

**Datasheet for #sbcw21077 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 #sbcw21077 DN (please note that AlN submount numbering is A0T0C)

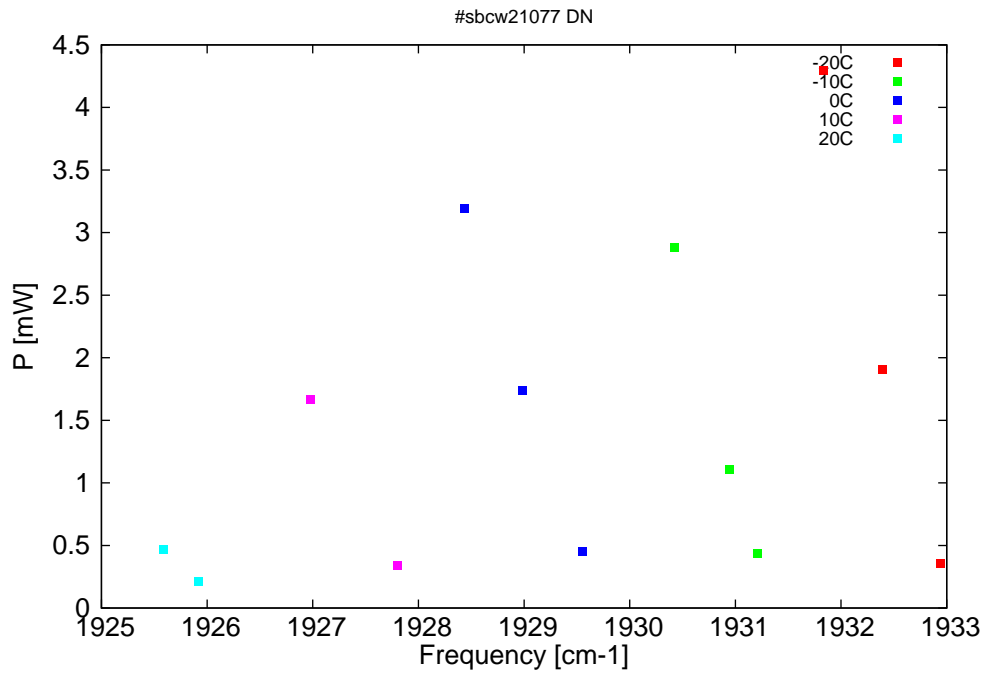


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

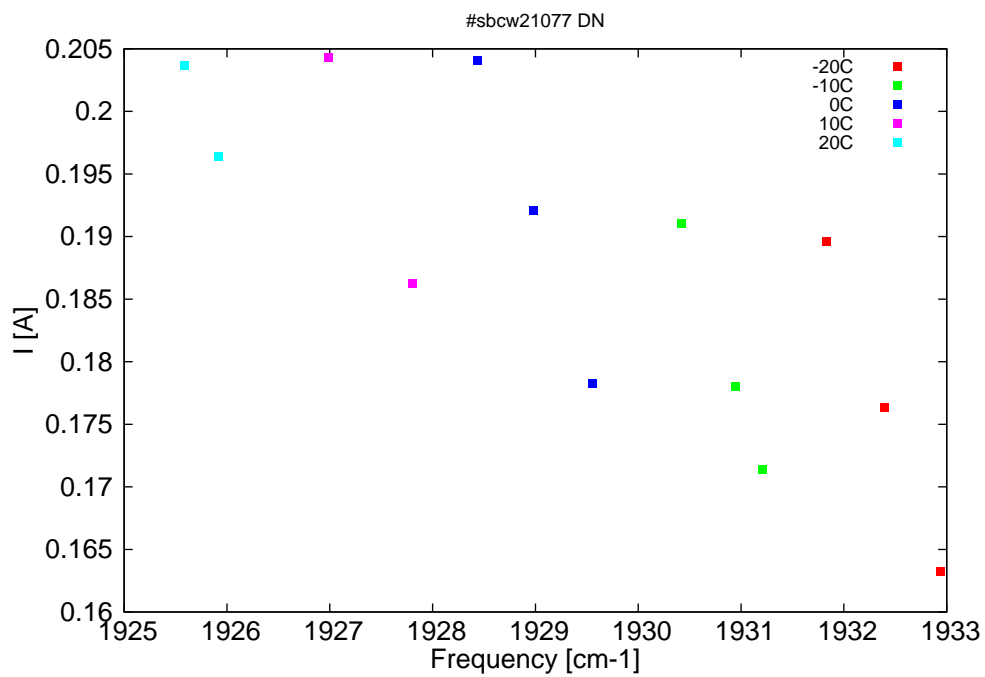


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5173.5	1932.9	0.4	-20	12.43	0.163
5174.9	1932.4	1.9	-20	12.67	0.176
5176.4	1931.8	4.3	-20	12.93	0.19
5178.1	1931.2	0.4	-10	12.44	0.171
5178.8	1930.9	1.1	-10	12.55	0.178
5180.2	1930.4	2.9	-10	12.79	0.191
