

Datasheet for #sbcw20748 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.

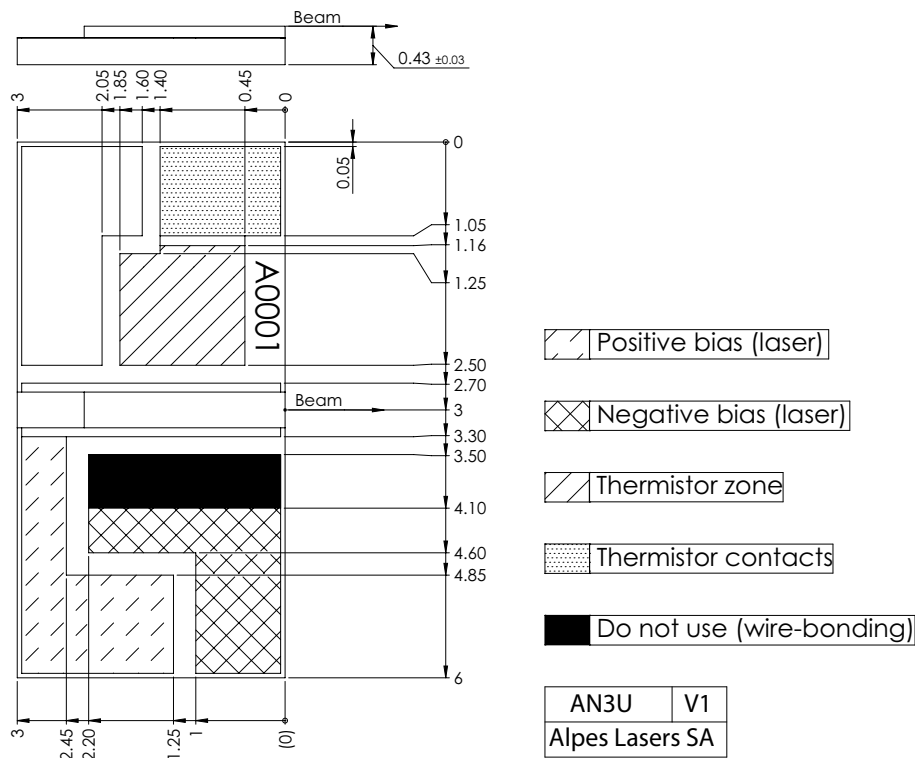


Figure 1: Mechanical and electrical interface for #sbcw20748 DN (please note that AlN submount numbering is A0T0F)

