

Datasheet for #sbcw27595 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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.

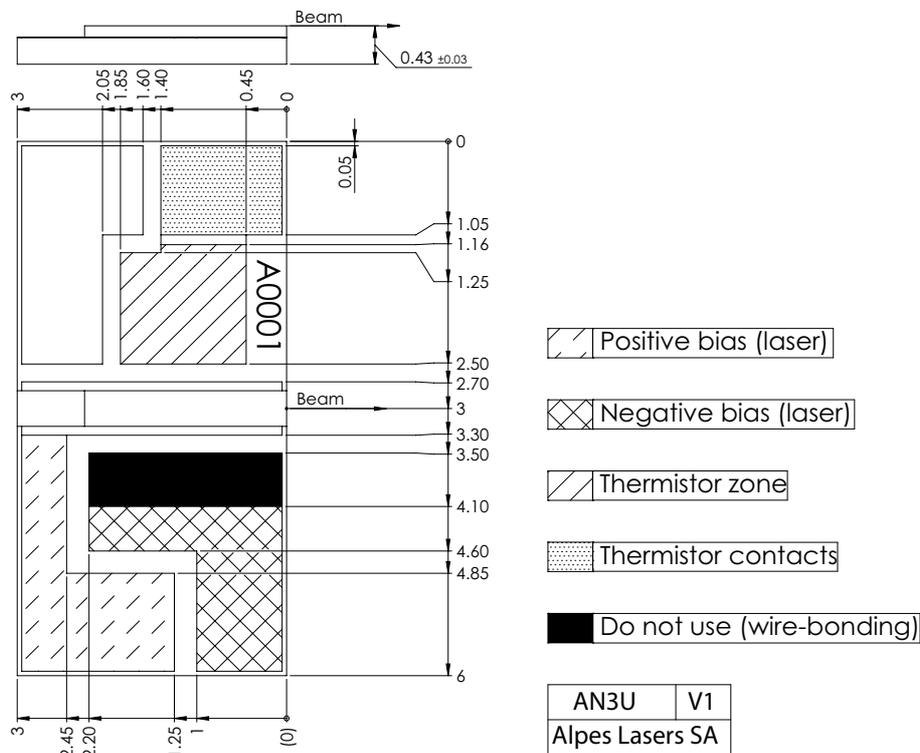


Figure 1: Mechanical and electrical interface for #sbcw27595 DN (please note that AlN submount numbering is A0V0R)

