

Datasheet for #sbcw25501 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 #sbcw25501 DN (please note that AlN submount numbering is A12MP)

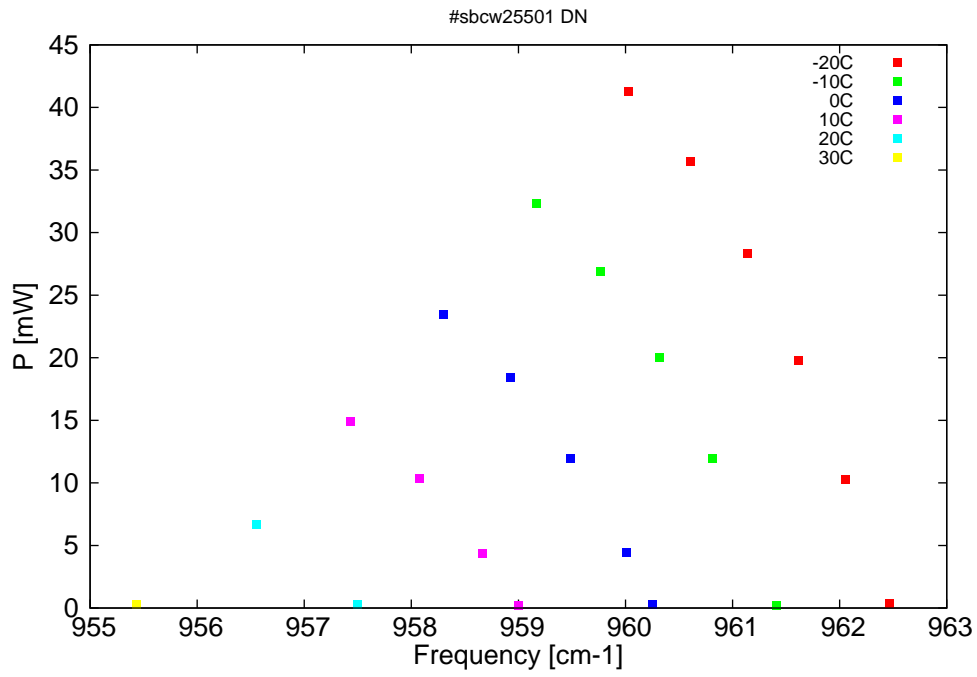


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

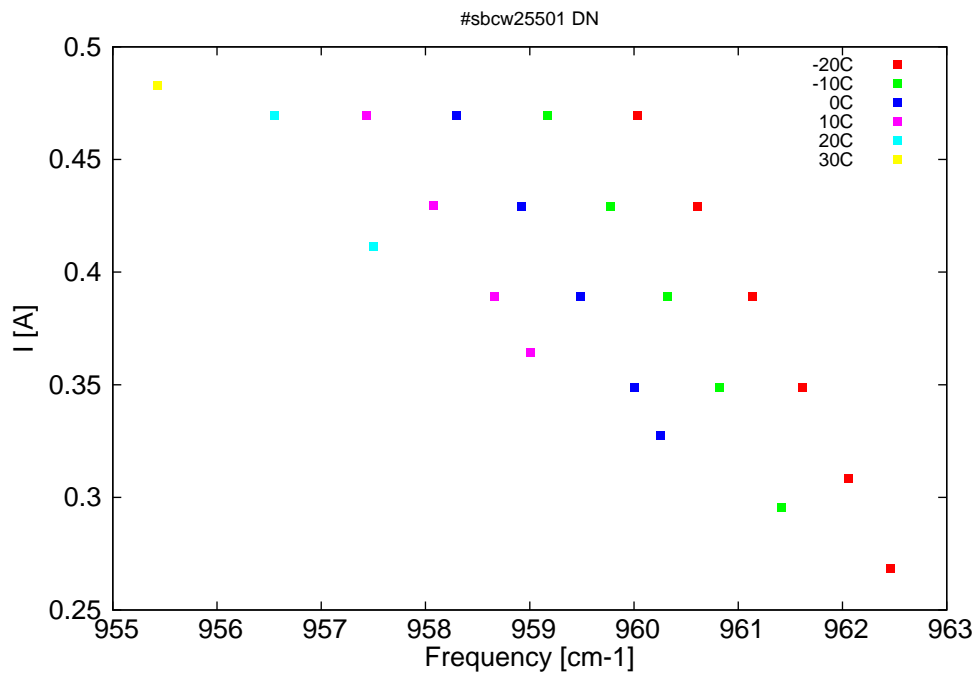


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10390	962.5	0.4	-20	9.04	0.268
10394.4	962.1	10.3	-20	9.37	0.309
10399.1	961.6	19.8	-20	9.7	0.349
10404.3	961.1	28.3	-20	10.02	0.389
10410.1	960.6	35.7	-20	10.34	0.429
10416.4	960	41.3	-20	10.66	0.47
10401.4	961.4	0.2	-10	9.16	0.296
10407.8	960.8	12	-10	9.6	0.349
10413.2	960.3	20.1	-10	9.93	0.389
10419.2	959.8	26.9	-10	10.25	0.429