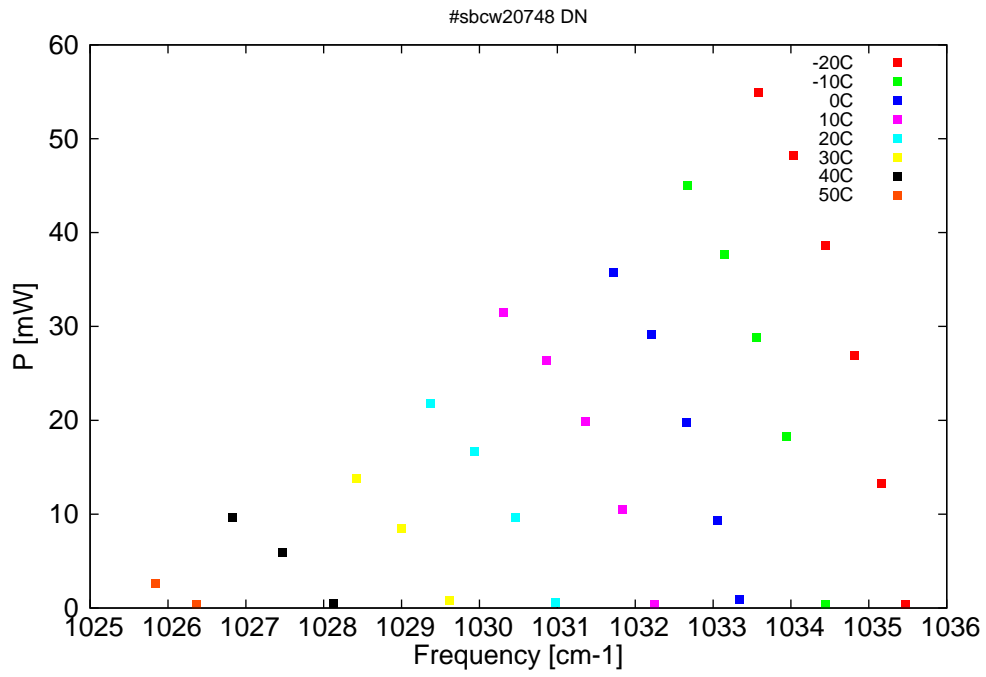


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

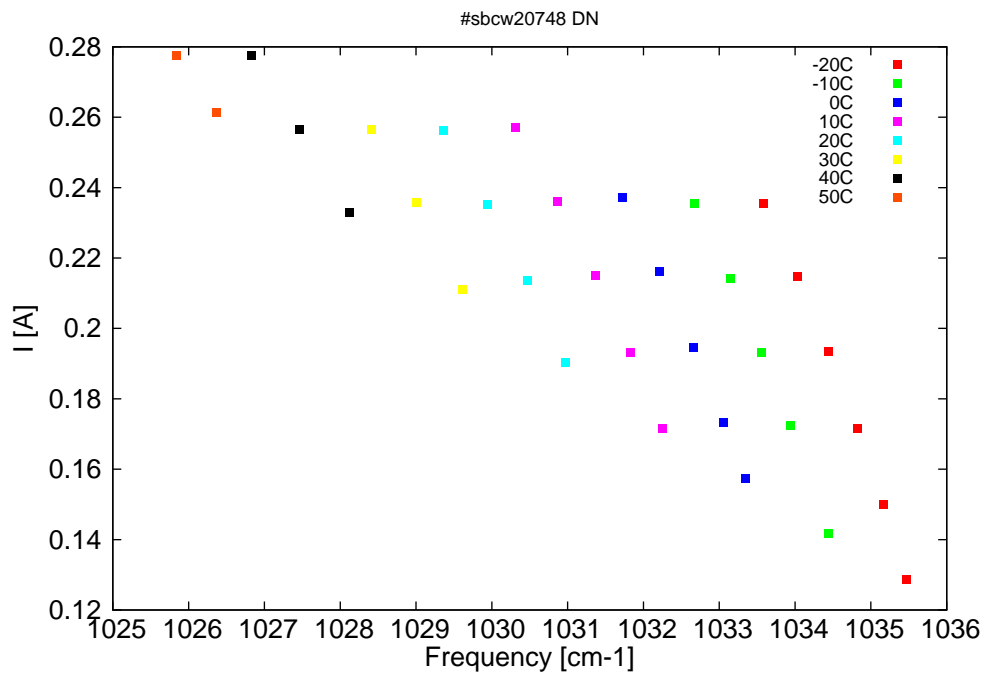


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9657.4	1035.5	0.4	-20	9.3	0.129
9660.3	1035.2	13.3	-20	9.64	0.15
9663.5	1034.8	26.9	-20	9.99	0.172
9667.1	1034.4	38.6	-20	10.34	0.193
9670.9	1034	48.2	-20	10.69	0.215
9675.1	1033.6	55	-20	11.04	0.236
9667	1034.4	0.4	-10	9.43	0.142
9671.7	1033.9	18.2	-10	9.91	0.172
9675.3	1033.6	28.8	-10	10.25	0.193
9679.2	1033.1	37.6	-10	10.59	0.214
9683.6	1032.7	45.1	-10	10.95	0.235
9677.3	1033.3	0.9	0	9.62	0.157
9680	1033.1	9.3	0	9.88	0.173
9683.8	1032.7	19.7	0	10.22	0.195
9688	1032.2	29.2	0	10.58	0.216
9692.6	1031.7	35.7	0	10.94	0.237
9687.6	1032.3	0.4	10	9.75	0.171
9691.5	1031.8	10.5	10	10.1	0.193
9695.9	1031.4	19.8	10	10.46	0.215
9700.6	1030.9	26.4	10	10.81	0.236
9705.8	1030.3	31.5	10	11.18	0.257
9699.5	1031	0.6	20	9.97	0.19
9704.4	1030.5	9.7	20	10.35	0.214
9709.3	1029.9	16.7	20	10.71	0.235
9714.7	1029.4	21.8	20	11.07	0.256
9712.3	1029.6	0.8	30	10.22	0.211
9718.1	1029	8.5	30	10.62	0.236
9723.7	1028.4	13.8	30	10.98	0.257
9726.4	1028.1	0.5	40	10.5	0.233
9732.7	1027.5	5.9	40	10.89	0.257
9738.7	1026.8	9.6	40	11.25	0.277
9743.1	1026.4	0.3	50	10.89	0.261
9748.1	1025.8	2.6	50	11.16	0.277

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

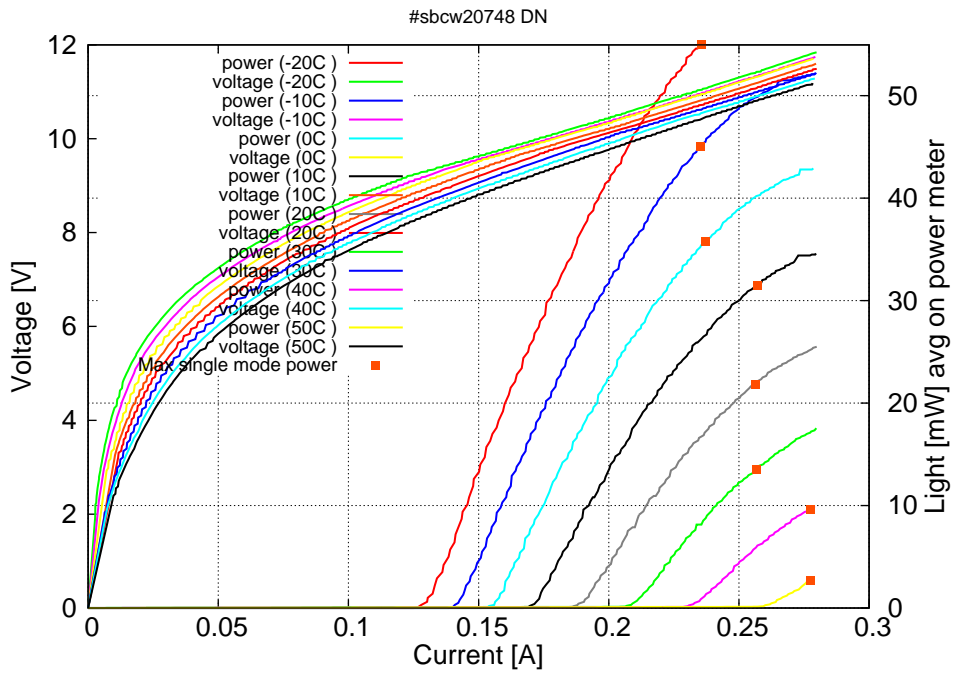


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=9.25V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and 0C, 0.26A between 10C and 30C, 0.28 at 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

