

**Datasheet for #sbcw19765 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.

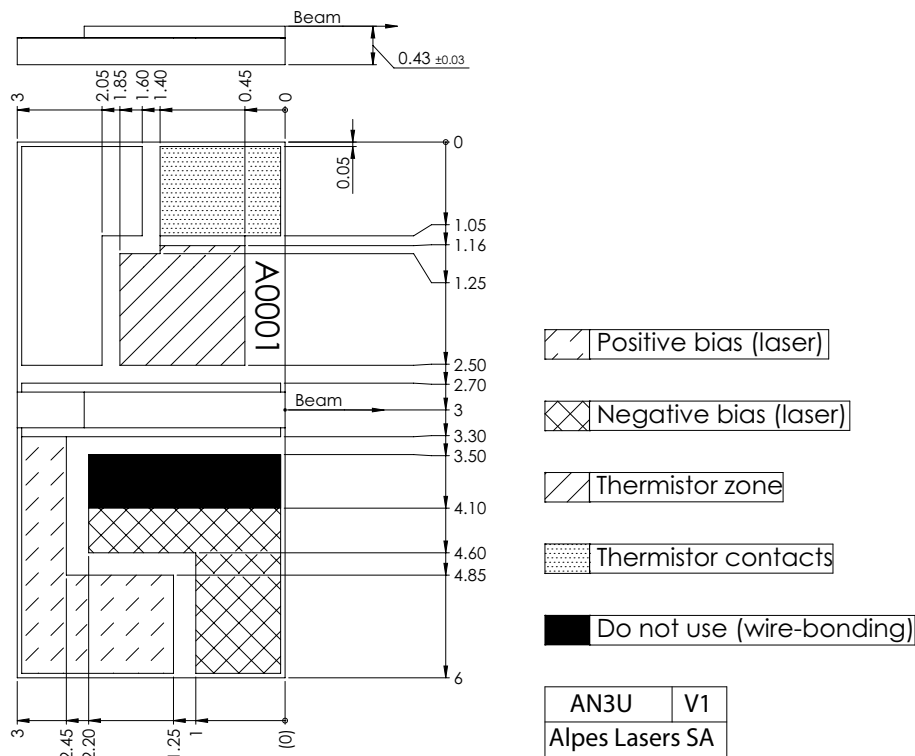


Figure 1: Mechanical and electrical interface for #sbcw19765 DN (please note that AlN submount numbering is A0TLN)

