

Datasheet for #sbcw20744 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.

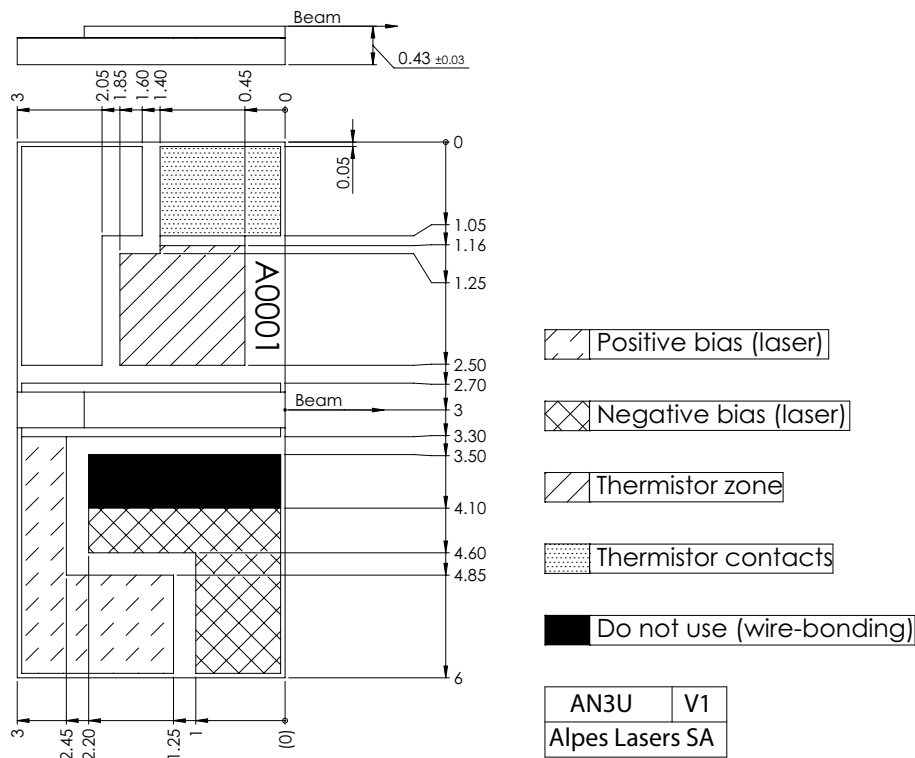


Figure 1: Mechanical and electrical interface for #sbcw20744 DN (please note that AlN submount numbering is A0T1A)

