

Datasheet for #sbcw25120 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.

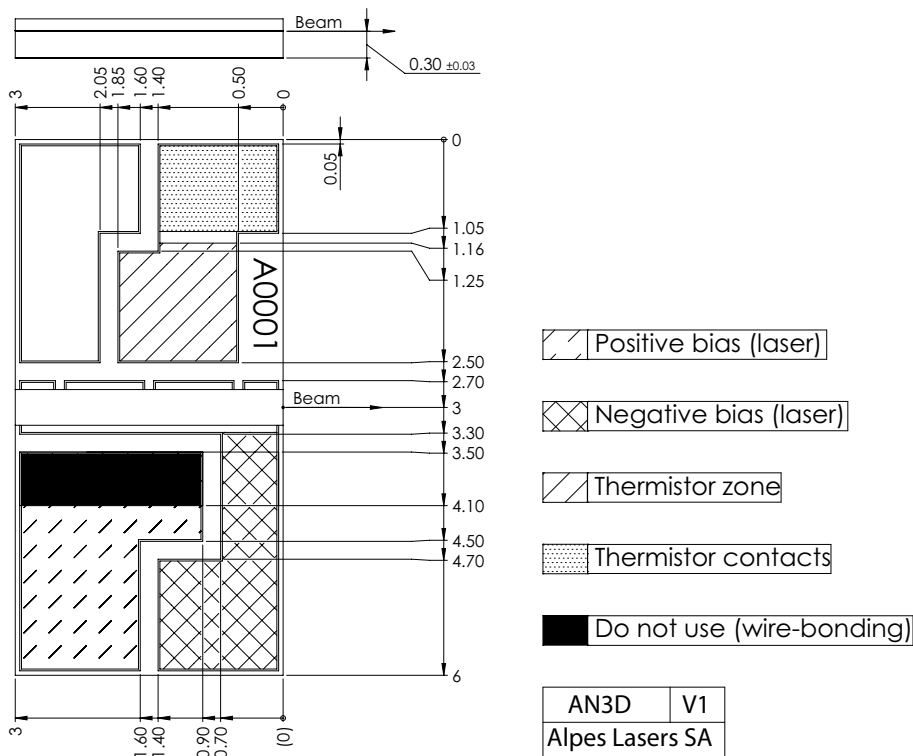


Figure 1: Mechanical and electrical interface for #sbcw25120 DN (please note that AlN submount numbering is P3751)

