

**Datasheet for #sbcw20758 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 #sbcw20758 DN (please note that AlN submount numbering is A0RWC)

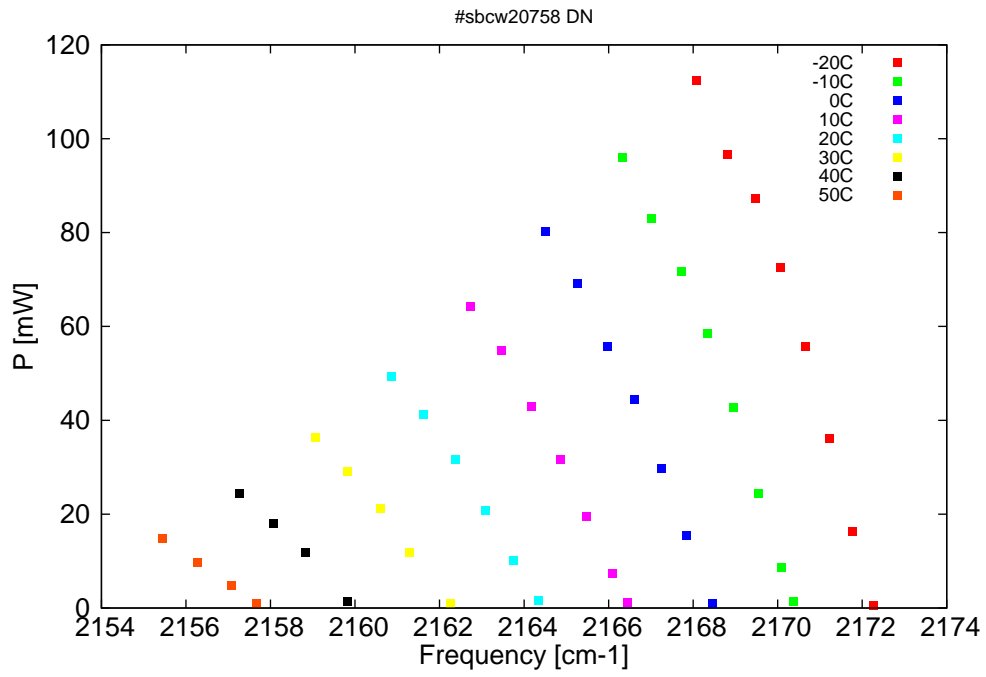


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

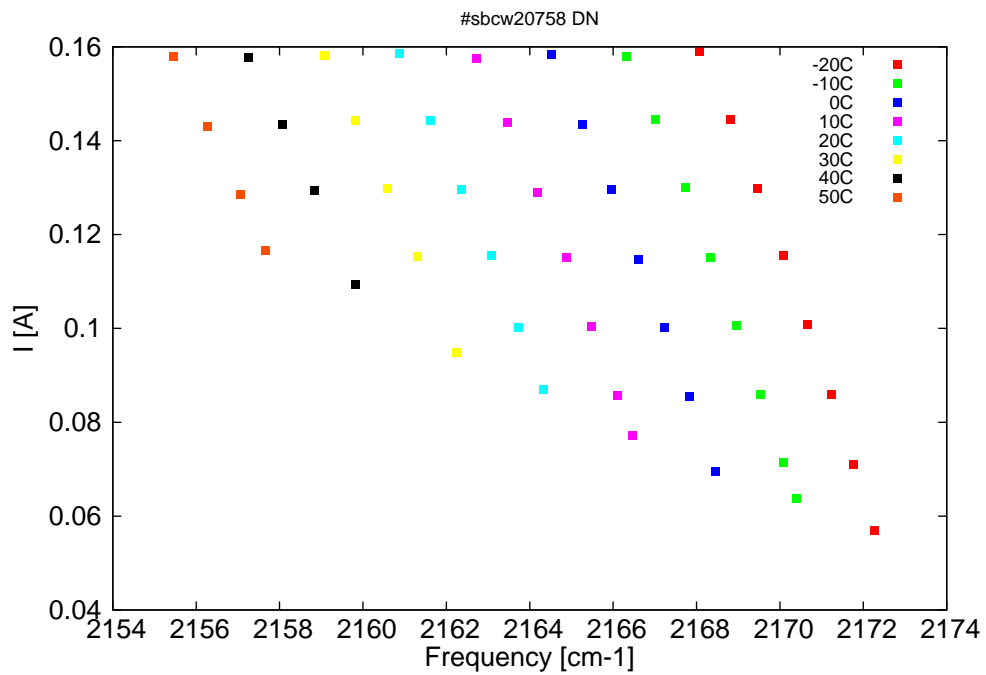


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4603.5	2172.3	0.5	-20	12.44	0.057
4604.5	2171.8	16.3	-20	12.64	0.071
4605.7	2171.2	36.1	-20	12.88	0.086
4606.9	2170.7	55.7	-20	13.13	0.101
4608.1	2170.1	72.6	-20	13.37	0.115
4609.4	2169.5	87.2	-20	13.61	0.13
4610.8	2168.8	96.6	-20	13.88	0.145
4612.4	2168.1	112.5	-20	14.07	0.159
4607.5	2170.4	1.4	-10	12.4	0.064
4608.1	2170.1	8.7	-10	12.51	0.071
4609.3	2169.5	24.5	-10	12.74	0.086
4610.5	2168.9	42.6	-10	12.98	0.101
4611.8	2168.3	58.5	-10	13.21	0.115
4613.1	2167.7	71.7	-10	13.45	0.13
4614.6	2167	83	-10	13.69	0.145
4616.1	2166.3	96.1	-10	13.88	0.158
4611.6	2168.5	1	0	12.39	0.069
4612.9	2167.8	15.4	0	12.61	0.086
4614.2	2167.2	29.8	0	12.83	0.1
4615.5	2166.6	44.4	0	13.06	0.115
4616.9	2166	55.7	0	13.3	0.13
4618.4	2165.3	69.2	0	13.5	0.143
4620	2164.5	80.3	0	13.71	0.158
4615.8	2166.5	1.1	10	12.4	0.077
