

Datasheet for #sbcw25115 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.

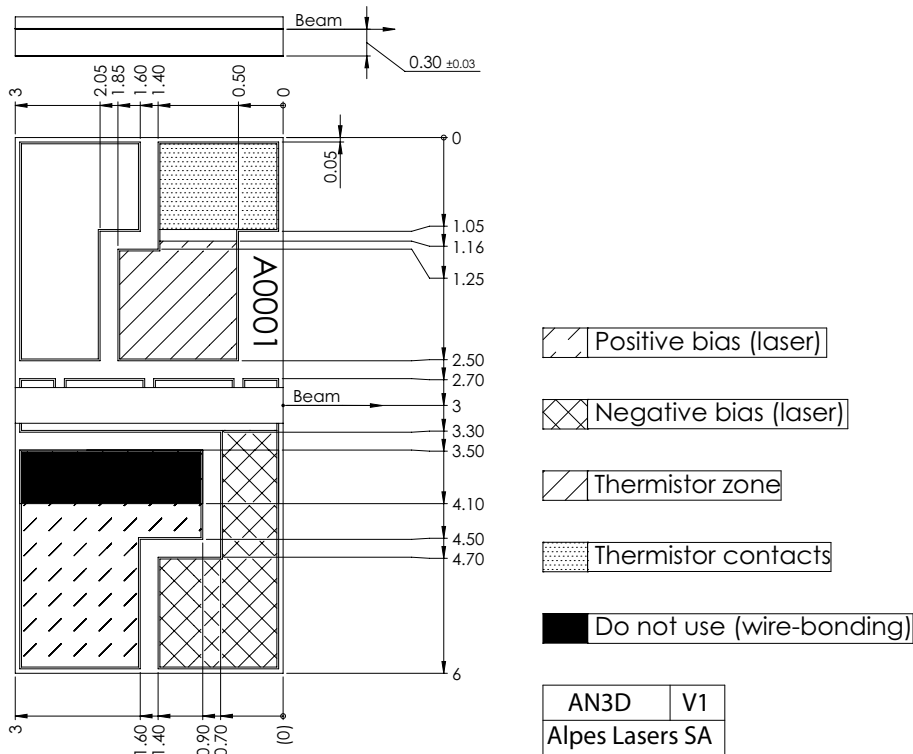


Figure 1: Mechanical and electrical interface for #sbcw25115 DN (please note that AlN submount numbering is P4110)

