

**Datasheet for #sbcw22477 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 #sbcw22477 DN (please note that AlN submount numbering is A0W1A)

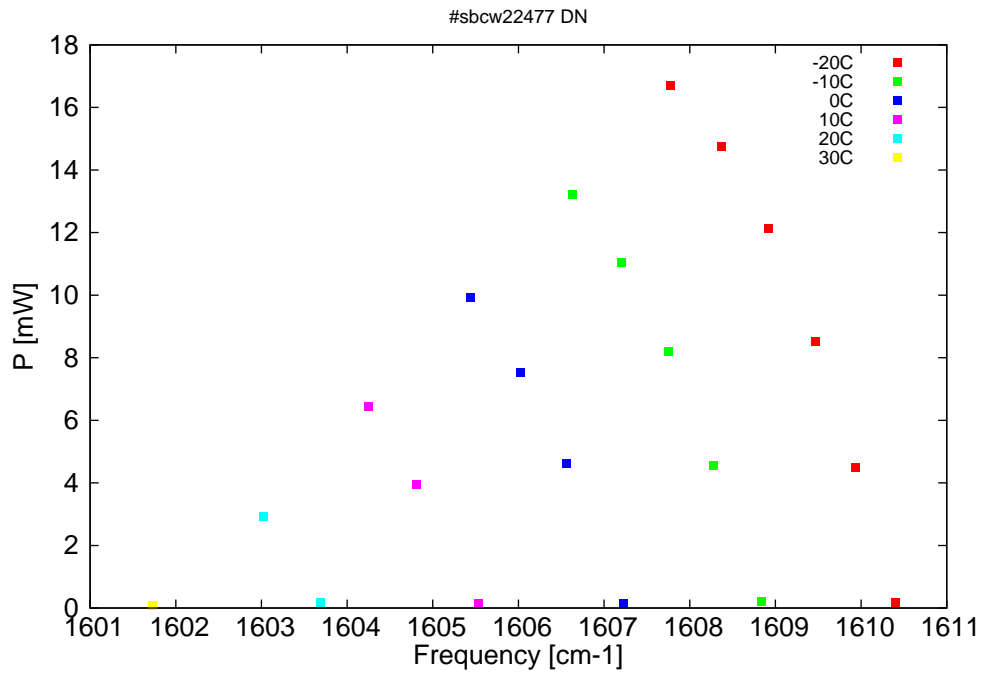


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

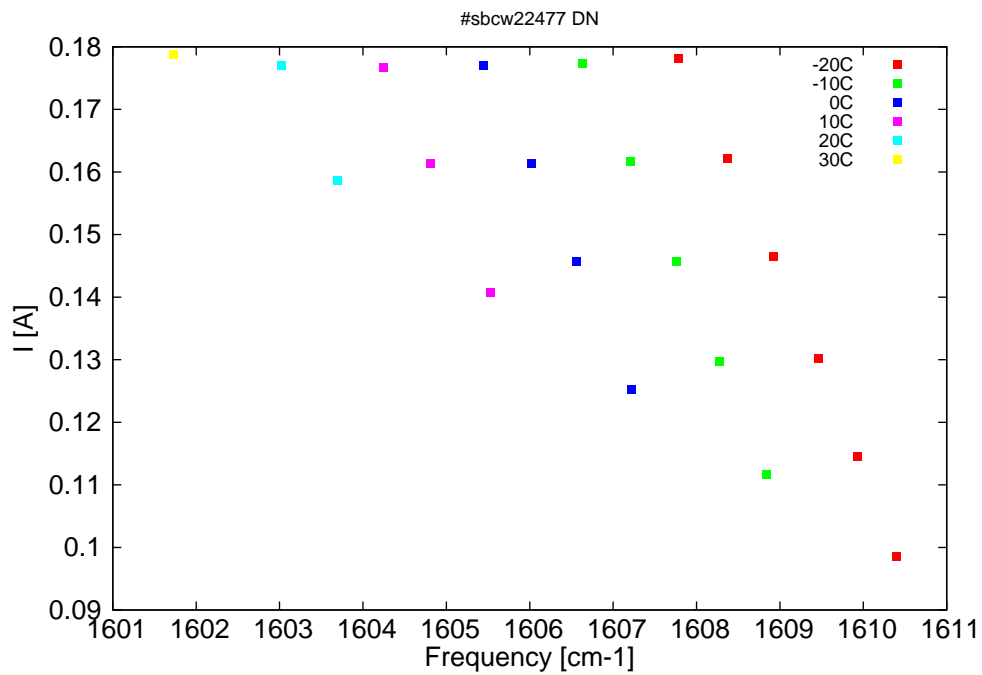


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6209.6	1610.4	0.2	-20	12.23	0.098
6211.4	1609.9	4.5	-20	12.62	0.114
6213.2	1609.5	8.5	-20	12.98	0.13
6215.4	1608.9	12.1	-20	13.35	0.147
6217.5	1608.4	14.8	-20	13.7	0.162
6219.8	1607.8	16.7	-20	14.04	0.178
6215.7	1608.8	0.2	-10	12.14	0.112
6217.8	1608.3	4.6	-10	12.56	0.13
6219.9	1607.8	8.2	-10	12.91	0.146
