

Datasheet for #sbcw20750 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 #sbcw20750 DN (please note that AlN submount numbering is A0T0P)

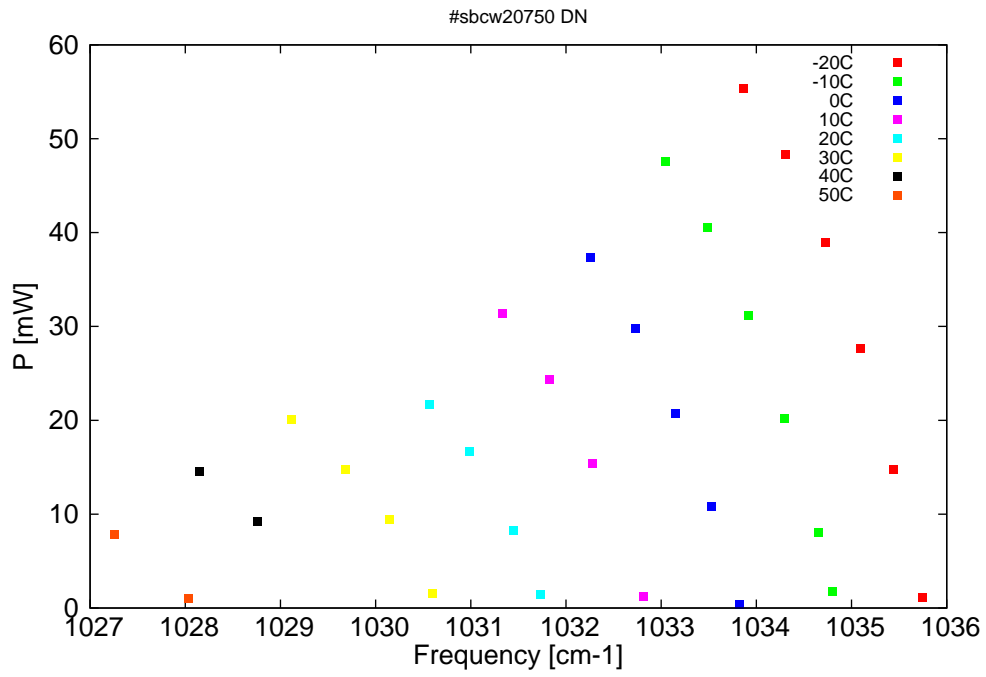


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

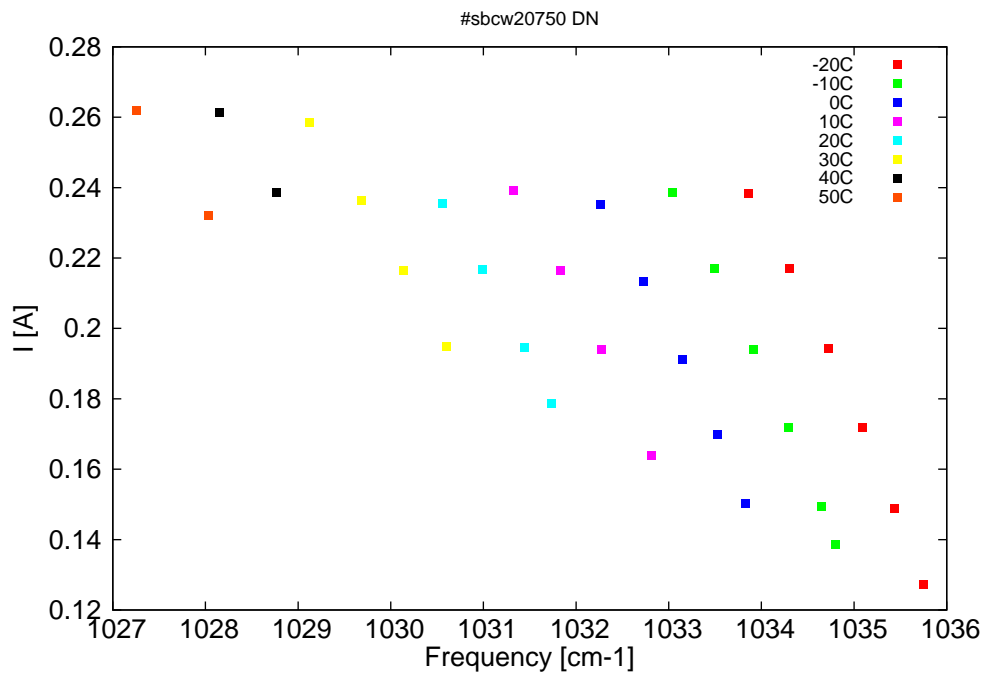


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9654.9	1035.7	1.1	-20	9.42	0.127
9657.8	1035.4	14.7	-20	9.81	0.149
9661	1035.1	27.7	-20	10.2	0.172
9664.4	1034.7	38.9	-20	10.58	0.194
9668.3	1034.3	48.3	-20	10.98	0.217
9672.5	1033.9	55.4	-20	11.36	0.238
9663.7	1034.8	1.7	-10	9.53	0.138
9665.1	1034.6	8.1	-10	9.72	0.149
9668.4	1034.3	20.2	-10	10.1	0.172
9672	1033.9	31.1	-10	10.48	0.194
9676	1033.5	40.5	-10	10.87	0.217
9680.2	1033	47.5	-10	11.25	0.239
9672.8	1033.8	0.4	0	9.66	0.15
9675.6	1033.5	10.8	0	9.98	0.17
9679.1	1033.2	20.7	0	10.34	0.191
9683.1	1032.7	29.8	0	10.72	0.213