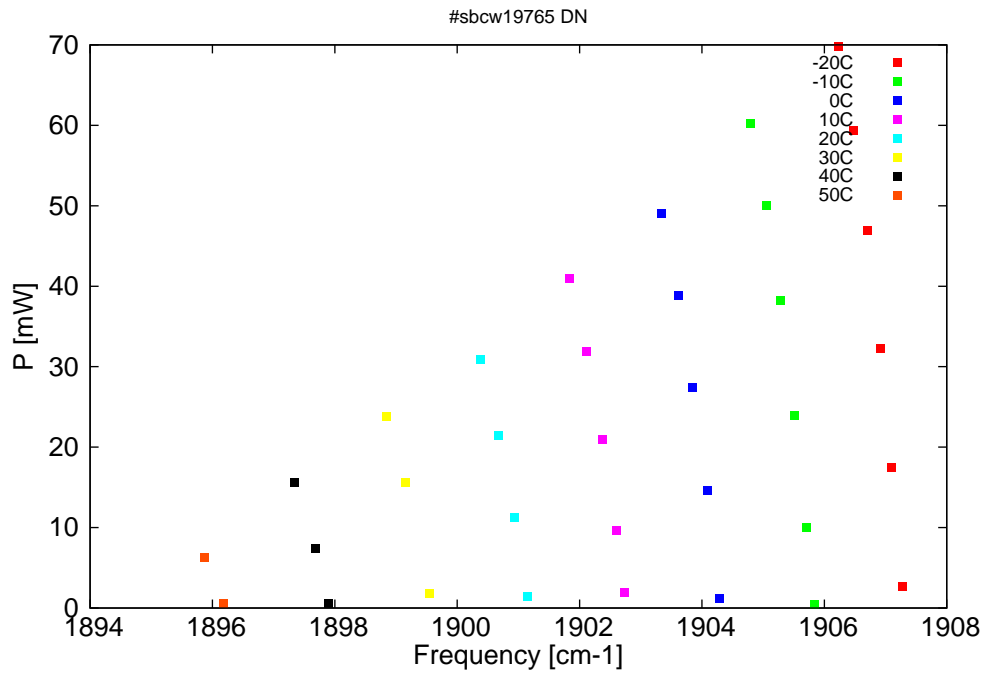


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

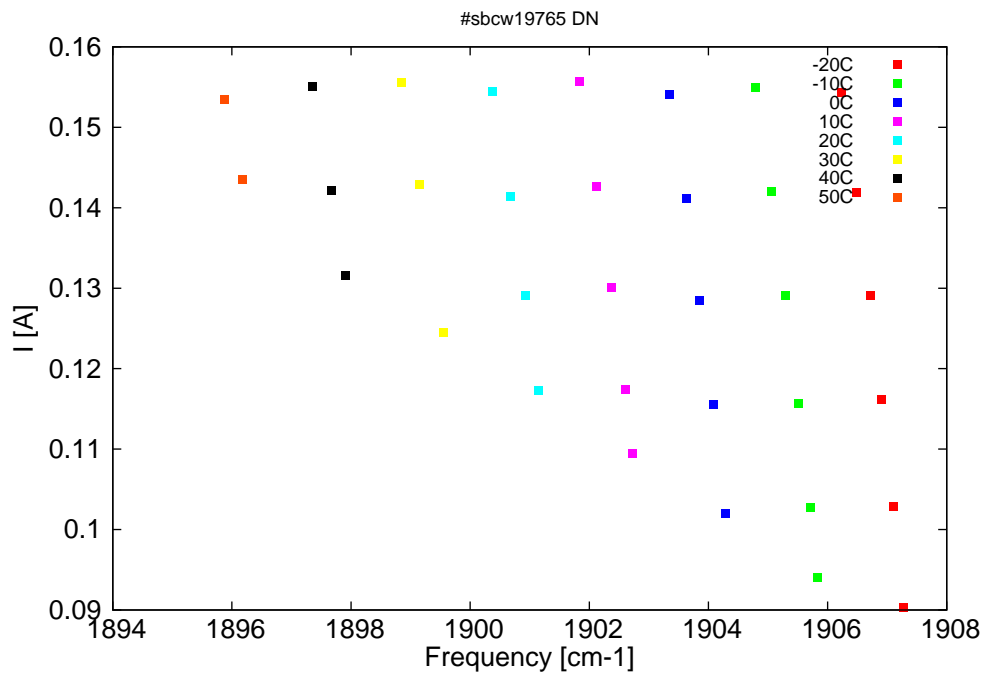


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5243.1	1907.3	2.7	-20	7.84	0.09
5243.6	1907.1	17.4	-20	8.02	0.103
5244.1	1906.9	32.3	-20	8.2	0.116
5244.6	1906.7	46.9	-20	8.39	0.129
5245.3	1906.5	59.3	-20	8.58	0.142
5245.9	1906.2	69.8	-20	8.8	0.154
5247	1905.8	0.5	-10	7.86	0.094
5247.4	1905.7	10	-10	7.98	0.103
5247.9	1905.5	24	-10	8.16	0.116
5248.5	1905.3	38.2	-10	8.36	0.129
5249.2	1905.1	50.1	-10	8.56	0.142
5249.9	1904.8	60.2	-10	8.78	0.155
5251.3	1904.3	1.2	0	7.93	0.102
5251.9	1904.1	14.6	0	8.13	0.115
5252.5	1903.9	27.4	0	8.32	0.128
5253.1	1903.6	38.8	0	8.52	0.141
5253.9	1903.3	49.1	0	8.74	0.154
5255.6	1902.7	1.9	10	8.01	0.109
5256	1902.6	9.6	10	8.13	0.117
5256.6	1902.4	20.9	10	8.32	0.13
5257.3	1902.1	31.9	10	8.52	0.143
5258.1	1901.8	41	10	8.75	0.156
5260	1901.1	1.5	20	8.1	0.117
5260.6	1900.9	11.3	20	8.28	0.129
5261.3	1900.7	21.5	20	8.48	0.141
5262.1	1900.4	30.9	20	8.7	0.154
5264.4	1899.6	1.7	30	8.19	0.125
5265.5	1899.1	15.7	30	8.49	0.143
5266.4	1898.8	23.7	30	8.71	0.156
5269	1897.9	0.6	40	8.3	0.132
5269.6	1897.7	7.4	40	8.45	0.142
5270.5	1897.3	15.6	40	8.68	0.155
5273.7	1896.2	0.6	50	8.46	0.144
5274.6	1895.9	6.2	50	8.64	0.154

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

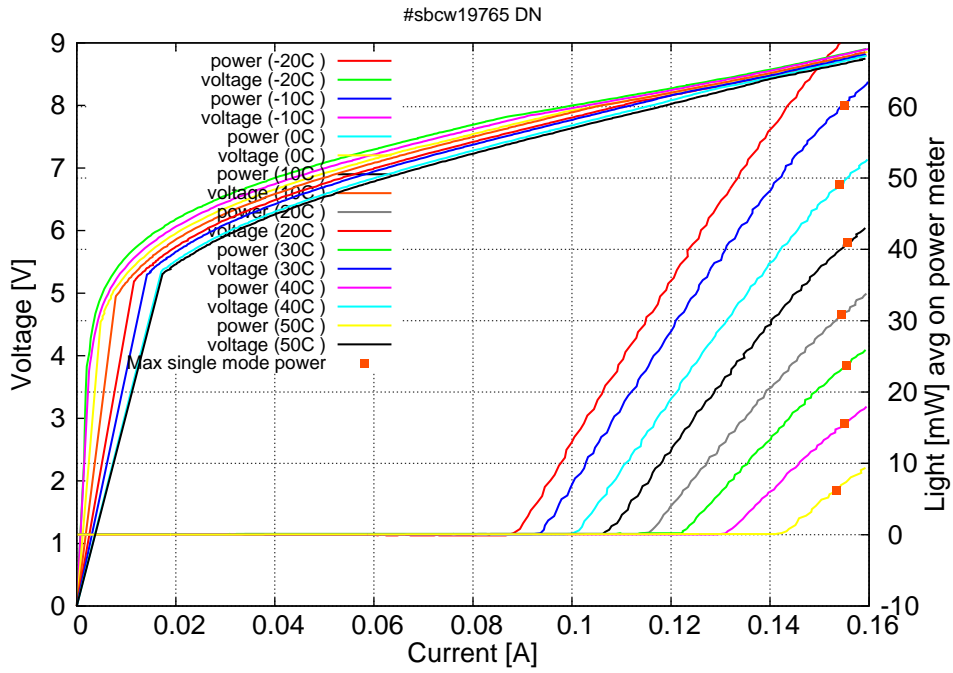


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.09A$  /  $V_{th}=7.8V$  (2-wires measurements). Maximum operation current: 0.160A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

