

Datasheet for #sbcw27603 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.

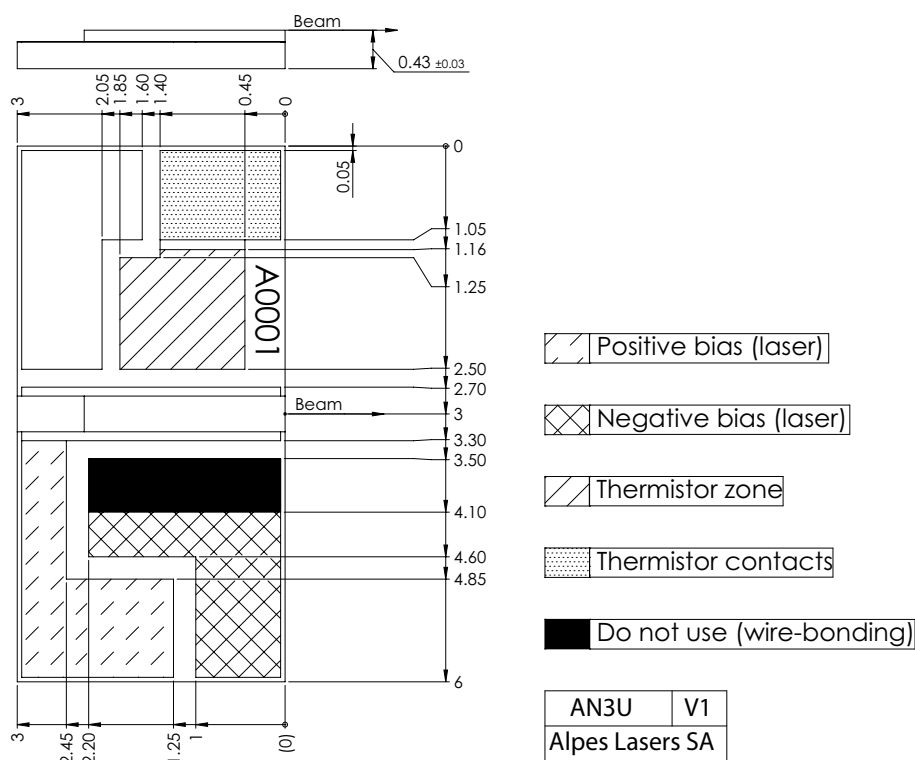


Figure 1: Mechanical and electrical interface for #sbcw27603 DN (please note that AlN submount numbering is A0VC0)

