

Datasheet for #sbcw25119 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.

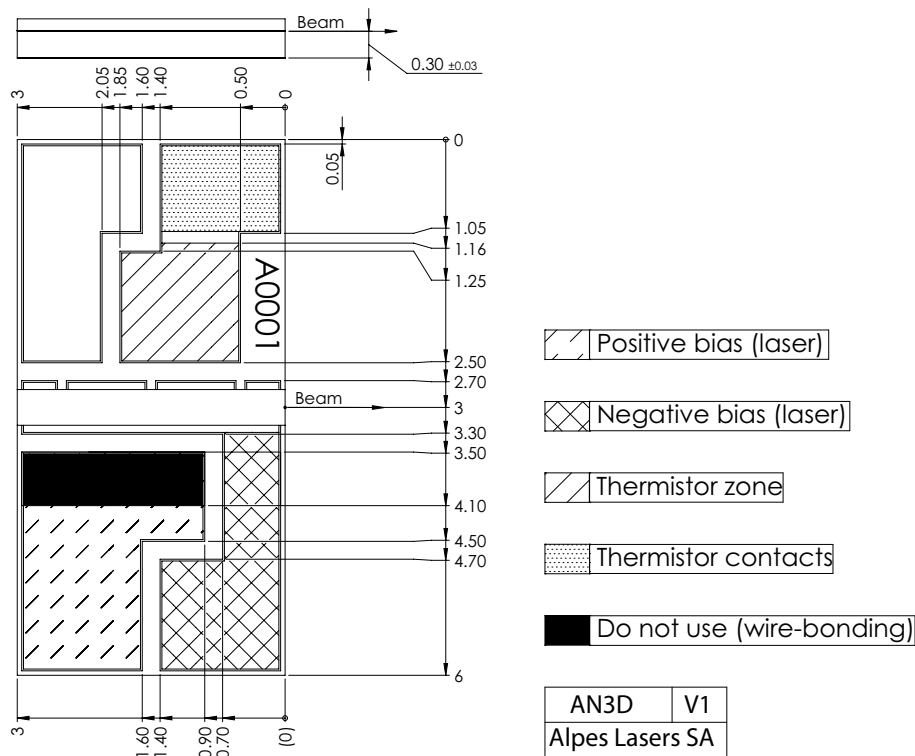


Figure 1: Mechanical and electrical interface for #sbcw25119 DN (please note that AlN submount numbering is P4118)

