

Datasheet for #sbcw27055 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.

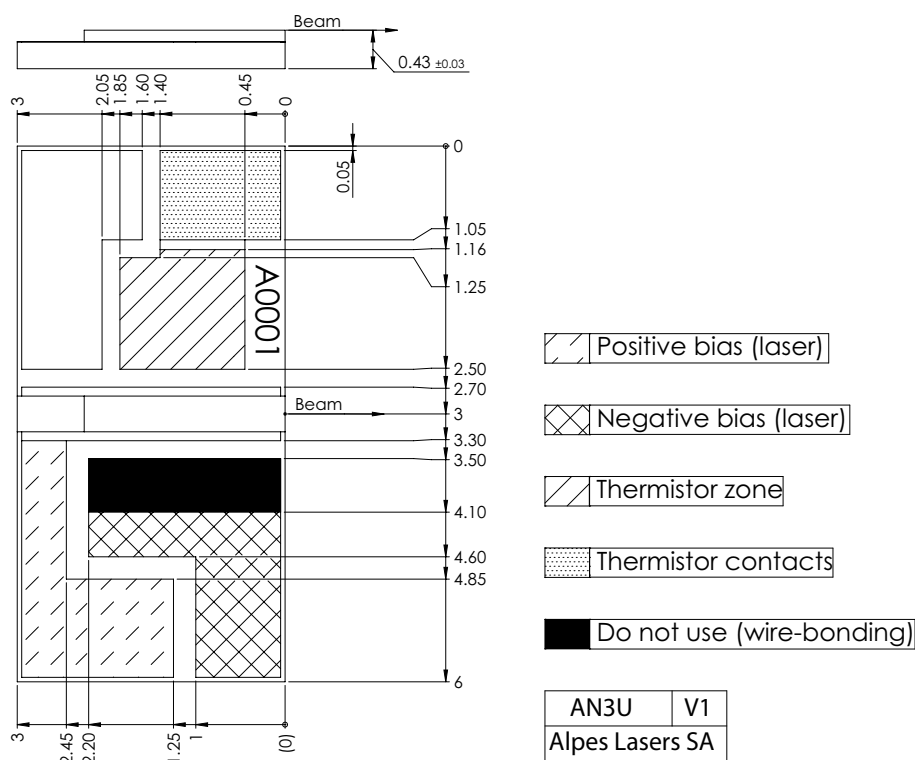


Figure 1: Mechanical and electrical interface for #sbcw27055 DN (please note that AlN submount numbering is A0XWM)

