

Datasheet for #sbcw19865 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 #sbcw19865 DN (please note that AlN submount numbering is A0PXM)

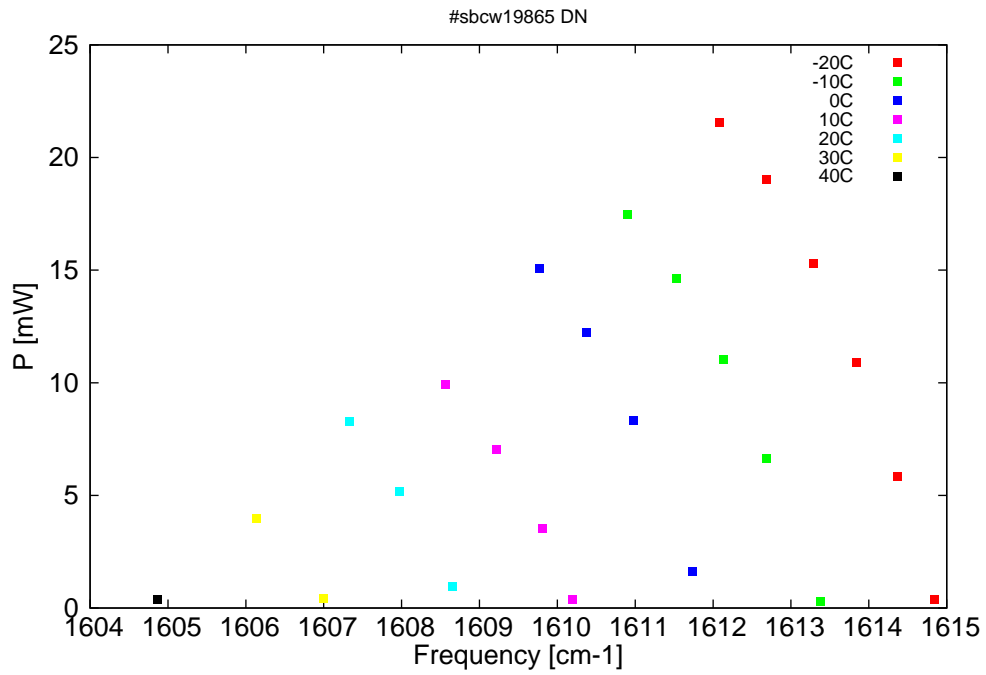


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

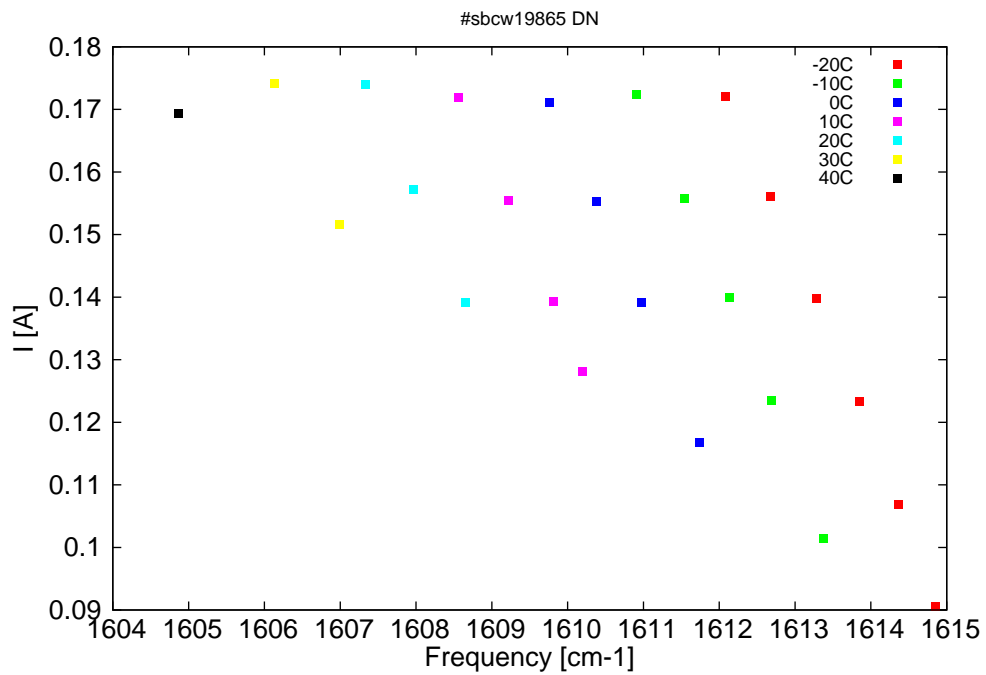


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6192.5	1614.8	0.4	-20	14.29	0.091
6194.4	1614.4	5.8	-20	14.75	0.107
6196.4	1613.8	10.9	-20	15.19	0.123
6198.5	1613.3	15.3	-20	15.59	0.14
6200.9	1612.7	19	-20	15.97	0.156
6203.2	1612.1	21.5	-20	16.31	0.172
6198.2	1613.4	0.3	-10	14.12	0.101
6200.8	1612.7	6.6	-10	14.68	0.123
6203	1612.1	11	-10	15.07	0.14
6205.3	1611.5	14.6	-10	15.43	0.156
