

**Datasheet for #sbcw22542 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 #sbcw22542 DN (please note that AlN submount numbering is A0U2K)

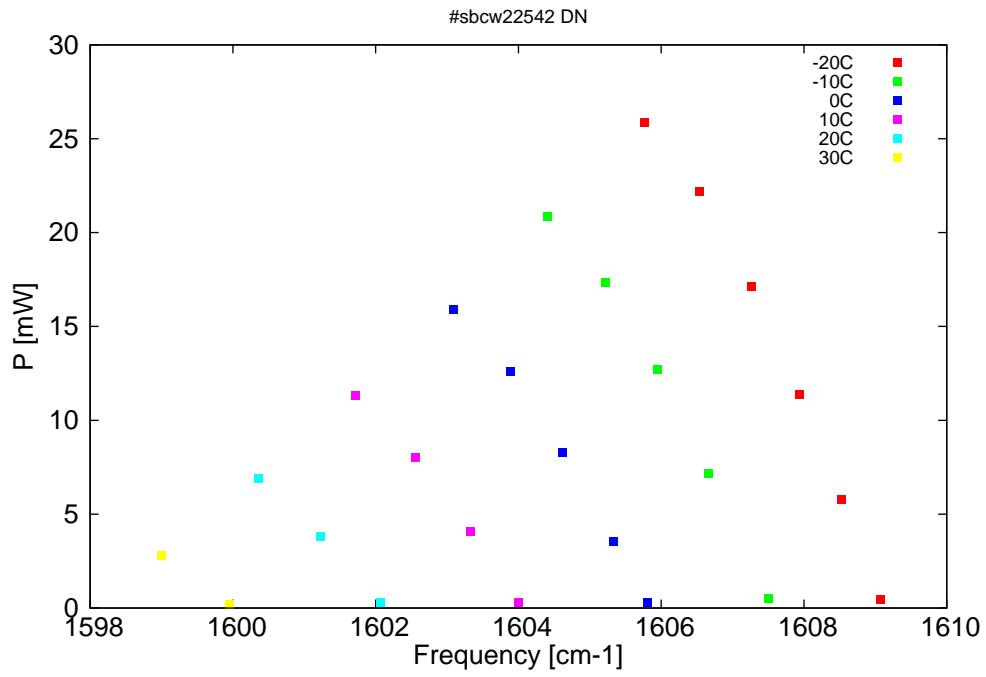


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

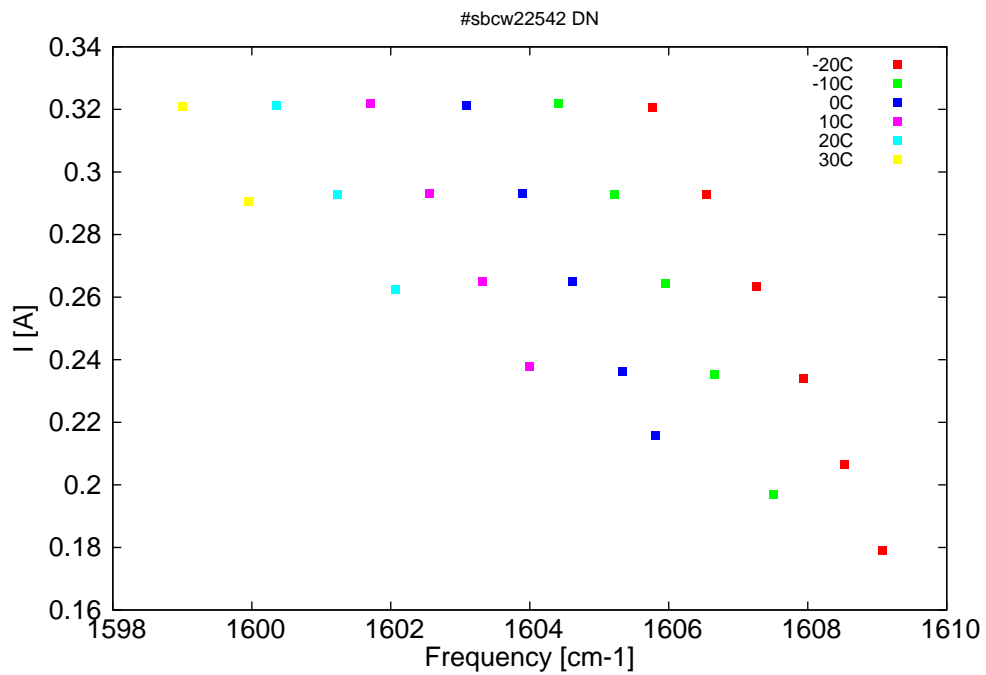


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6214.8	1609.1	0.5	-20	9.6	0.179
6216.9	1608.5	5.8	-20	9.87	0.207
6219.2	1607.9	11.4	-20	10.15	0.234
6221.8	1607.3	17.1	-20	10.45	0.263
6224.5	1606.5	22.2	-20	10.78	0.293
6227.6	1605.8	25.9	-20	11.12	0.321
6220.8	1607.5	0.5	-10	9.69	0.197
6224.1	1606.7	7.2	-10	10.08	0.235
6226.8	1606	12.7	-10	10.39	0.264
6229.7	1605.2	17.3	-10	10.7	0.293
6232.8	1604.4	20.9	-10	11.05	0.322
