

## Datasheet for #sbcw22412 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 #sbcw22412 DN (please note that AlN submount numbering is A0YHR)

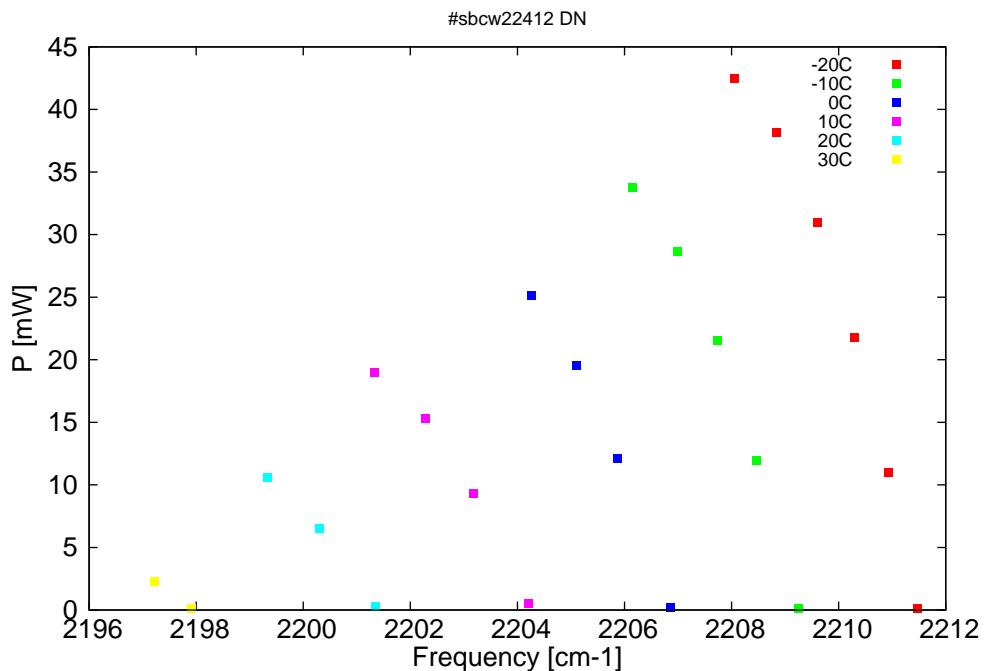


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

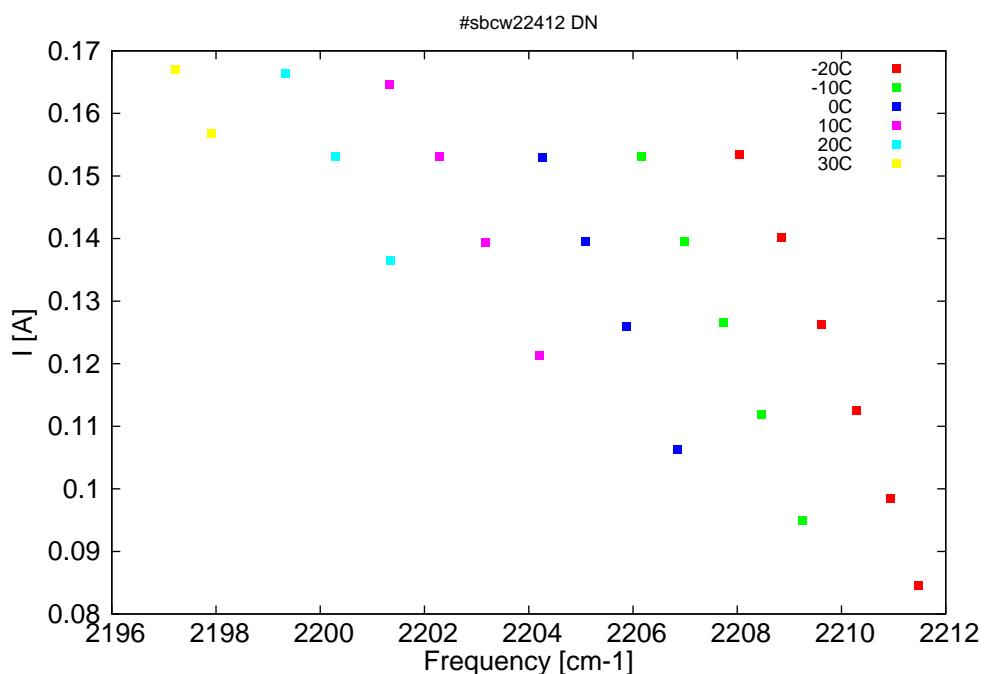


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm $^{-1}$ ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4521.9	2211.5	0.2	-20	8.71	0.085
4523	2210.9	11	-20	8.9	0.098
4524.3	2210.3	21.8	-20	9.09	0.112
4525.7	2209.6	31	-20	9.28	0.126
4527.3	2208.8	38.2	-20	9.48	0.14
4528.9	2208.1	42.5	-20	9.66	0.153
4526.4	2209.2	0.1	-10	8.81	0.095
4528	2208.5	12	-10	9.04	0.112
4529.5	2207.7	21.6	-10	9.24	0.127
4531.1	2207	28.6	-10	9.43	0.14
4532.8	2206.2	33.8	-10	9.62	0.153