10425.7	959.2	32.3	-10	10.59	0.47
10413.9	960.3	0.3	0	9.36	0.328
10416.6	960	4.4	0	9.54	0.349
10422.2	959.5	12	0	9.88	0.389
10428.4	958.9	18.5	0	10.21	0.429
10435.2	958.3	23.4	0	10.54	0.47
10427.5	959	0.2	10	9.6	0.364
10431.2	958.7	4.3	10	9.81	0.389
10437.6	958.1	10.3	10	10.15	0.429
10444.6	957.4	14.9	10	10.49	0.47
10443.9	957.5	0.3	20	9.97	0.412
10454.2	956.6	6.7	20	10.46	0.47
10466.5	955.4	0.3	30	10.55	0.483

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

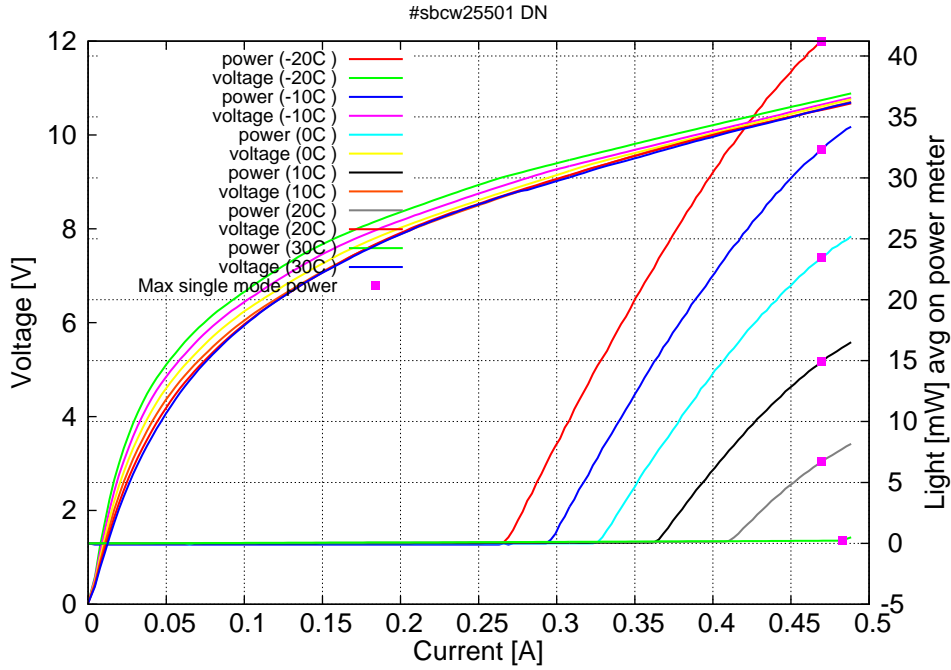


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.26A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.490A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