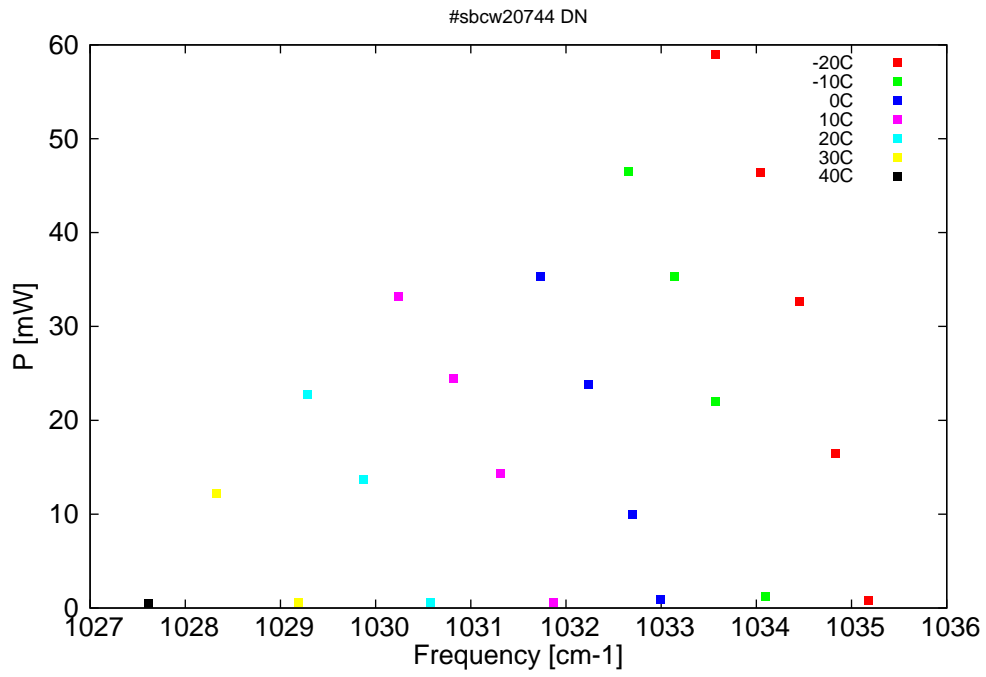


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

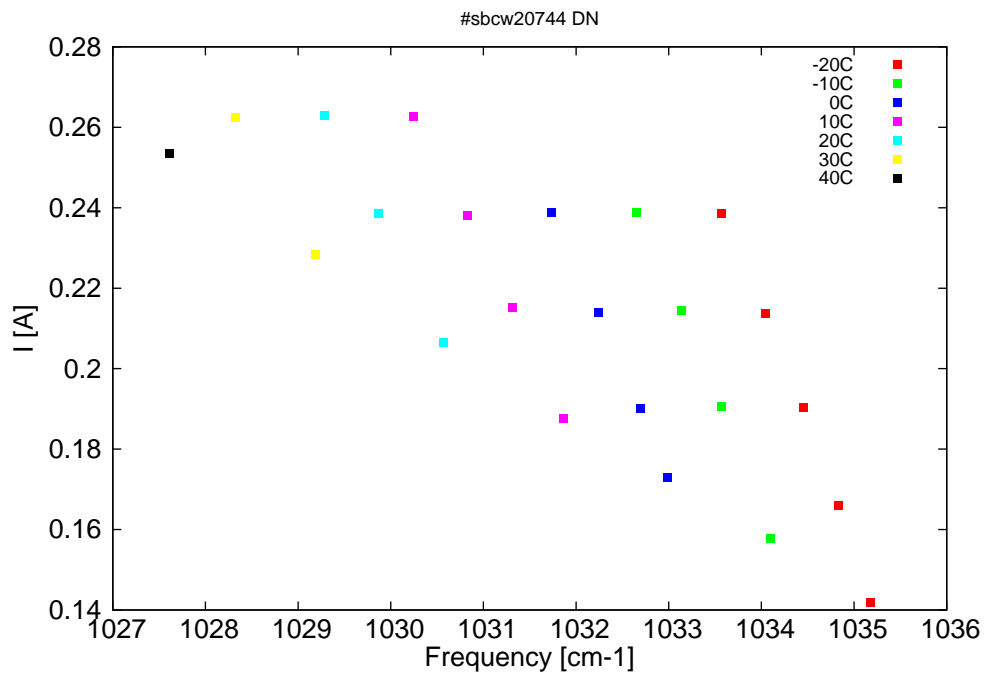


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9660.2	1035.2	0.8	-20	9.28	0.142
9663.4	1034.8	16.5	-20	9.62	0.166
9667	1034.5	32.7	-20	9.96	0.19
9670.8	1034	46.4	-20	10.29	0.214
9675.2	1033.6	58.9	-20	10.64	0.239
9670.2	1034.1	1.3	-10	9.42	0.158
9675.2	1033.6	22	-10	9.88	0.19
9679.2	1033.1	35.4	-10	10.22	0.215
9683.8	1032.7	46.5	-10	10.57	0.239
9680.6	1033	0.9	0	9.56	0.173
9683.4	1032.7	10	0	9.8	0.19
9687.7	1032.2	23.9	0	10.14	0.214
9692.4	1031.7	35.4	0	10.5	0.239
9691.2	1031.9	0.6	10	9.7	0.188
9696.3	1031.3	14.3	10	10.09	0.215
9701	1030.8	24.4	10	10.42	0.238
9706.4	1030.2	33.2	10	10.78	0.263
9703.3	1030.6	0.6	20	9.9	0.206
9710	1029.9	13.7	20	10.37	0.239
9715.5	1029.3	22.7	20	10.72	0.263
9716.4	1029.2	0.6	30	10.16	0.228
9724.6	1028.3	12.2	30	10.66	0.262
9731.3	1027.6	0.5	40	10.47	0.254

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

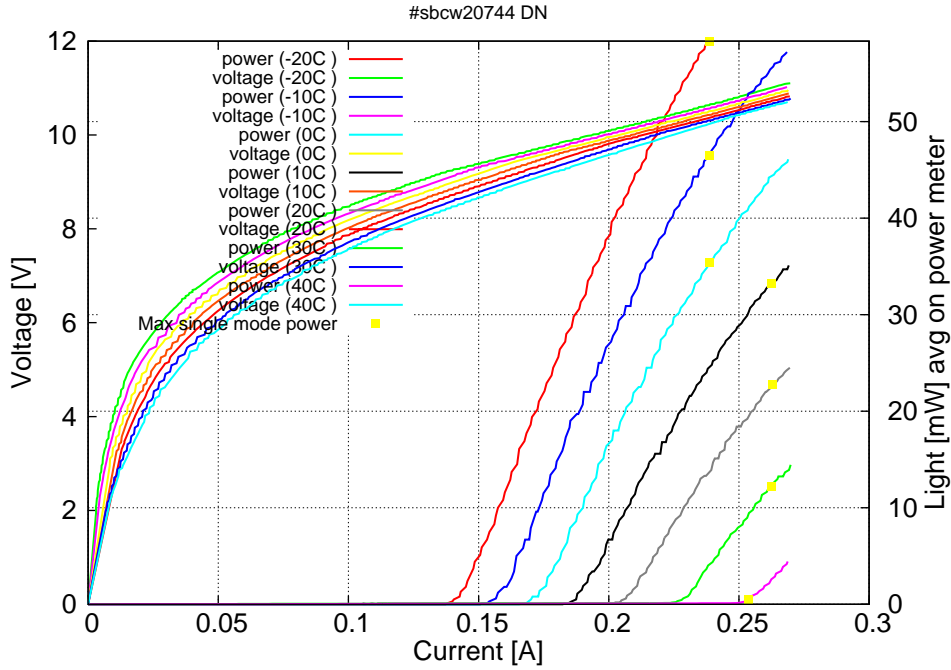


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=9.2V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and 0C, 0.27A between 10C and 40C.

Figure 3: spectra at different temperatures for various DC currents