9687.5	1032.3	37.3	0	11.11	0.235
9682.3	1032.8	1.2	10	9.79	0.164
9687.4	1032.3	15.4	10	10.3	0.194
9691.5	1031.8	24.3	10	10.69	0.216
9696.2	1031.3	31.4	10	11.08	0.239
9692.4	1031.7	1.4	20	9.97	0.179
9695.1	1031.4	8.3	20	10.23	0.195
9699.4	1031	16.7	20	10.61	0.217
9703.4	1030.6	21.6	20	10.94	0.235
9703.1	1030.6	1.6	30	10.17	0.195
9707.4	1030.1	9.5	30	10.53	0.216
9711.8	1029.7	14.8	30	10.88	0.236
9717.1	1029.1	20.1	30	11.27	0.259
9720.4	1028.8	9.2	40	10.82	0.239
9726.2	1028.2	14.5	40	11.23	0.261
9727.3	1028	1	50	10.63	0.232
9734.6	1027.3	7.9	50	11.14	0.262

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

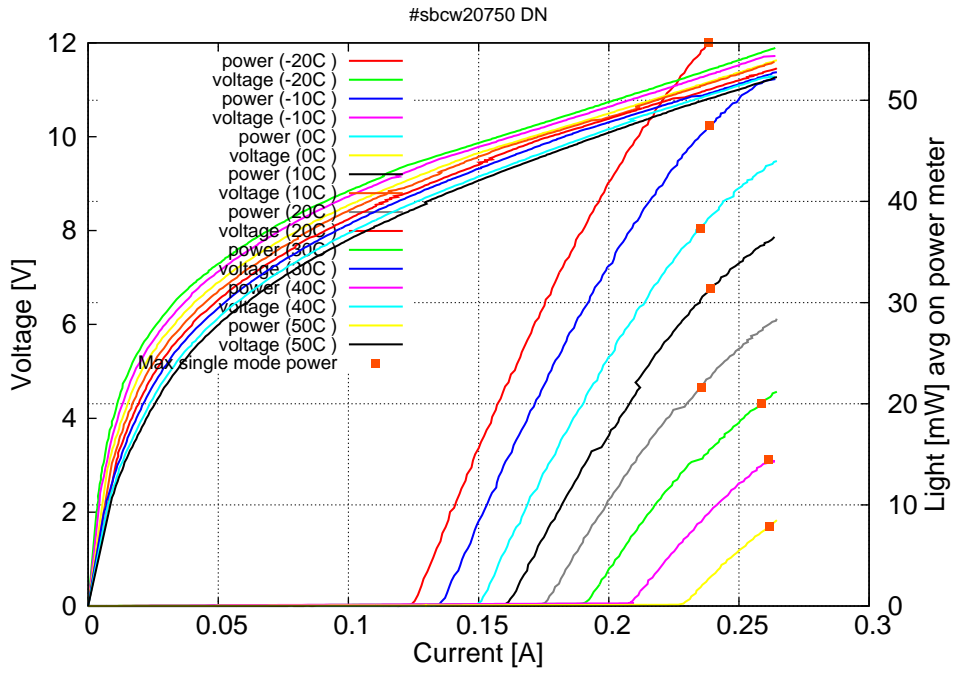


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=9.4V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and 20C, 0.265A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