6222	1607.2	11	-10	13.26	0.162
6224.2	1606.6	13.2	-10	13.59	0.177
6221.9	1607.2	0.1	0	12.06	0.125
6224.5	1606.6	4.6	0	12.51	0.146
6226.5	1606	7.5	0	12.84	0.161
6228.8	1605.4	9.9	0	13.16	0.177
6228.5	1605.5	0.2	10	12	0.141
6231.3	1604.8	3.9	10	12.44	0.161
6233.5	1604.2	6.4	10	12.75	0.177
6235.6	1603.7	0.2	20	11.99	0.159
6238.2	1603	2.9	20	12.36	0.177
6243.2	1601.7	0.1	30	12.03	0.179

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

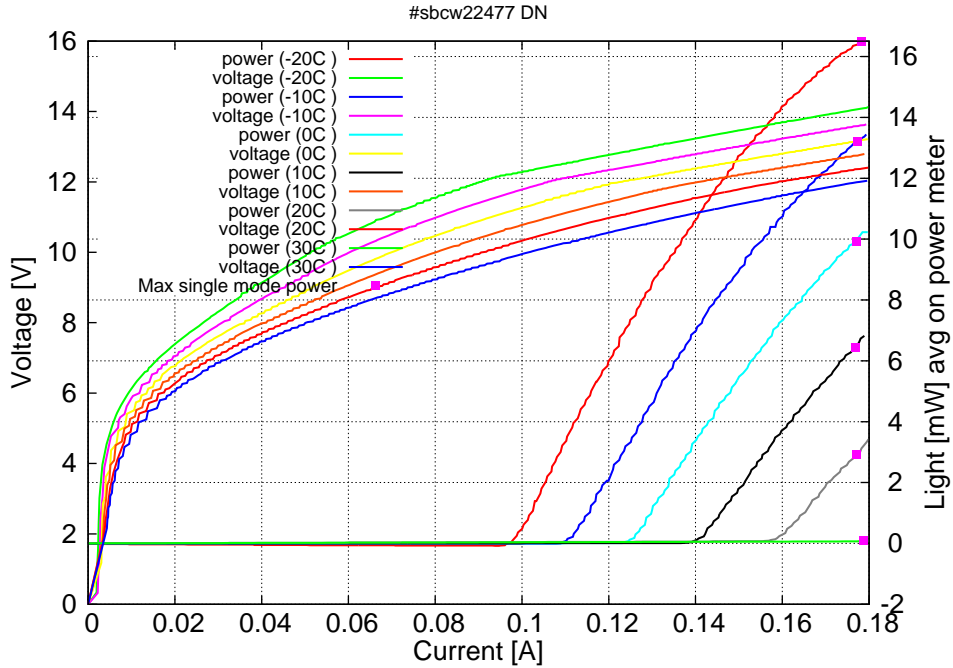


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.10A$  /  $V_{th}=12.2V$  (2-wires measurements). Maximum operation

current: 0.18A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

