

Datasheet for #sbcw25112 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.

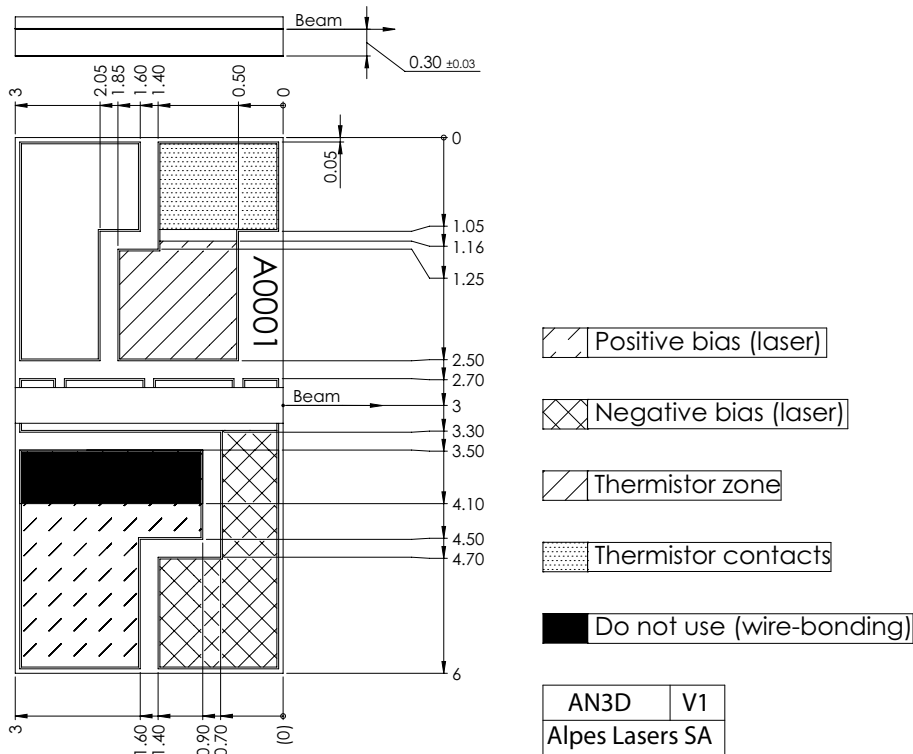


Figure 1: Mechanical and electrical interface for #sbcw25112 DN (please note that AlN submount numbering is P4102)

