

**Datasheet for #sbcw19827 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 #sbcw19827 DN (please note that AlN submount numbering is A0MN0)

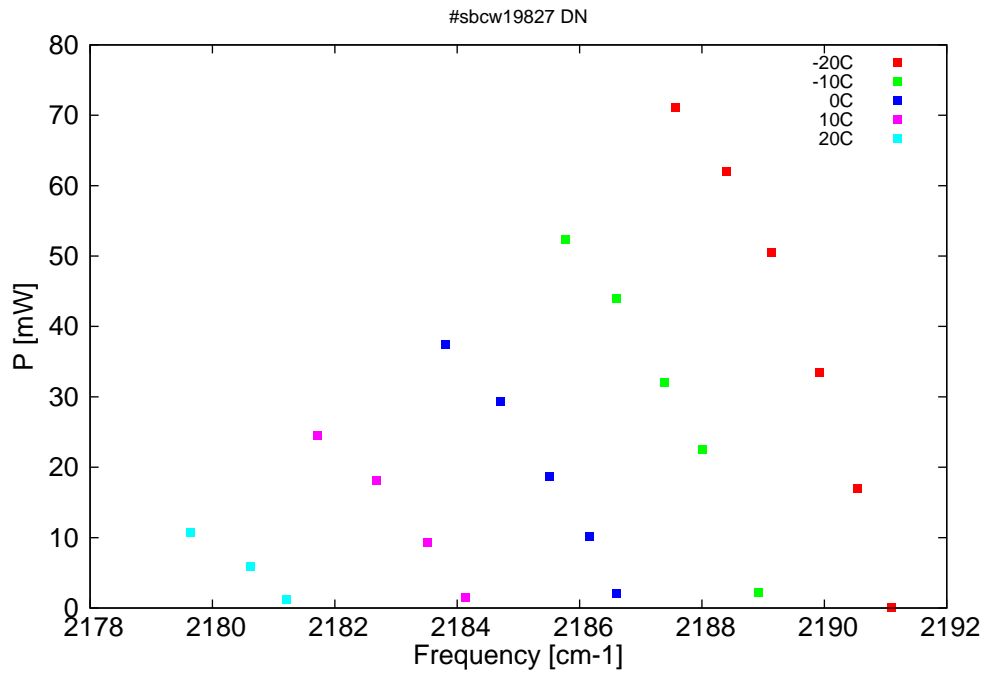


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

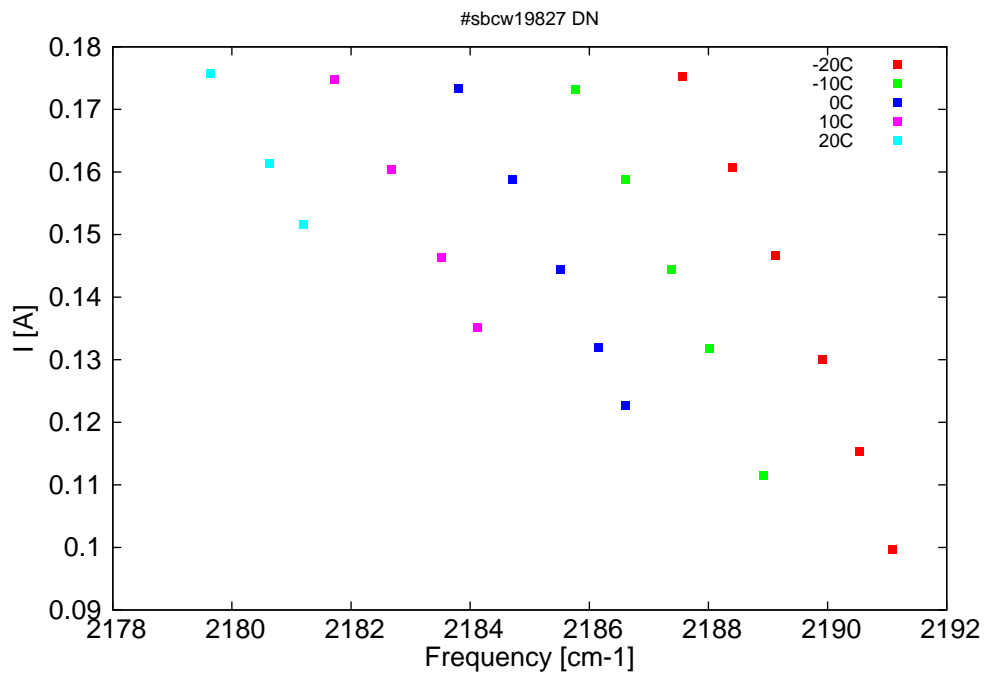


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4563.9	2191.1	0.1	-20	8.78	0.1
4565.1	2190.5	16.9	-20	8.95	0.115
4566.4	2189.9	33.4	-20	9.14	0.13
4568	2189.1	50.4	-20	9.35	0.147
4569.5	2188.4	62	-20	9.54	0.161
4571.3	2187.6	71.1	-20	9.74	0.175
4568.5	2188.9	2.2	-10	8.86	0.112
4570.4	2188	22.5	-10	9.12	0.132
4571.7	2187.4	32.1	-10	9.29	0.144
4573.3	2186.6	44	-10	9.48	0.159
4575	2185.8	52.4	-10	9.67	0.173
