

**Datasheet for #sbcw24959 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.

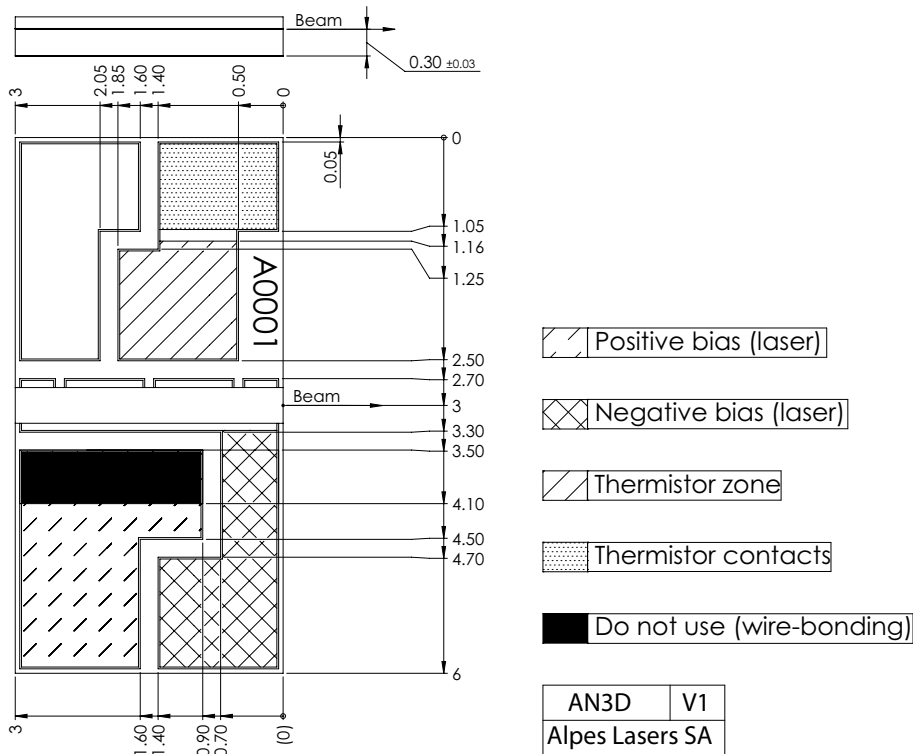


Figure 1: Mechanical and electrical interface for #sbcw24959 DN (please note that AlN submount numbering is P3757)