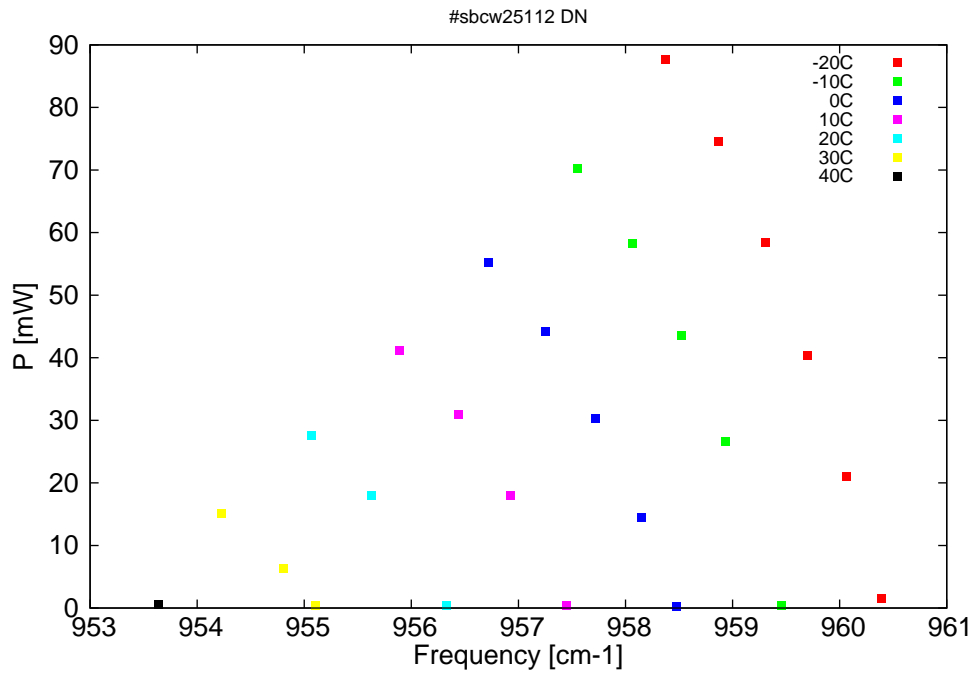


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

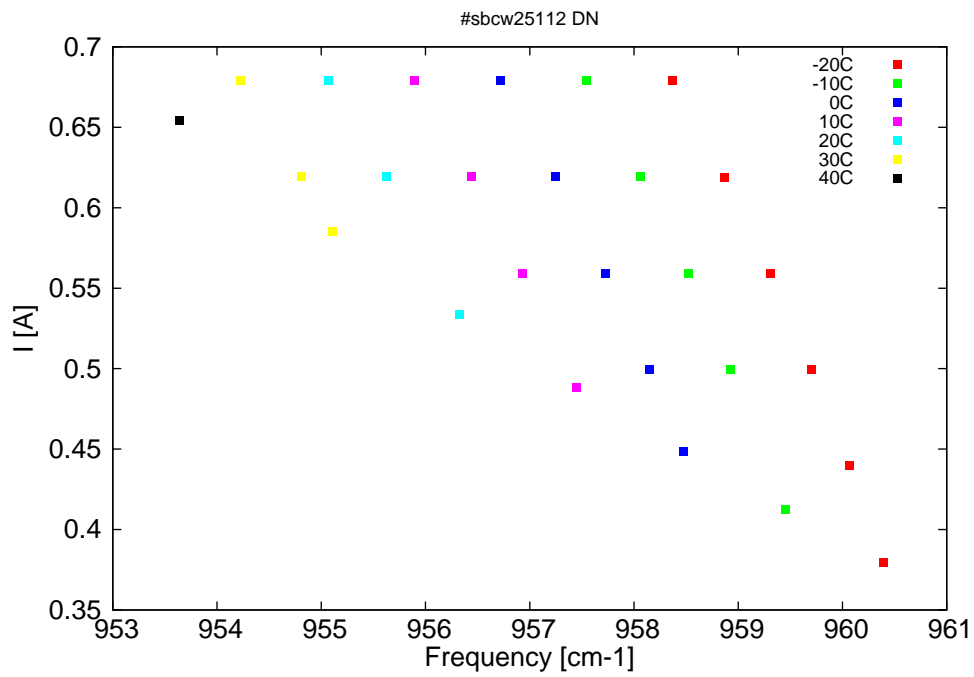


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10412.4	960.4	1.5	-20	8.08	0.38
10416	960.1	21.1	-20	8.36	0.44
10419.9	959.7	40.3	-20	8.67	0.499
10424.2	959.3	58.5	-20	8.98	0.559
10429	958.9	74.6	-20	9.32	0.619
10434.4	958.4	87.6	-20	9.7	0.679
10422.6	959.5	0.4	-10	8.2	0.412
10428.3	958.9	26.6	-10	8.65	0.5
10432.8	958.5	43.5	-10	8.97	0.559
10437.7	958.1	58.3	-10	9.33	0.619
10443.3	957.5	70.3	-10	9.71	0.679
10433.2	958.5	0.3	0	8.36	0.449
10436.8	958.1	14.5	0	8.63	0.5
10441.4	957.7	30.2	0	8.96	0.559
10446.6	957.3	44.2	0	9.32	0.619
10452.4	956.7	55.2	0	9.7	0.679
10444.5	957.4	0.4	10	8.55	0.488
10450.1	956.9	17.9	10	8.95	0.559
10455.4	956.4	30.9	10	9.32	0.619
10461.4	955.9	41.1	10	9.71	0.679
10456.6	956.3	0.4	20	8.79	0.534
10464.4	955.6	18	20	9.31	0.619
10470.4	955.1	27.6	20	9.7	0.679
10470	955.1	0.4	30	9.07	0.585
10473.3	954.8	6.3	30	9.29	0.619
10479.7	954.2	15.1	30	9.68	0.679
10486.1	953.6	0.5	40	9.51	0.654

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

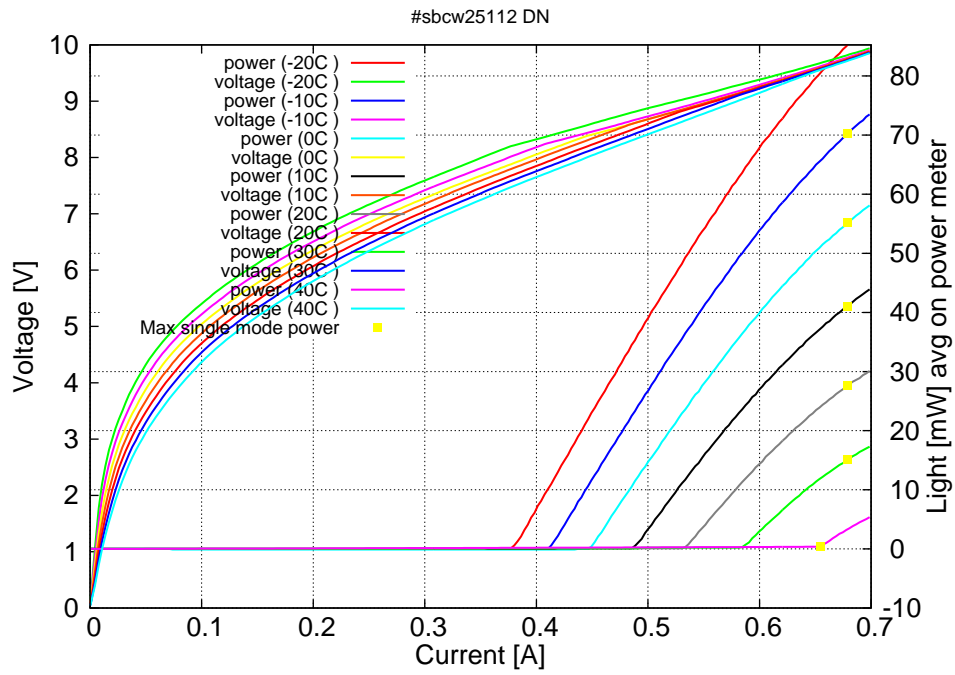


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.37A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.700A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