4573.3	2186.6	2.1	0	8.98	0.123
4574.2	2186.2	10.1	0	9.1	0.132
4575.6	2185.5	18.7	0	9.26	0.144
4577.3	2184.7	29.4	0	9.46	0.159
4579.2	2183.8	37.5	0	9.65	0.173
4578.5	2184.1	1.5	10	9.12	0.135
4579.8	2183.5	9.3	10	9.27	0.146
4581.5	2182.7	18.2	10	9.46	0.16
4583.5	2181.7	24.5	10	9.67	0.175
4584.6	2181.2	1.3	20	9.34	0.152
4585.8	2180.6	5.9	20	9.47	0.161
4587.9	2179.6	10.8	20	9.67	0.176

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

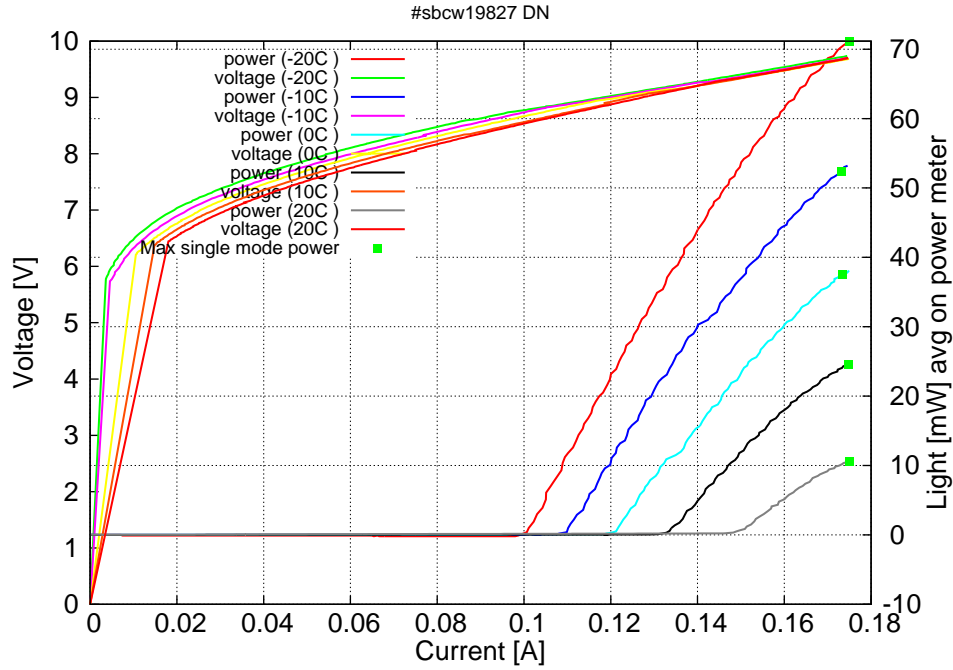


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.10A$  /  $V_{th}=8.8V$  (2-wires measurements). Maximum operation current: 0.175A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