4616.6	2166.1	7.3	10	12.5	0.086
4617.9	2165.5	19.5	10	12.72	0.1
4619.2	2164.9	31.6	10	12.94	0.115
4620.7	2164.2	42.9	10	13.15	0.129
4622.2	2163.5	54.8	10	13.35	0.144
4623.8	2162.7	64.2	10	13.55	0.157
4620.4	2164.3	1.6	20	12.44	0.087
4621.6	2163.7	10.1	20	12.61	0.1
4623	2163.1	20.8	20	12.82	0.115
4624.6	2162.4	31.7	20	13.01	0.13
4626.1	2161.6	41.3	20	13.22	0.144
4627.8	2160.9	49.3	20	13.41	0.159
4624.8	2162.3	0.9	30	12.46	0.095
4626.9	2161.3	11.7	30	12.7	0.115
4628.4	2160.6	21.2	30	12.88	0.13
4630	2159.8	29.1	30	13.08	0.144
4631.6	2159.1	36.4	30	13.26	0.158
4630	2159.8	1.3	40	12.54	0.109
4632.1	2158.8	11.8	40	12.76	0.129
4633.8	2158.1	18.1	40	12.94	0.143
4635.5	2157.3	24.4	40	13.12	0.158
4634.6	2157.7	1	50	12.55	0.117
4635.9	2157.1	4.8	50	12.66	0.129
4637.6	2156.3	9.6	50	12.83	0.143
4639.4	2155.4	14.7	50	13	0.158

*continued on next page*

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

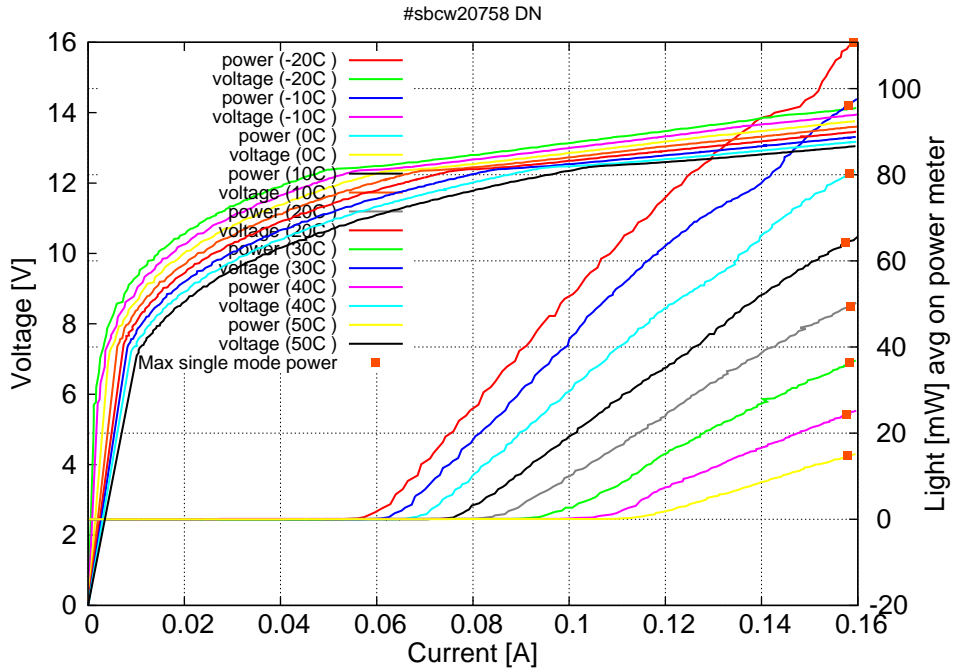


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.06\text{A}$  /  $V_{th}=12.4\text{V}$  (2-wires measurements). Maximum operation current: 0.16A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

