

**Datasheet for #sbcw24947 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 #sbcw24947 DN (please note that AlN submount numbering is A128D)

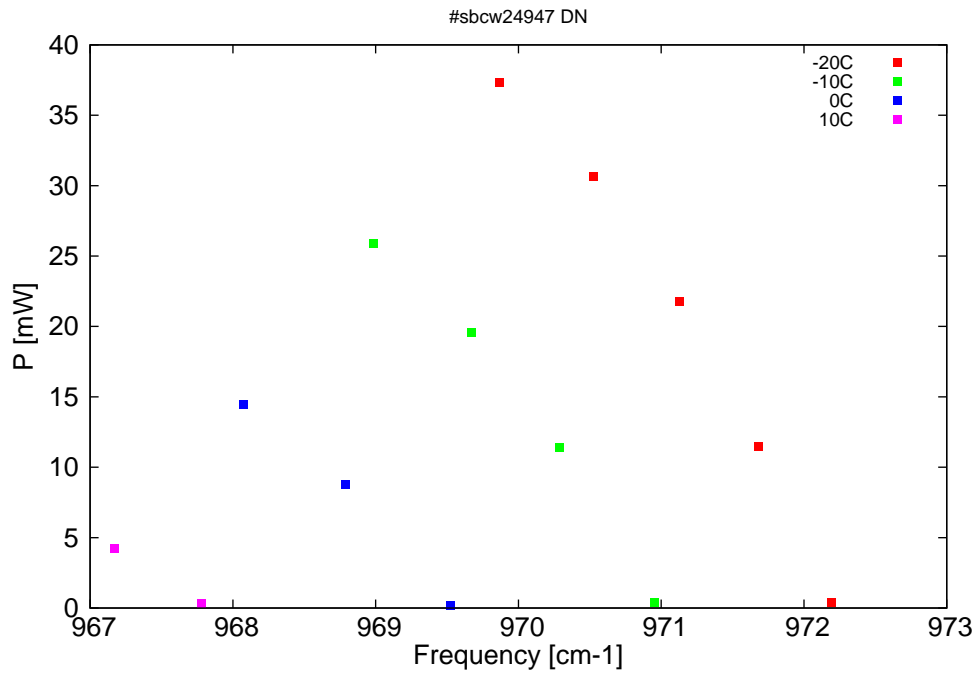


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

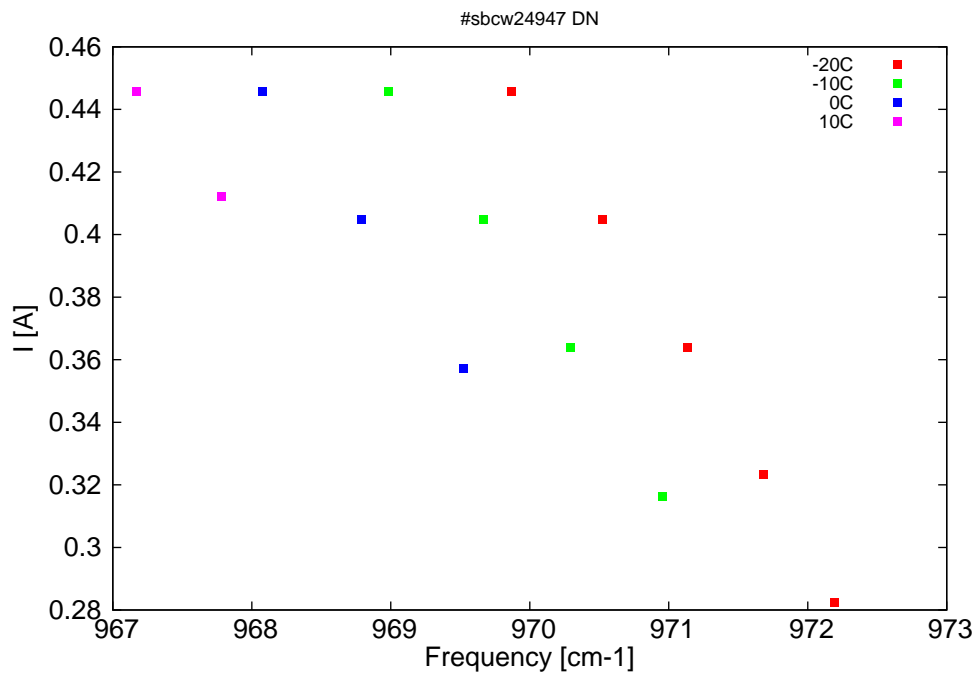


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10286	972.2	0.4	-20	9.48	0.282
10291.4	971.7	11.5	-20	9.84	0.323
10297.3	971.1	21.8	-20	10.19	0.364
10303.7	970.5	30.6	-20	10.53	0.405
10310.7	969.9	37.3	-20	10.86	0.446
10299.1	971	0.4	-10	9.67	0.316
10306.2	970.3	11.4	-10	10.08	0.364
10312.8	969.7	19.6	-10	10.41	0.405
10320.1	969	25.9	-10	10.75	0.446
10314.4	969.5	0.2	0	9.9	0.357
10322.2	968.8	8.8	0	10.3	0.405
10329.8	968.1	14.5	0	10.65	0.446
10332.9	967.8	0.3	10	10.26	0.412
10339.5	967.2	4.2	10	10.55	0.446

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

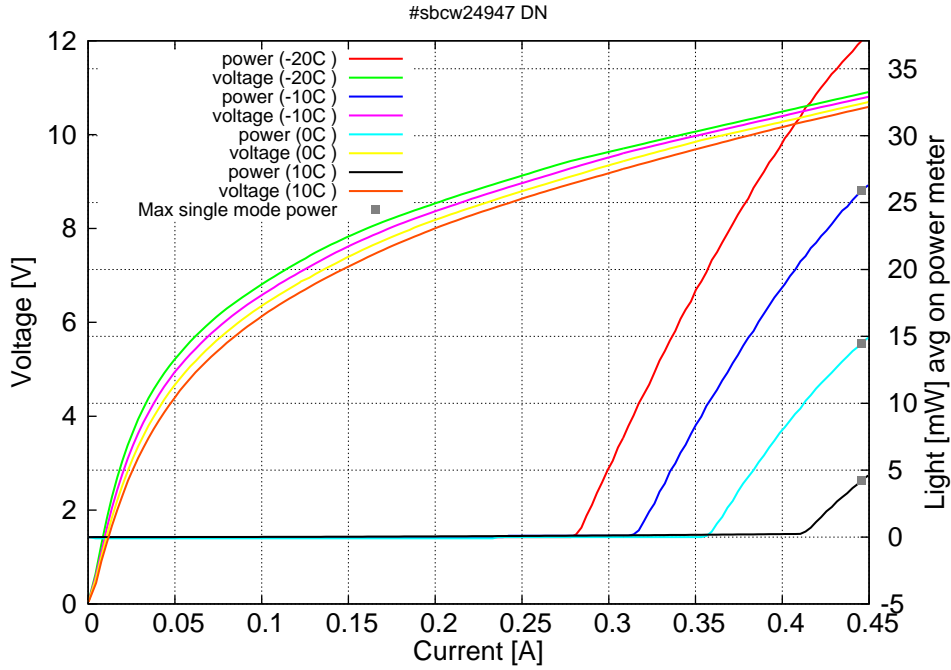


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.28A$  /  $V_{th}=9.4V$  (2-wires measurements). Maximum operation current: 0.450A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

