

Datasheet for #sbcw20746 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 #sbcw20746 DN (please note that AlN submount numbering is A0T20)

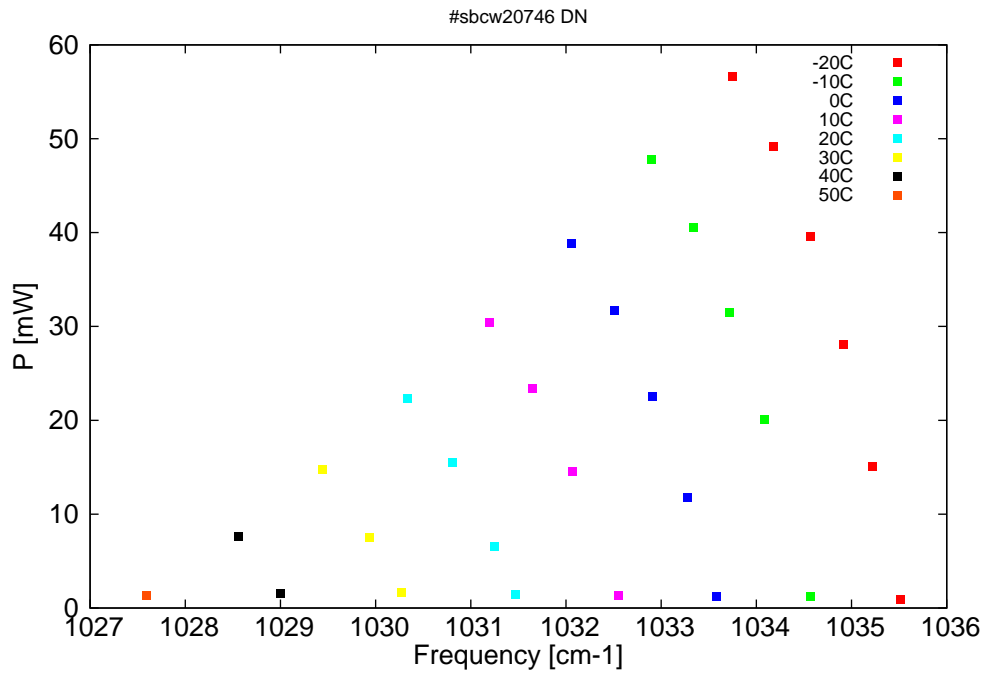


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

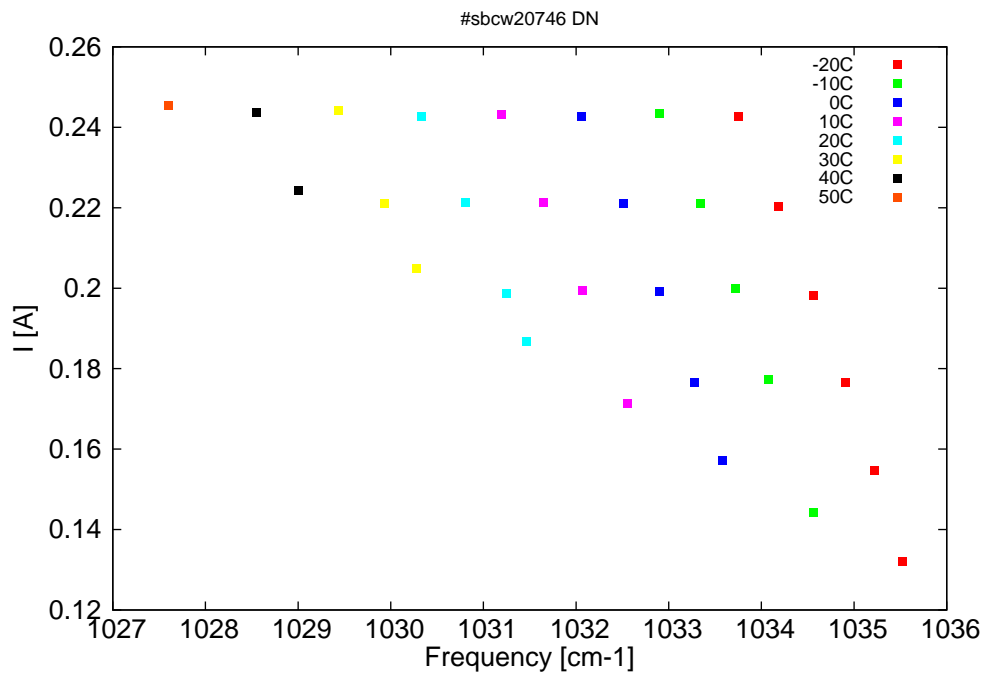


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9657	1035.5	0.9	-20	9.22	0.132
9659.7	1035.2	15	-20	9.57	0.155
9662.7	1034.9	28.1	-20	9.91	0.177
9665.9	1034.6	39.6	-20	10.25	0.198
9669.5	1034.2	49.2	-20	10.61	0.22
9673.5	1033.8	56.7	-20	10.99	0.243
9665.9	1034.6	1.2	-10	9.33	0.144
9670.4	1034.1	20.1	-10	9.84	0.177
9673.8	1033.7	31.4	-10	10.19	0.2
9677.4	1033.3	40.6	-10	10.53	0.221
9681.5	1032.9	47.8	-10	10.91	0.243
9675.1	1033.6	1.2	0	9.46	0.157
9677.9	1033.3	11.8	0	9.76	0.177
9681.4	1032.9	22.6	0	10.11	0.199