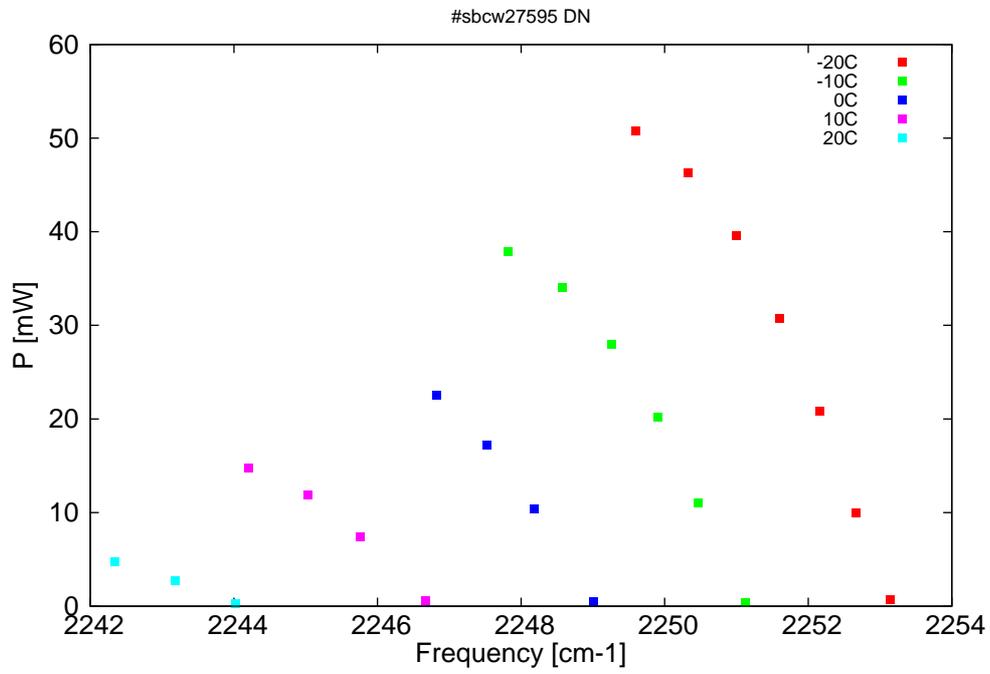


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

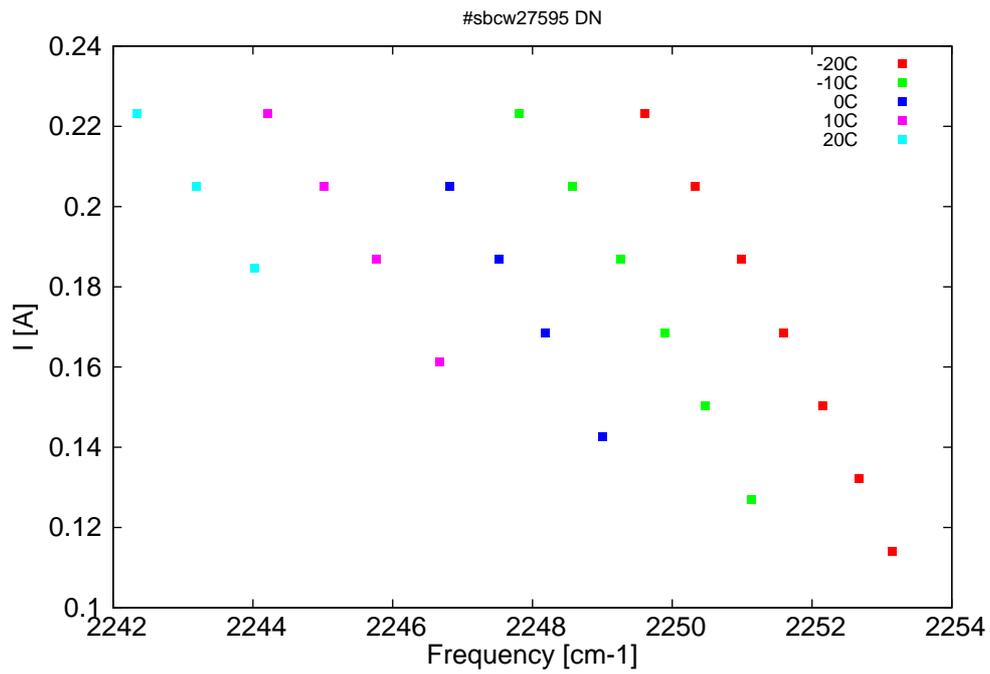


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4438.2	2253.1	0.7	-20	8.87	0.114
4439.2	2252.7	10	-20	9.07	0.132
4440.2	2252.2	20.8	-20	9.28	0.15
4441.3	2251.6	30.8	-20	9.49	0.169
4442.5	2251	39.6	-20	9.7	0.187
4443.8	2250.3	46.3	-20	9.93	0.205
4445.2	2249.6	50.7	-20	10.16	0.223
4442.2	2251.1	0.4	-10	8.99	0.127
4443.5	2250.5	11	-10	9.25	0.15
4444.6	2249.9	20.2	-10	9.46	0.169
4445.9	2249.3	28	-10	9.68	0.187
4447.3	2248.6	34.1	-10	9.91	0.205
4448.8	2247.8	37.9	-10	10.14	0.223
4446.4	2249	0.5	0	9.15	0.143
4448	2248.2	10.3	0	9.44	0.169
4449.3	2247.5	17.2	0	9.66	0.187
4450.7	2246.8	22.5	0	9.89	0.205
4451	2246.7	0.6	10	9.35	0.161
4452.8	2245.8	7.4	10	9.64	0.187
4454.3	2245	11.9	10	9.87	0.205
4455.9	2244.2	14.8	10	10.11	0.223
4456.3	2244	0.3	20	9.63	0.185
4457.9	2243.2	2.7	20	9.87	0.205
4459.6	2242.3	4.7	20	10.11	0.223

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

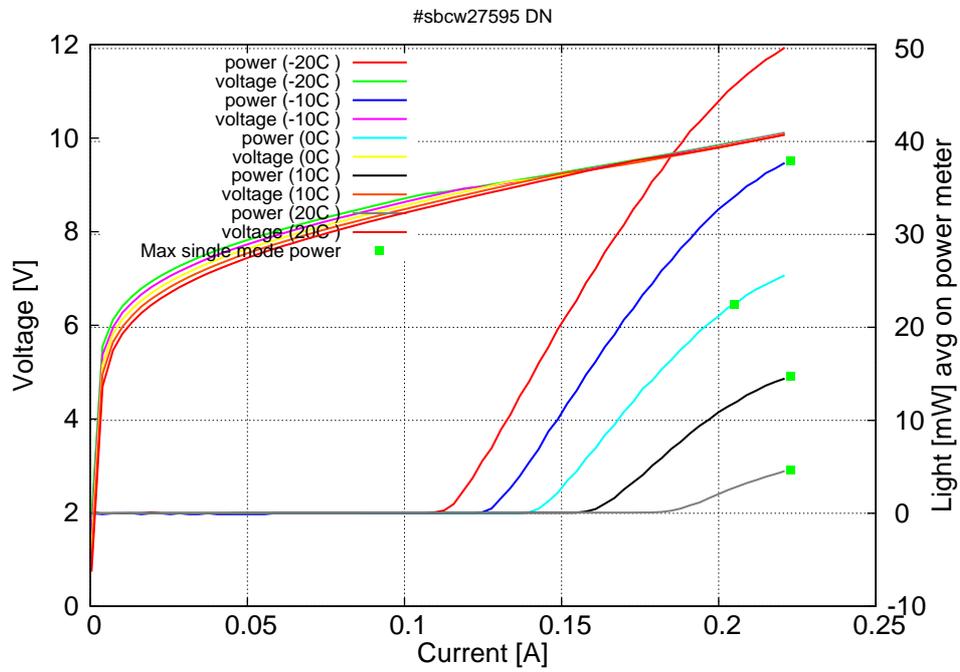


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.223A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

