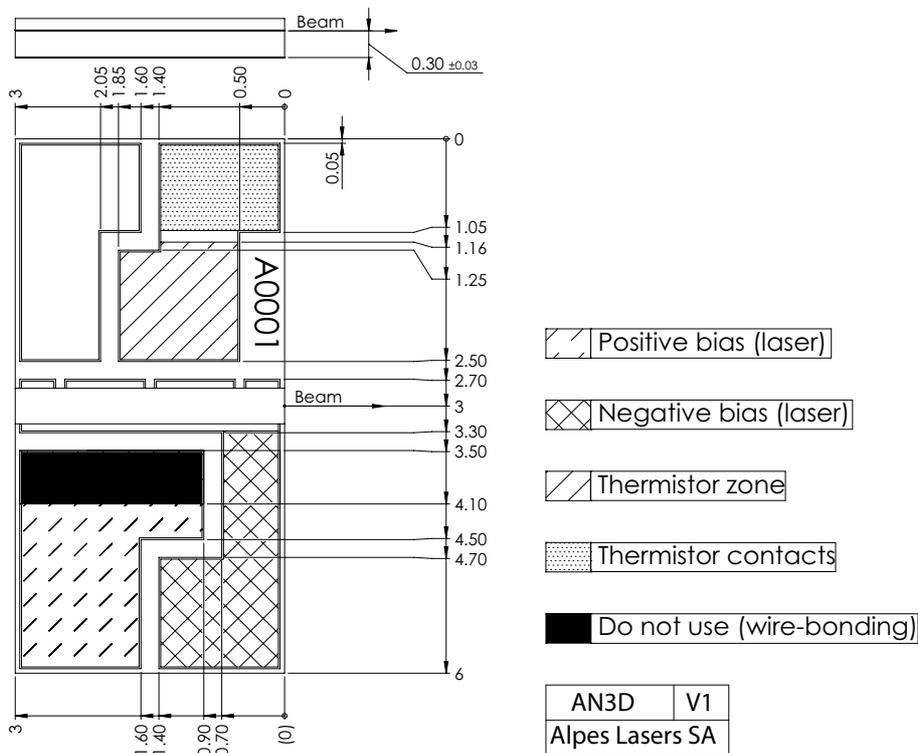


Figure 1: Mechanical and electrical interface for #sbcw24940 DN (please note that AlN submount numbering is P2775)