9685.2	1032.5	31.7	0	10.45	0.221
9689.4	1032.1	38.8	0	10.82	0.243
9684.8	1032.6	1.3	10	9.61	0.171
9689.2	1032.1	14.6	10	10.04	0.199
9693.2	1031.7	23.4	10	10.39	0.221
9697.5	1031.2	30.4	10	10.75	0.243
9695	1031.5	1.5	20	9.78	0.187
9697	1031.2	6.6	20	9.96	0.199
9701.1	1030.8	15.5	20	10.32	0.221
9705.6	1030.3	22.3	20	10.67	0.243
9706.2	1030.3	1.7	30	10	0.205
9709.4	1029.9	7.5	30	10.27	0.221
9714	1029.4	14.8	30	10.63	0.244
9718.2	1029	1.5	40	10.25	0.224
9722.4	1028.6	7.6	40	10.57	0.244
9731.4	1027.6	1.3	50	10.55	0.246

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

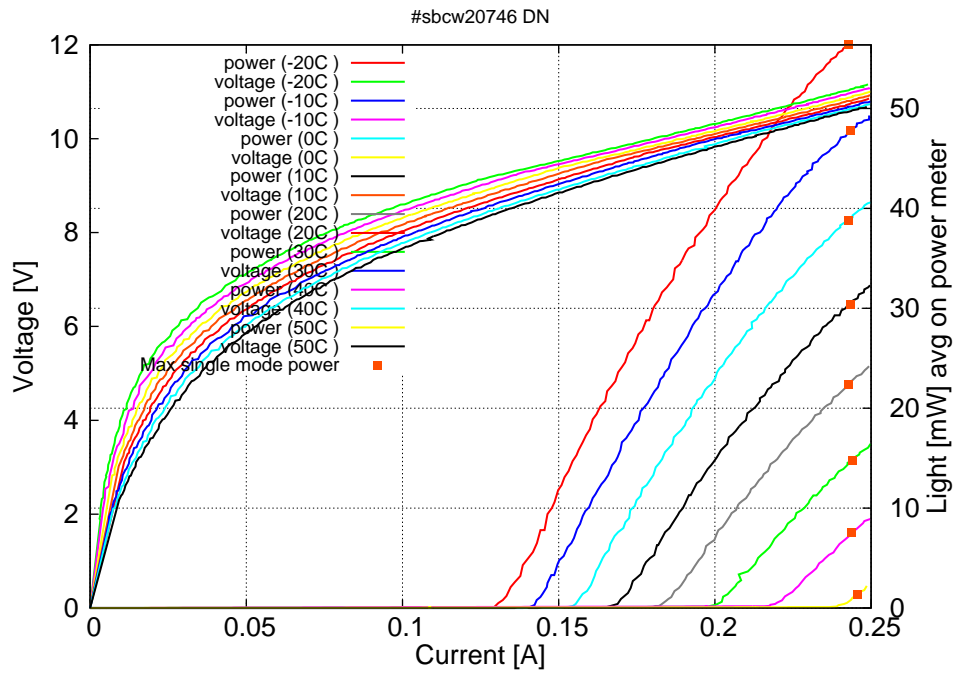


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=9.2V$ (2-wires measurements). Maximum operation current: 0.250A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