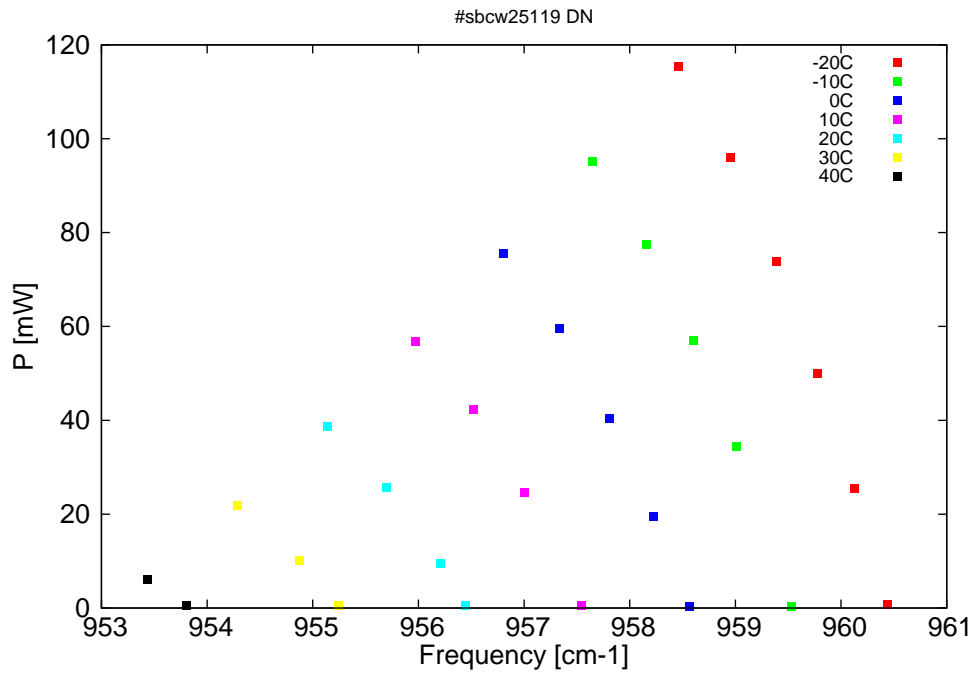


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

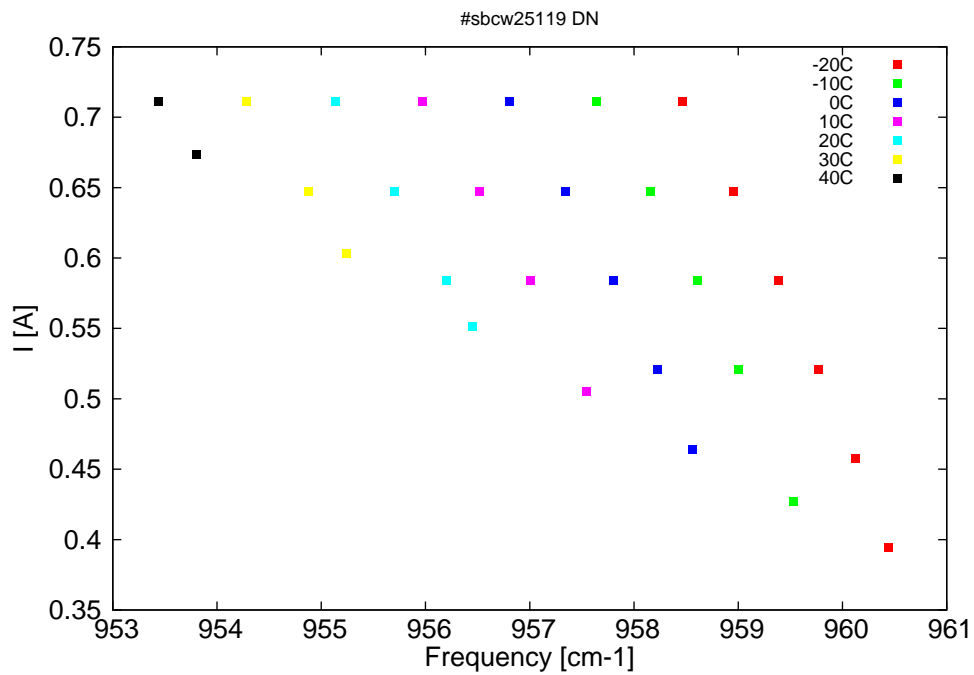


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10411.9	960.4	0.8	-20	8.15	0.394
10415.3	960.1	25.5	-20	8.44	0.458
10419.1	959.8	50.1	-20	8.73	0.521
10423.3	959.4	73.9	-20	9.03	0.584
10428	959	96.1	-20	9.36	0.648
10433.4	958.5	115.4	-20	9.71	0.711
10421.8	959.5	0.4	-10	8.24	0.427
10427.5	959	34.5	-10	8.68	0.521
10431.8	958.6	56.9	-10	8.99	0.584
10436.7	958.2	77.4	-10	9.33	0.648
10442.3	957.6	95.2	-10	9.69	0.711
10432.3	958.6	0.4	0	8.39	0.464
10436	958.2	19.5	0	8.67	0.521
10440.5	957.8	40.3	0	8.98	0.584
10445.6	957.3	59.5	0	9.33	0.648
10451.4	956.8	75.6	0	9.7	0.711
10443.4	957.5	0.5	10	8.57	0.505
10449.3	957	24.6	10	8.98	0.584
10454.5	956.5	42.3	10	9.33	0.648
10460.6	956	56.8	10	9.7	0.711
10455.4	956.4	0.6	20	8.8	0.551
10458	956.2	9.6	20	8.97	0.584
10463.5	955.7	25.6	20	9.32	0.648
10469.7	955.1	38.7	20	9.69	0.711
10468.5	955.2	0.5	30	9.08	0.603
10472.6	954.9	10.2	30	9.34	0.648
10479	954.3	21.8	30	9.71	0.711
10484.3	953.8	0.5	40	9.5	0.673
10488.4	953.4	6.1	40	9.73	0.711

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

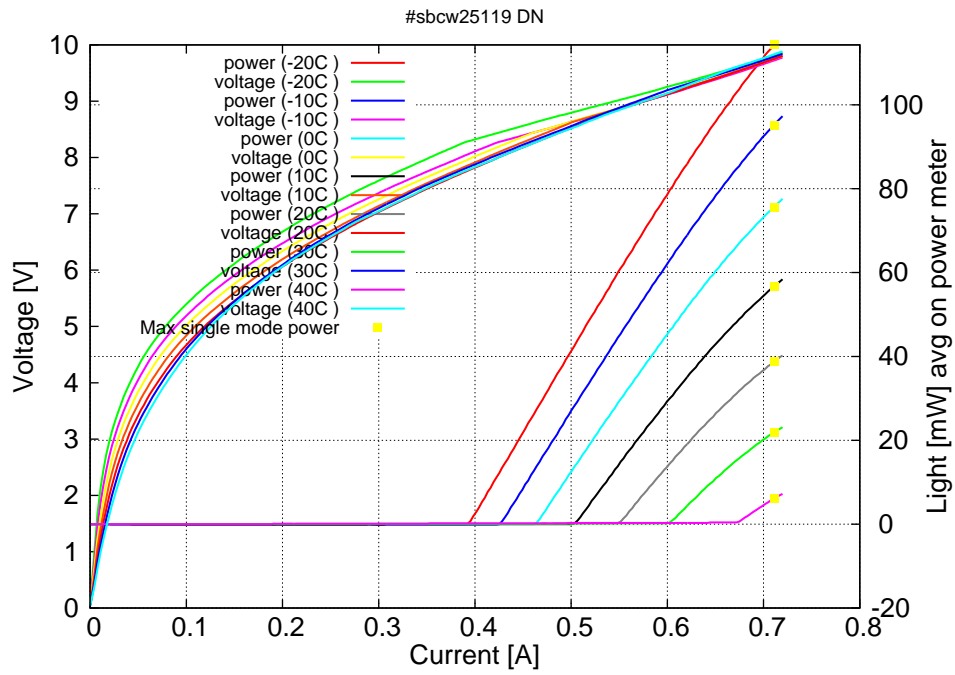


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.39A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.720A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