4531.3	2206.9	0.2	0	8.93	0.106
4533.3	2205.9	12.1	0	9.2	0.126
4535	2205.1	19.5	0	9.4	0.139
4536.7	2204.3	25.1	0	9.59	0.153
4536.8	2204.2	0.5	10	9.11	0.121
4538.9	2203.2	9.3	10	9.36	0.139
4540.7	2202.3	15.3	10	9.56	0.153
4542.7	2201.3	19	10	9.77	0.165
4542.7	2201.4	0.3	20	9.31	0.136
4544.8	2200.3	6.5	20	9.54	0.153
4546.8	2199.3	10.6	20	9.74	0.166
4549.8	2197.9	0.2	30	9.6	0.157
4551.2	2197.2	2.3	30	9.74	0.167

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

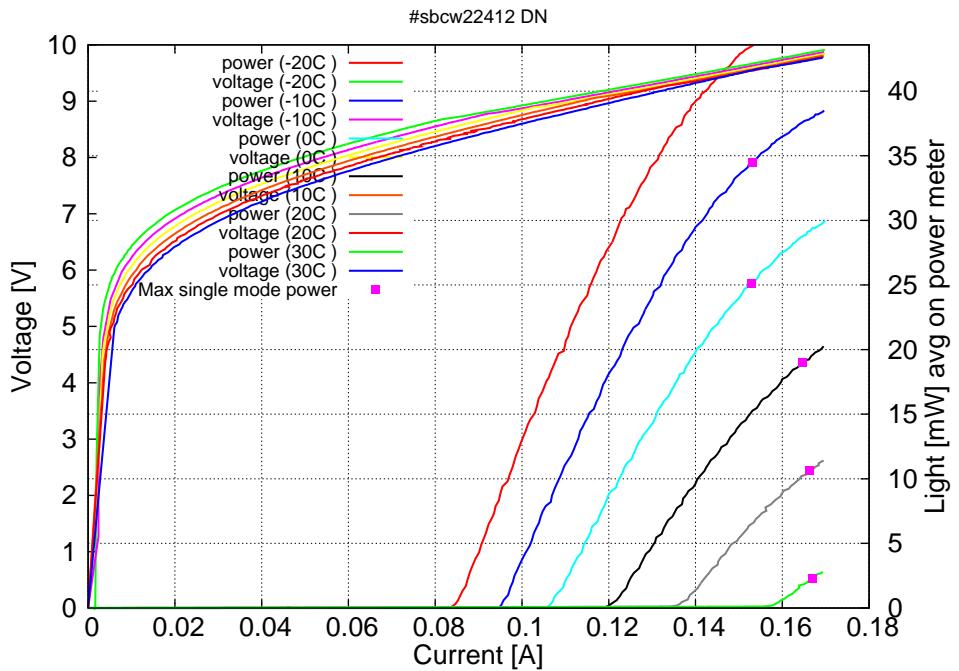


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.08A$  /  $V_{th}=8.7V$  (2-wires measurements). Maximum operation current: 0.155A between -20C and 0C, 0.170A between 10c and 30C.

Figure 3: spectra at different temperatures for various DC currents