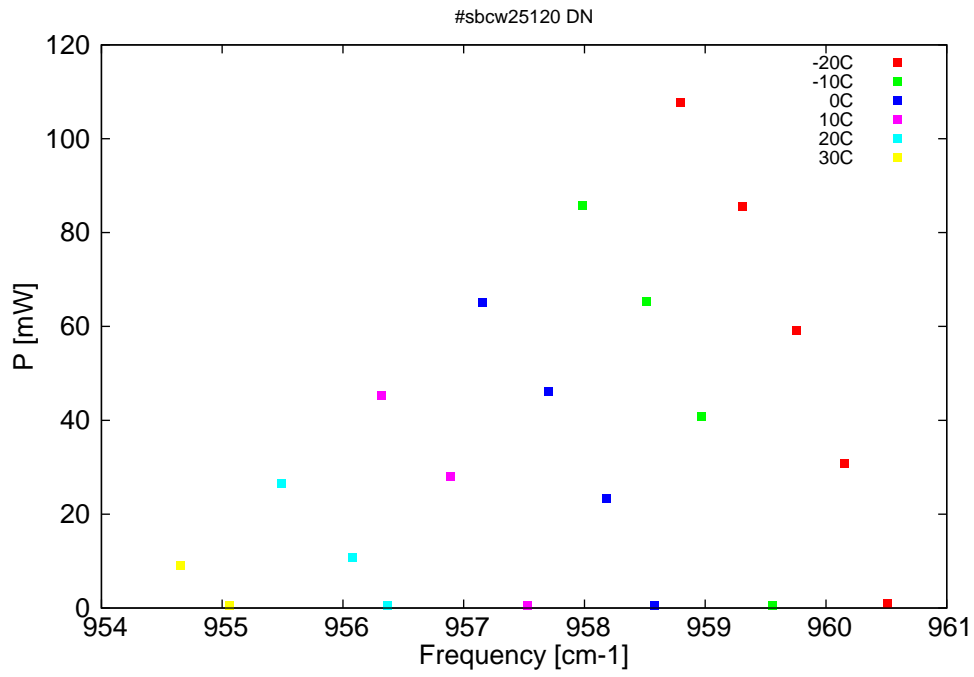


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

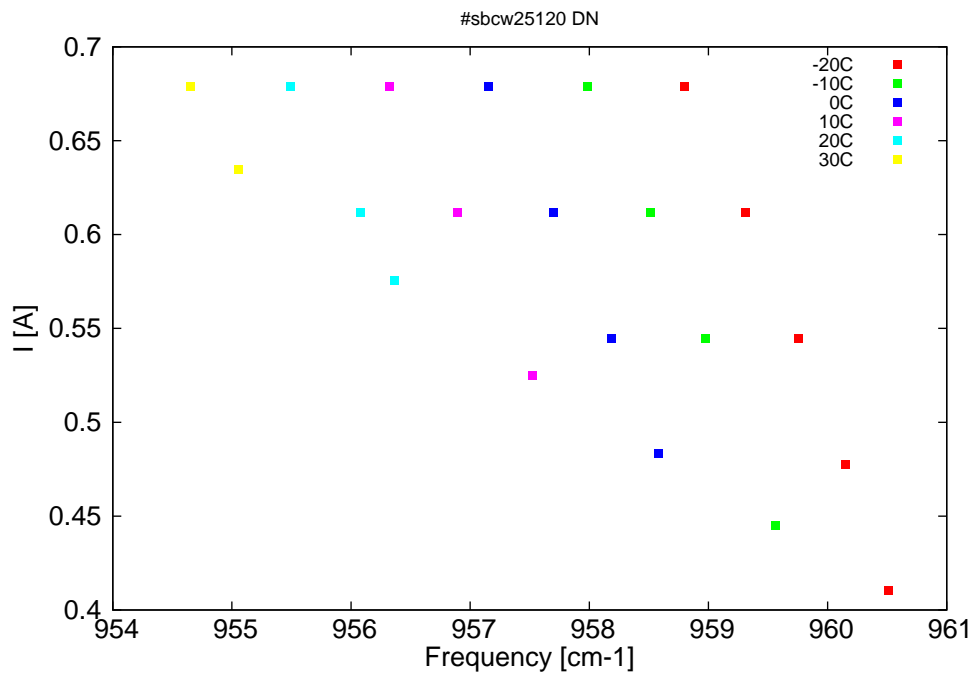


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10411.1	960.5	1	-20	8.33	0.411
10415	960.2	30.8	-20	8.65	0.478
10419.3	959.8	59.2	-20	8.97	0.545
10424.1	959.3	85.6	-20	9.33	0.612
10429.7	958.8	107.8	-20	9.72	0.679
10421.4	959.6	0.5	-10	8.44	0.445
10427.8	959	40.8	-10	8.93	0.545
10432.8	958.5	65.3	-10	9.29	0.612
10438.6	958	85.7	-10	9.69	0.679
10432.1	958.6	0.5	0	8.6	0.483
10436.4	958.2	23.3	0	8.91	0.545
10441.7	957.7	46.1	0	9.28	0.612
10447.7	957.2	65	0	9.68	0.679
10443.6	957.5	0.5	10	8.79	0.525
10450.5	956.9	28.1	10	9.27	0.612
10456.7	956.3	45.2	10	9.67	0.679
10456.2	956.4	0.5	20	9.03	0.576
10459.4	956.1	10.7	20	9.23	0.612
10465.8	955.5	26.4	20	9.64	0.679
10470.6	955.1	0.5	30	9.37	0.635
10475	954.7	9.1	30	9.63	0.679

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

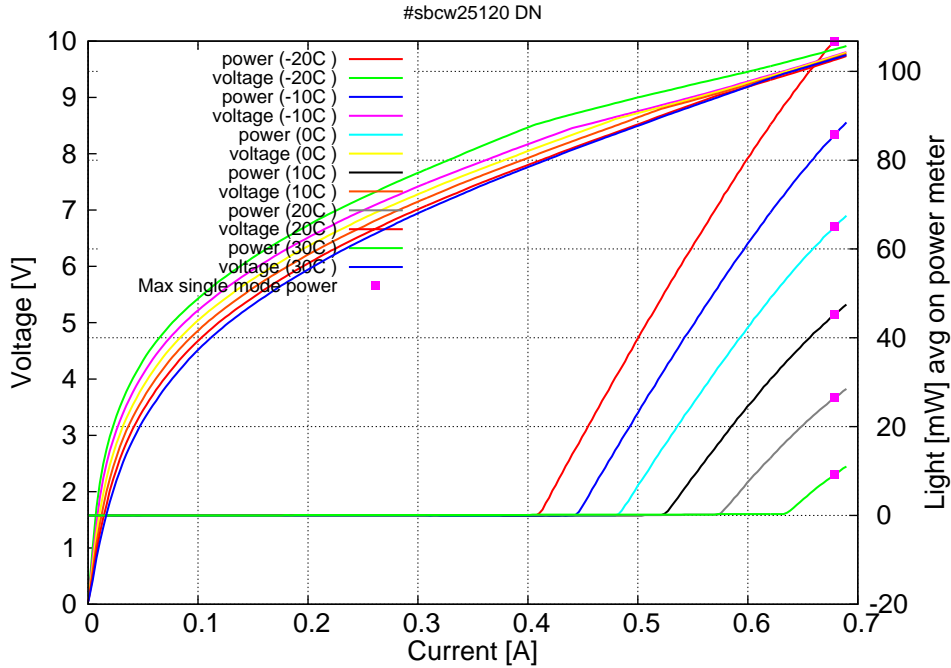


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.40A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation

current: 0.690A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