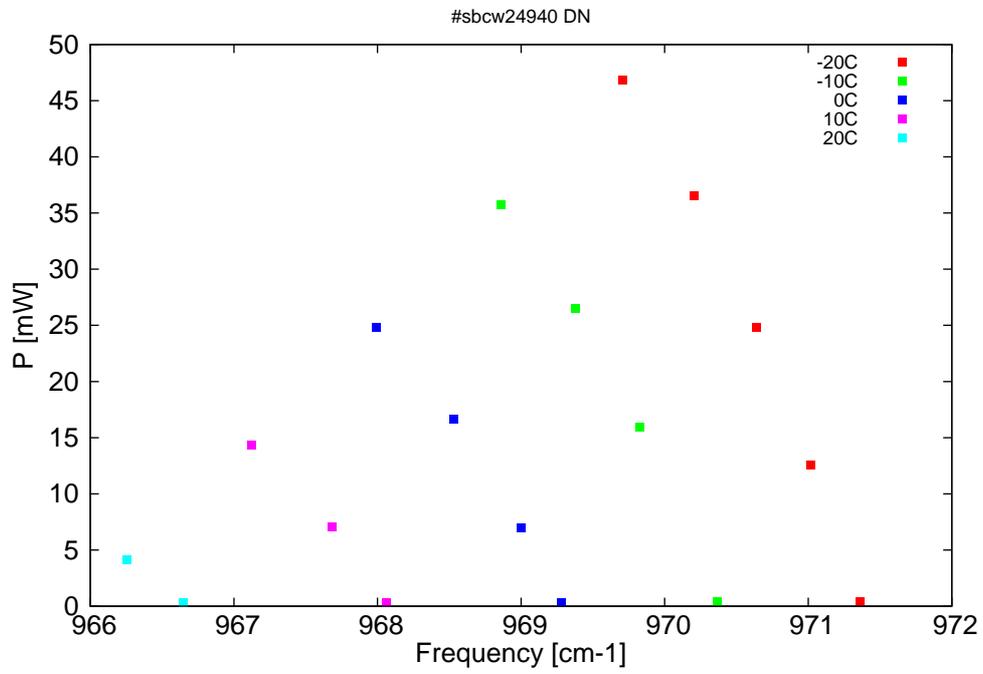


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

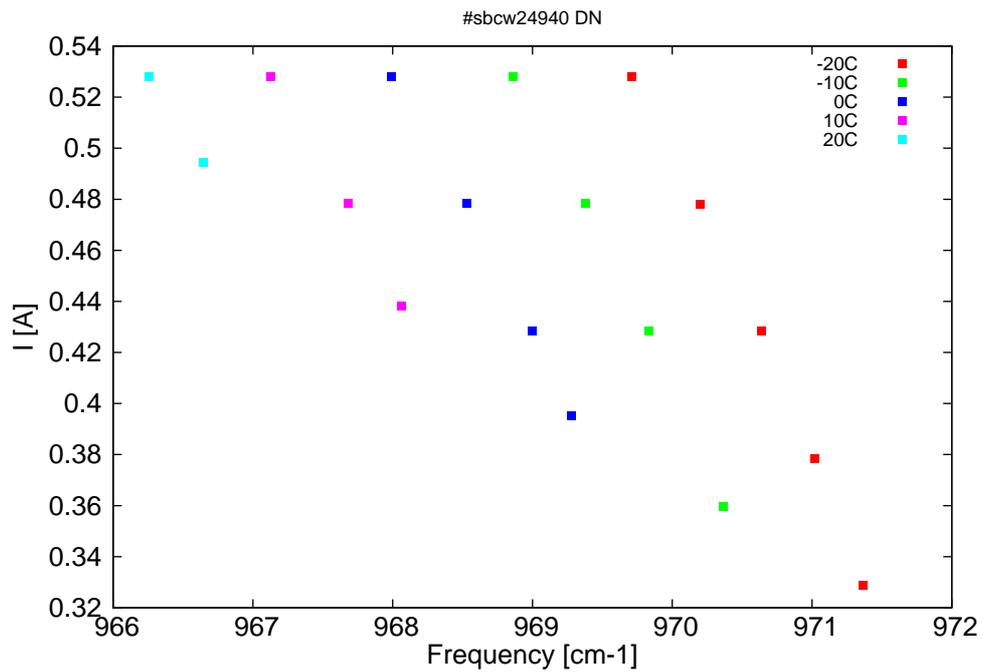


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10294.8	971.4	0.4	-20	8.45	0.329
10298.5	971	12.6	-20	8.77	0.379
10302.5	970.6	24.9	-20	9.1	0.428
10307.1	970.2	36.5	-20	9.47	0.478
10312.4	969.7	46.8	-20	9.88	0.528
10305.4	970.4	0.4	-10	8.62	0.36
10311.1	969.8	15.9	-10	9.09	0.428
10315.9	969.4	26.5	-10	9.47	0.478
10321.4	968.9	35.8	-10	9.88	0.528
10316.9	969.3	0.3	0	8.84	0.395
10319.9	969	7	0	9.07	0.428
10324.9	968.5	16.7	0	9.45	0.478
10330.6	968	24.8	0	9.87	0.528
10329.9	968.1	0.3	10	9.13	0.438
10334	967.7	7.1	10	9.45	0.478
10339.9	967.1	14.4	10	9.87	0.528
10345	966.6	0.3	20	9.58	0.495
10349.3	966.3	4.1	20	9.87	0.528

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

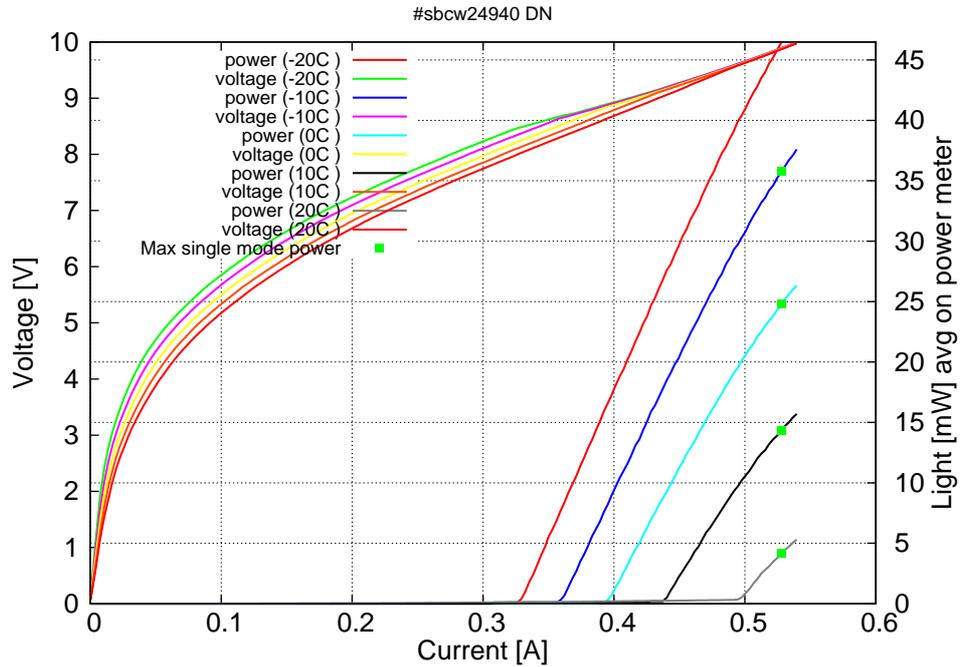


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.32A$  /  $V_{th}=8.4V$  (2-wires measurements). Maximum operation current: 0.540A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