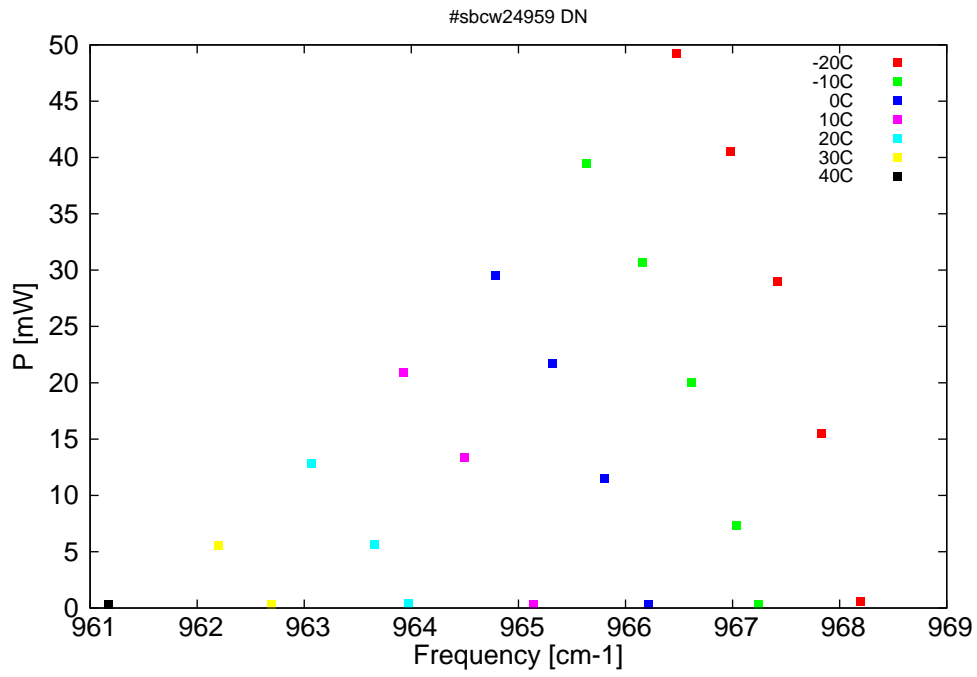


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

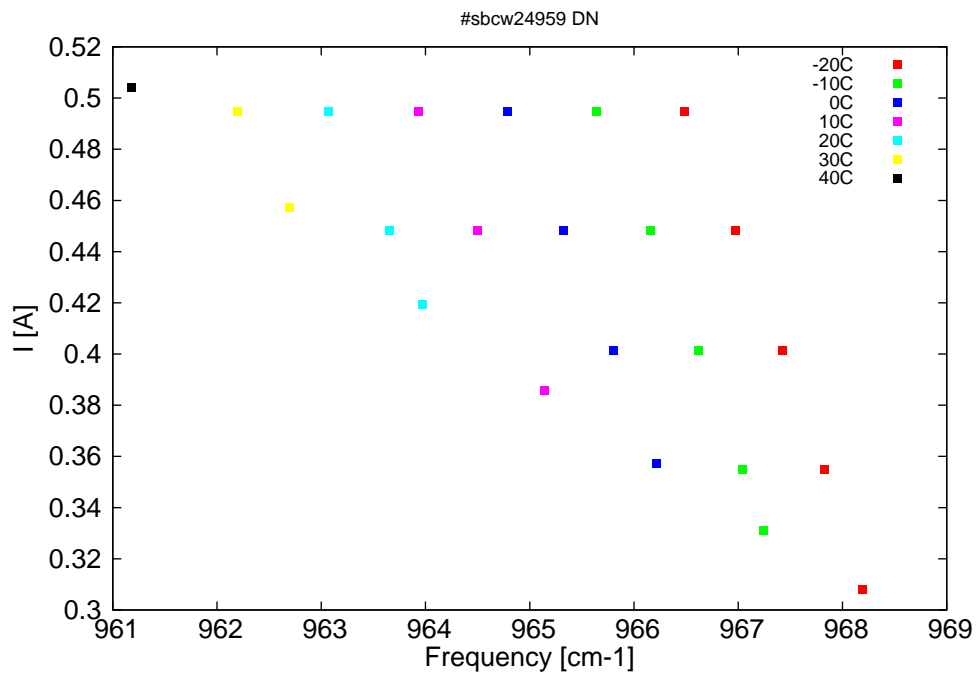


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10328.5	968.2	0.6	-20	8.32	0.308
10332.4	967.8	15.5	-20	8.61	0.355
10336.7	967.4	29	-20	8.92	0.402
10341.5	967	40.5	-20	9.25	0.448
10346.8	966.5	49.3	-20	9.61	0.495
10338.7	967.2	0.3	-10	8.45	0.331
10340.8	967	7.3	-10	8.61	0.355
10345.3	966.6	20	-10	8.93	0.402
10350.3	966.2	30.7	-10	9.28	0.448
10355.9	965.6	39.5	-10	9.65	0.495
10349.6	966.2	0.3	0	8.61	0.357
10354	965.8	11.5	0	8.92	0.402
10359.2	965.3	21.7	0	9.27	0.448
10365	964.8	29.6	0	9.64	0.495
10361.2	965.1	0.3	10	8.83	0.386
10368.1	964.5	13.4	10	9.3	0.448
10374.2	963.9	20.9	10	9.67	0.495
10373.8	964	0.4	20	9.04	0.42
10377.2	963.7	5.6	20	9.27	0.448
10383.5	963.1	12.8	20	9.65	0.495
10387.5	962.7	0.3	30	9.33	0.457
10392.9	962.2	5.6	30	9.64	0.495
10403.9	961.2	0.3	40	9.71	0.504

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

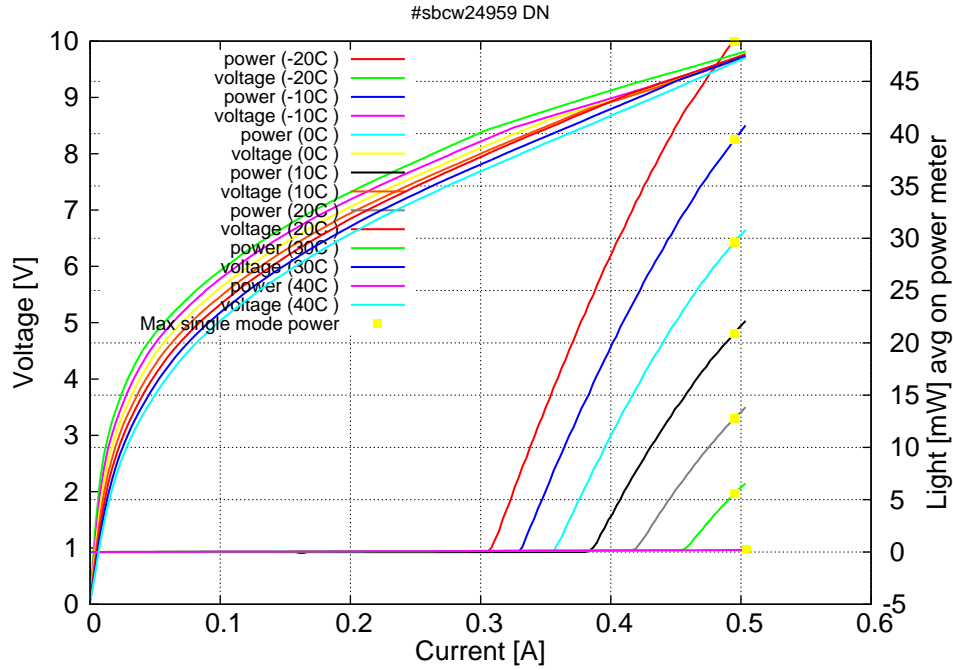


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.30A$  /  $V_{th}=8.3V$  (2-wires measurements). Maximum operation current: 0.505A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