6207.7	1610.9	17.5	-10	15.77	0.172
6204.5	1611.7	1.6	0	14.01	0.117
6207.4	1611	8.3	0	14.54	0.139
6209.7	1610.4	12.2	0	14.9	0.155
6212.1	1609.8	15.1	0	15.22	0.171
6210.4	1610.2	0.4	10	13.79	0.128
6211.9	1609.8	3.5	10	14.04	0.139
6214.2	1609.2	7	10	14.39	0.155
6216.7	1608.6	9.9	10	14.72	0.172
6216.4	1608.6	0.9	20	13.55	0.139
6219	1608	5.2	20	13.94	0.157
6221.5	1607.3	8.3	20	14.25	0.174
6222.8	1607	0.4	30	13.34	0.152
6226.1	1606.1	4	30	13.78	0.174
6231	1604.9	0.4	40	13.34	0.169

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

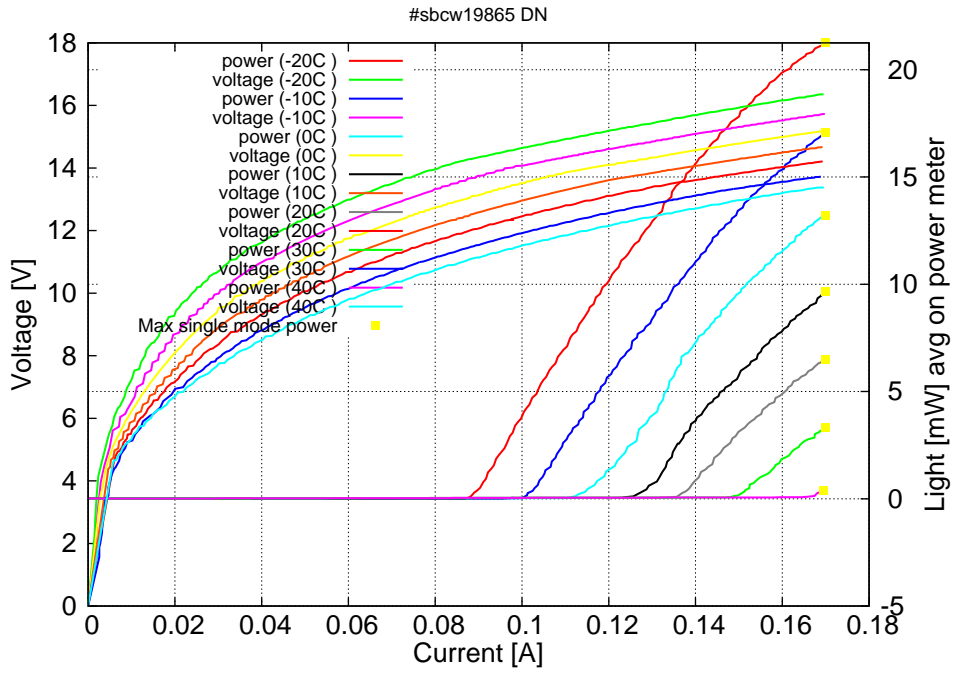


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=14.3V$ (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