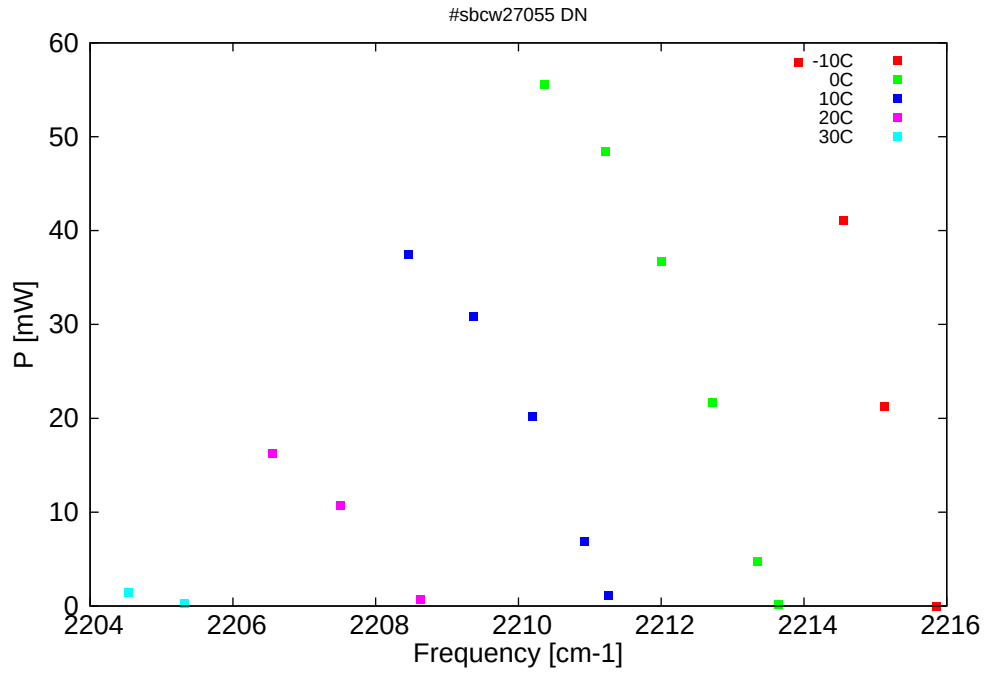


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

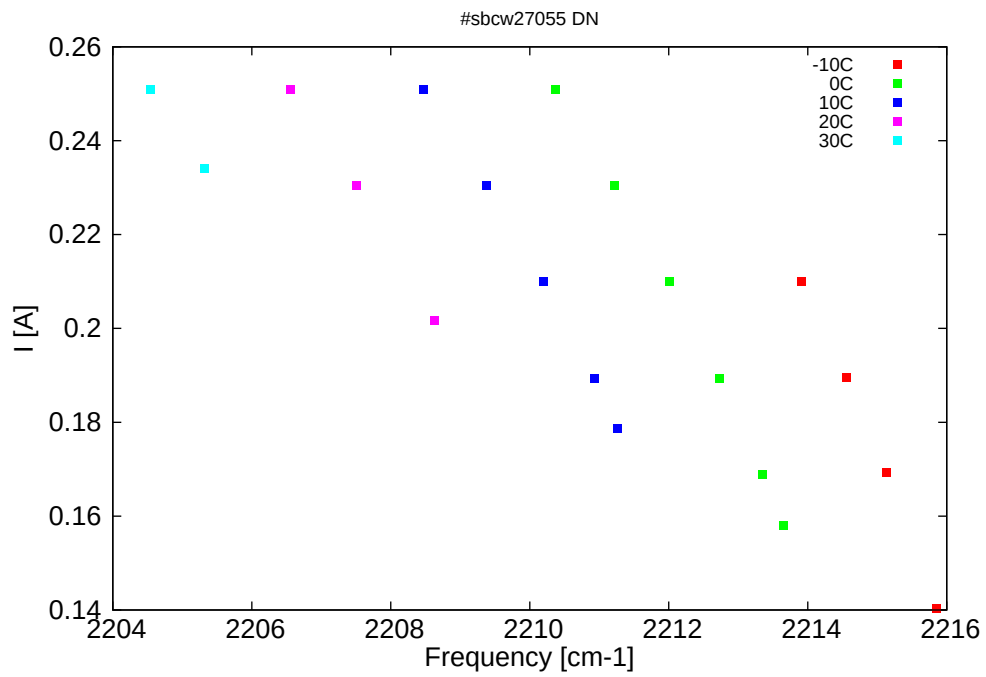


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4512.9	2215.9	0	-10	9.35	0.14
4514.4	2215.1	21.2	-10	9.68	0.169
4515.6	2214.6	41.1	-10	9.94	0.19
4516.9	2213.9	57.9	-10	10.21	0.21
4517.4	2213.6	0.1	0	9.45	0.158
4518	2213.3	4.8	0	9.55	0.169
4519.3	2212.7	21.7	0	9.79	0.189
4520.8	2212	36.7	0	10.05	0.21
4522.4	2211.2	48.4	0	10.31	0.23
4524.1	2210.4	55.6	0	10.6	0.251
4522.3	2211.3	1.1	10	9.67	0.179
4523	2210.9	6.9	10	9.79	0.189
4524.5	2210.2	20.1	10	10.04	0.21
4526.2	2209.4	30.9	10	10.31	0.23
4528	2208.5	37.4	10	10.59	0.251
4527.7	2208.6	0.7	20	9.96	0.202
4530	2207.5	10.8	20	10.31	0.23
4531.9	2206.6	16.3	20	10.6	0.251
4534.5	2205.3	0.3	30	10.42	0.234
4536.1	2204.5	1.5	30	10.64	0.251

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

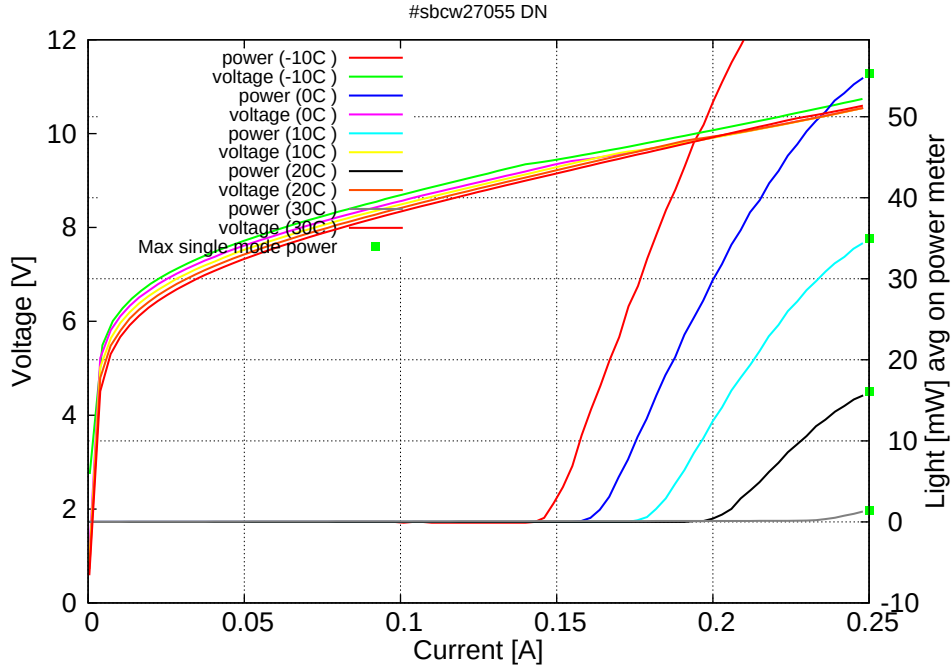


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.16A$ / $V_{th}=9.5V$ (2-wires measurements). Maximum operation current: 0.21A at -10C, 0.25A between 0C and 30C.

Figure 3: spectra at different temperatures for various DC currents