5182.5	1929.6	0.4	0	12.42	0.178
5184.1	1929	1.7	0	12.66	0.192
5185.5	1928.4	3.2	0	12.91	0.204
5187.2	1927.8	0.3	10	12.47	0.186
5189.5	1927	1.7	10	12.8	0.204
5192.3	1925.9	0.2	20	12.58	0.196
5193.2	1925.6	0.5	20	12.72	0.204

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

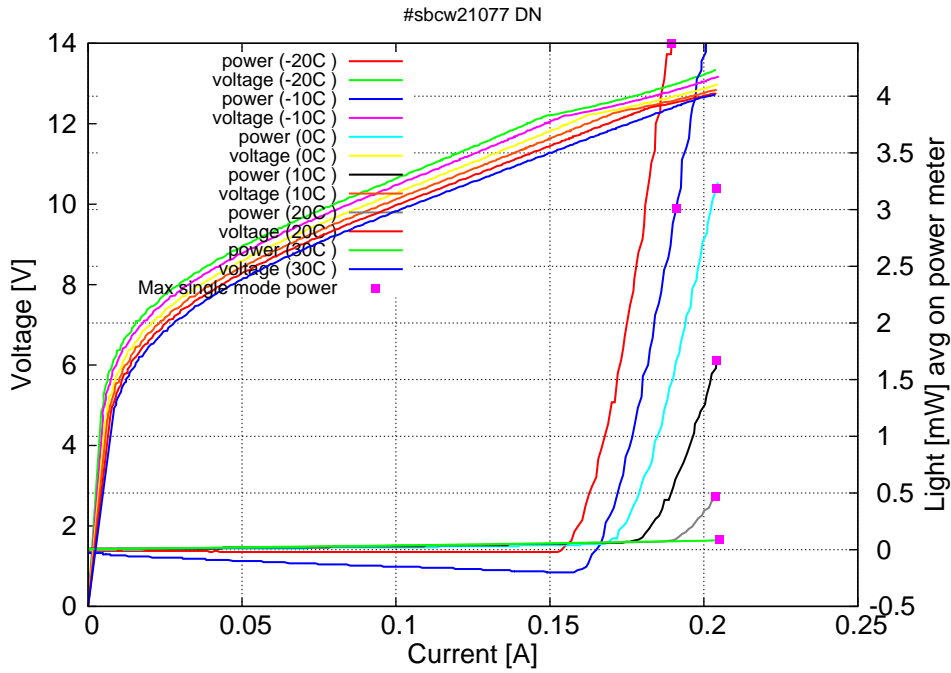


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.16A$  /  $V_{th}=12.4V$  (2-wires measurements). Maximum operation current: 0.19A between 20C and -10C, 0.205A between 0C and 20C.

Figure 3: spectra at different temperatures for various DC currents