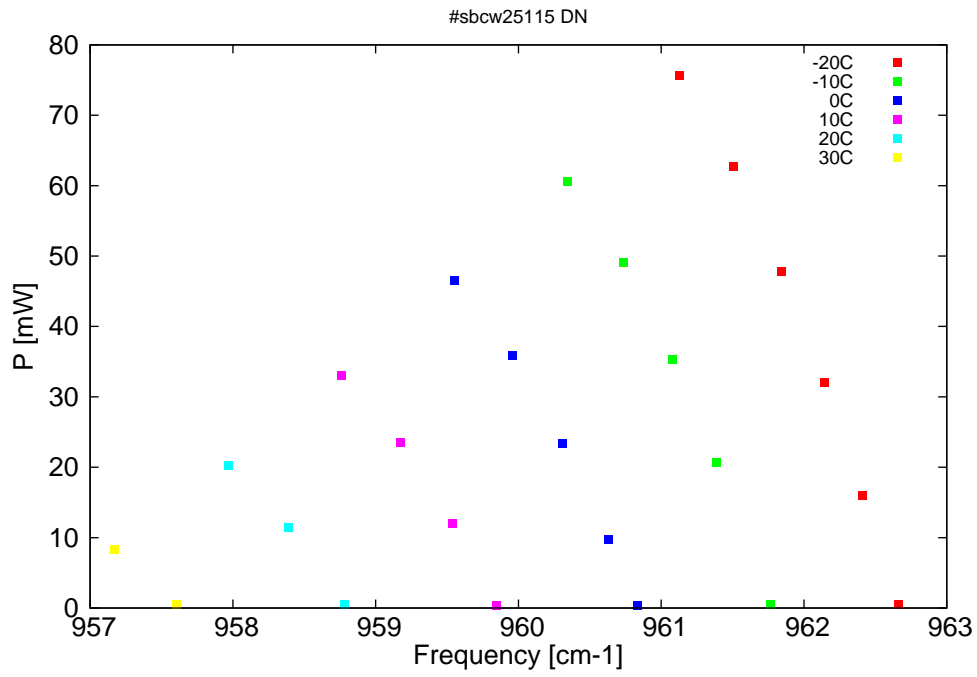


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

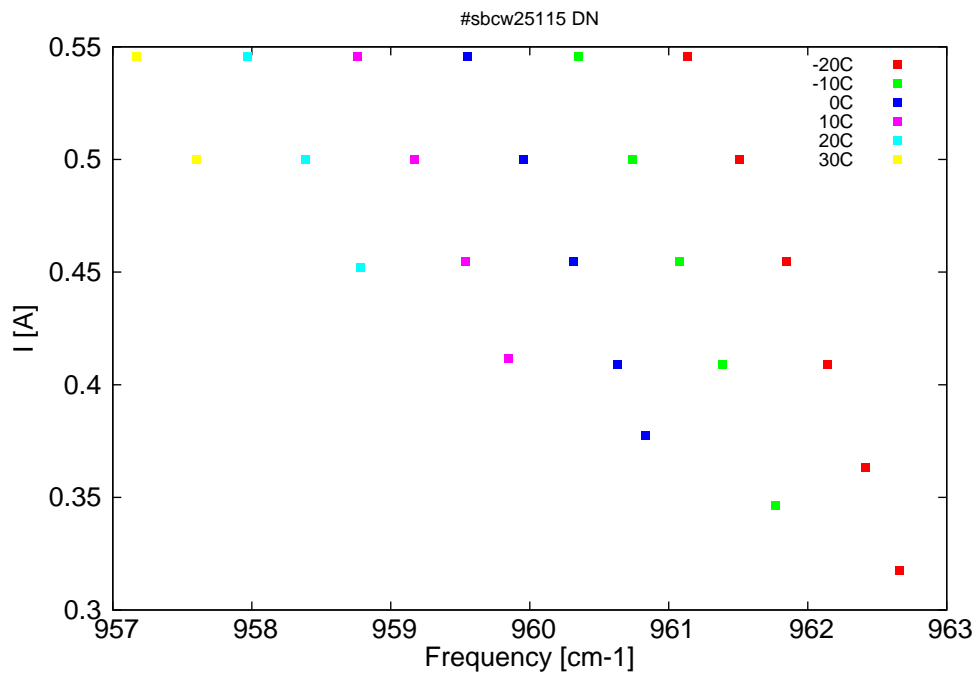


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10387.9	962.7	0.5	-20	8.25	0.318
10390.5	962.4	15.9	-20	8.52	0.363
10393.5	962.1	32	-20	8.81	0.409
10396.7	961.8	47.8	-20	9.11	0.455
10400.3	961.5	62.8	-20	9.44	0.5
10404.4	961.1	75.6	-20	9.8	0.546
10397.5	961.8	0.5	-10	8.36	0.346
10401.6	961.4	20.7	-10	8.76	0.409
10404.9	961.1	35.4	-10	9.06	0.455
10408.7	960.7	49	-10	9.39	0.5
10412.9	960.3	60.6	-10	9.75	0.546
10407.6	960.8	0.4	0	8.53	0.377
10409.8	960.6	9.7	0	8.74	0.409
10413.3	960.3	23.3	0	9.05	0.455
10417.1	960	35.9	0	9.4	0.5
10421.5	959.6	46.6	0	9.76	0.546
10418.3	959.8	0.4	10	8.72	0.412
10421.7	959.5	12	10	9.01	0.455
10425.6	959.2	23.5	10	9.35	0.5
10430.1	958.8	33.1	10	9.71	0.546
10429.9	958.8	0.5	20	8.97	0.452
10434.2	958.4	11.5	20	9.33	0.5
10438.8	958	20.2	20	9.69	0.546
10442.7	957.6	0.5	30	9.29	0.5
10447.5	957.2	8.2	30	9.64	0.546

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

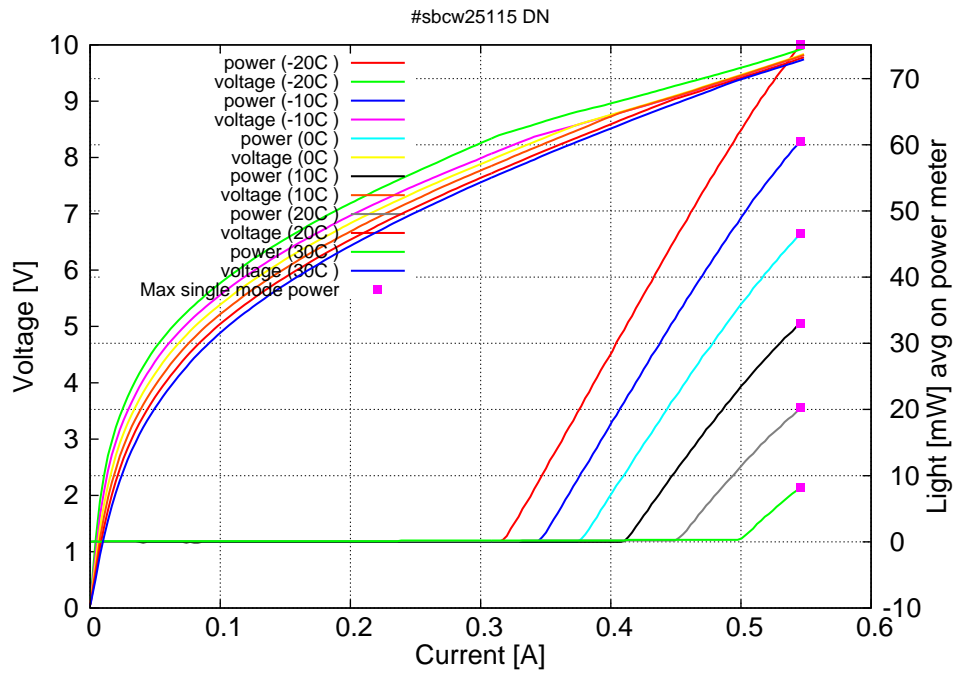


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.31A$ / $V_{th}=8.2V$ (2-wires measurements). Maximum operation current: 0.550A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