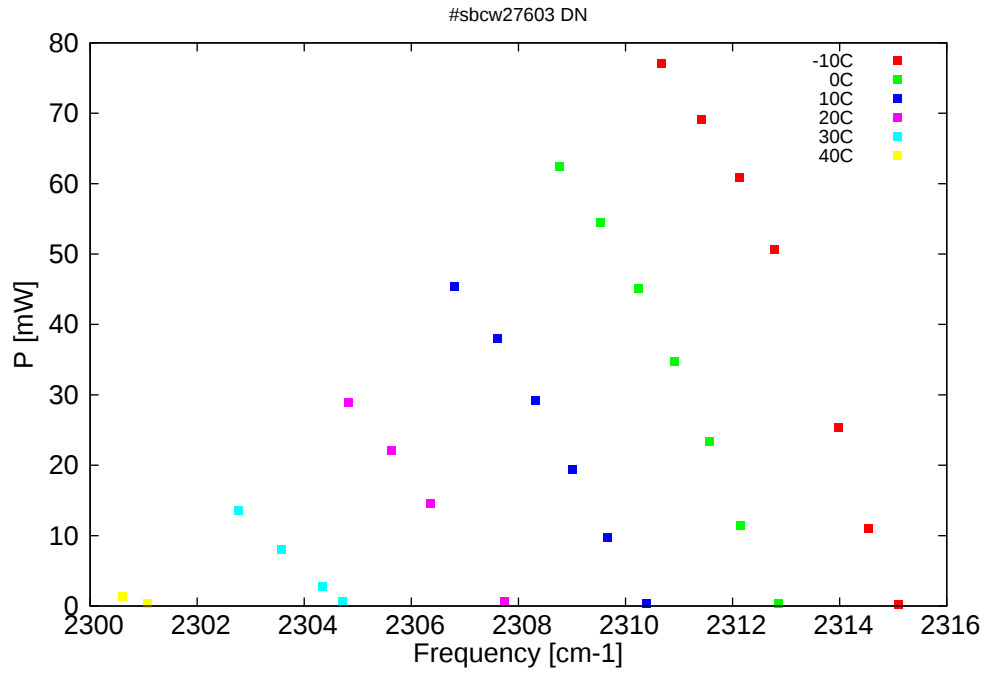


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

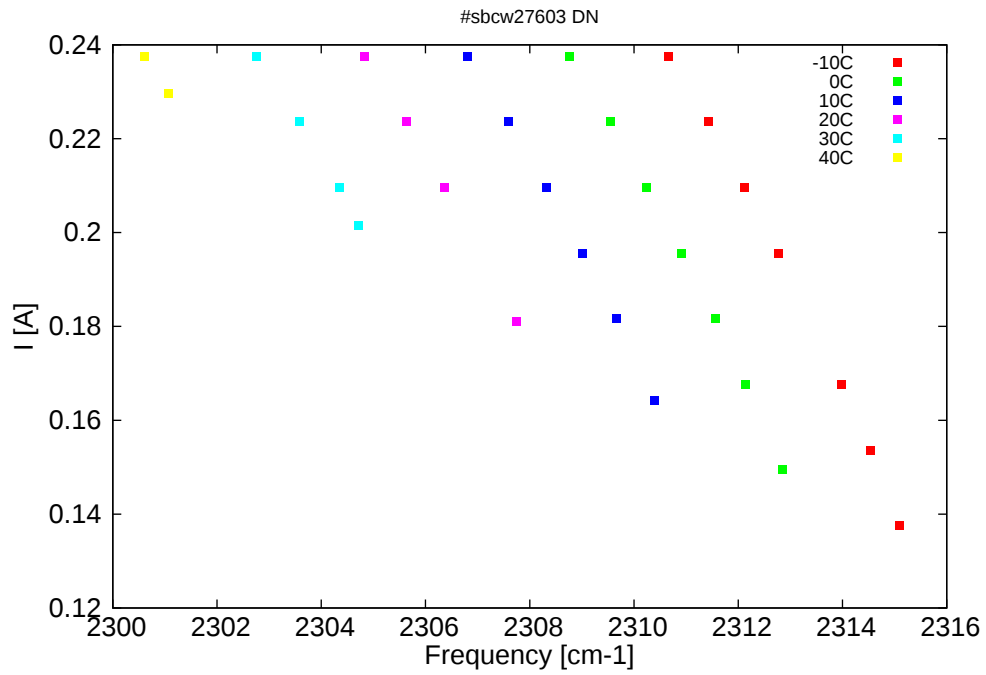


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4319.5	2315.1	0.2	-10	12.66	0.138
4320.5	2314.5	11	-10	12.83	0.154
4321.5	2314	25.4	-10	12.99	0.168
4323.8	2312.8	50.7	-10	13.3	0.196
4325	2312.1	60.9	-10	13.46	0.21
4326.3	2311.4	69.1	-10	13.62	0.224
4327.8	2310.7	77.1	-10	13.77	0.238
4323.7	2312.9	0.3	0	12.69	0.15
4325	2312.1	11.4	0	12.88	0.168
4326.1	2311.6	23.3	0	13.04	0.182
4327.3	2310.9	34.7	0	13.19	0.196
4328.5	2310.2	45.1	0	13.35	0.21
4329.9	2309.5	54.5	0	13.5	0.224
4331.3	2308.8	62.4	0	13.65	0.238
4328.3	2310.4	0.4	10	12.77	0.164
4329.6	2309.7	9.8	10	12.95	0.182
4330.9	2309	19.4	10	13.1	0.196
4332.2	2308.3	29.2	10	13.25	0.21
4333.5	2307.6	38	10	13.4	0.224
4335	2306.8	45.5	10	13.56	0.238
4333.2	2307.7	0.7	20	12.89	0.181
4335.8	2306.4	14.5	20	13.18	0.21
4337.2	2305.6	22.1	20	13.32	0.224
4338.7	2304.8	28.9	20	13.47	0.238
4338.9	2304.7	0.7	30	13.07	0.202
4339.6	2304.3	2.8	30	13.14	0.21
4341.1	2303.6	8.1	30	13.28	0.224
4342.6	2302.8	13.6	30	13.43	0.238
4345.8	2301.1	0.3	40	13.36	0.23
4346.7	2300.6	1.3	40	13.43	0.238

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

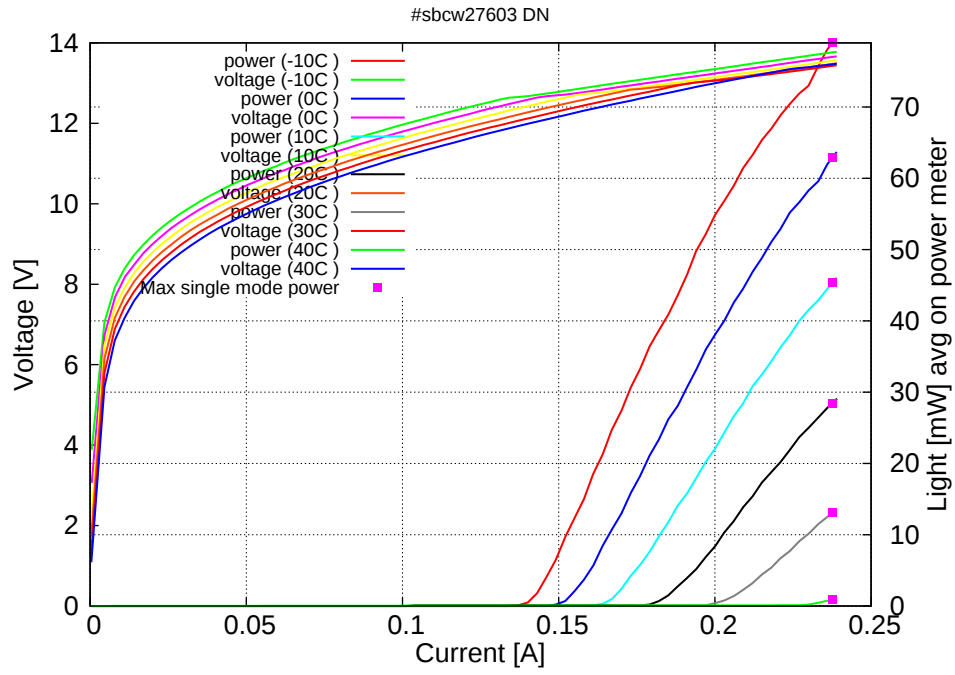


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.14A$ / $V_{th}=12.7V$ (2-wires measurements). Maximum operation current: 0.24A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