6227.4	1605.8	0.3	0	9.8	0.216
6229.2	1605.3	3.5	0	10.01	0.236
6232	1604.6	8.3	0	10.32	0.265
6234.8	1603.9	12.6	0	10.62	0.293
6238	1603.1	15.9	0	10.96	0.321
6234.4	1604	0.3	10	9.95	0.238
6237	1603.3	4.1	10	10.23	0.265
6240	1602.6	8	10	10.55	0.293
6243.3	1601.7	11.3	10	10.89	0.322
6241.9	1602.1	0.3	20	10.13	0.263
6245.2	1601.2	3.8	20	10.47	0.293
6248.6	1600.4	6.9	20	10.8	0.321
6250.2	1600	0.2	30	10.37	0.29
6253.9	1599	2.8	30	10.72	0.321

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

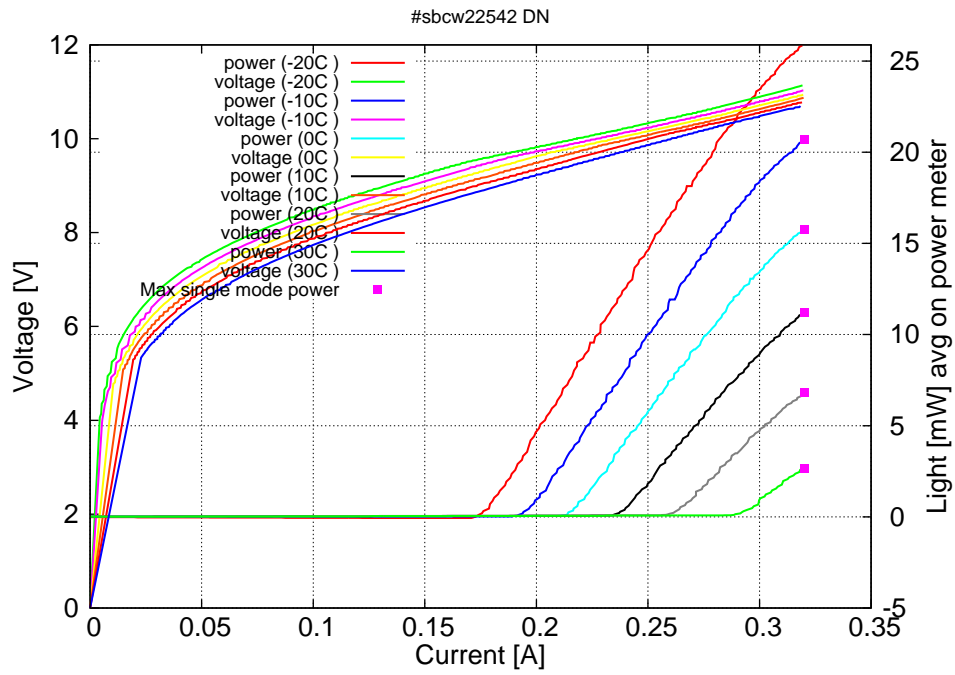


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.17A$  /  $V_{th}=9.6V$  (2-wires measurements). Maximum operation current: 0.32A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

