

Datasheet for #sbcw27915 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.

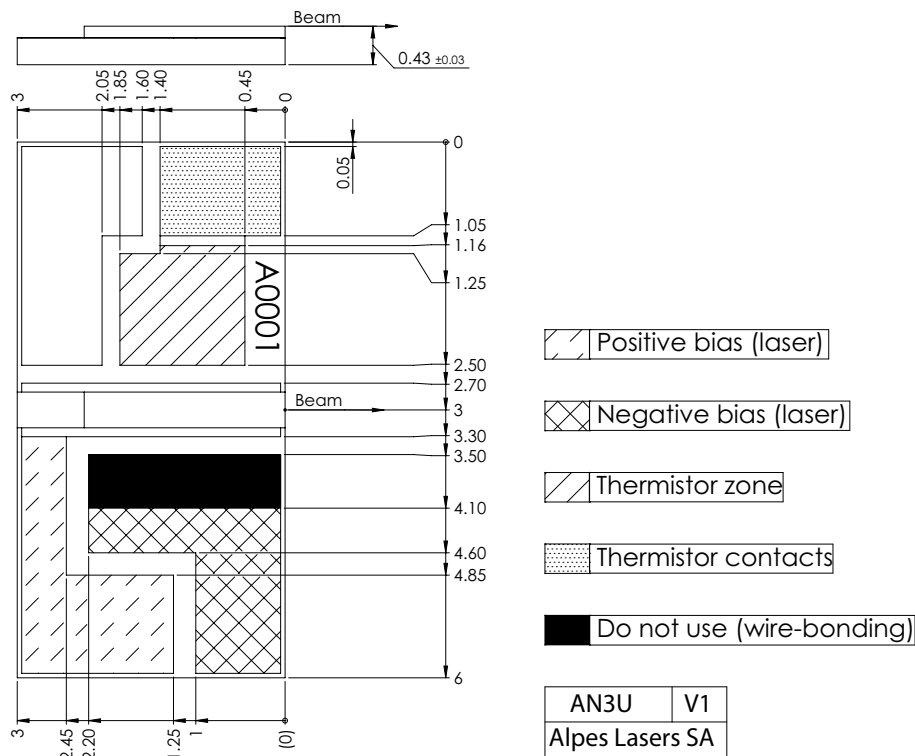


Figure 1: Mechanical and electrical interface for #sbcw27915 DN (please note that AlN submount numbering is A0Y9X)

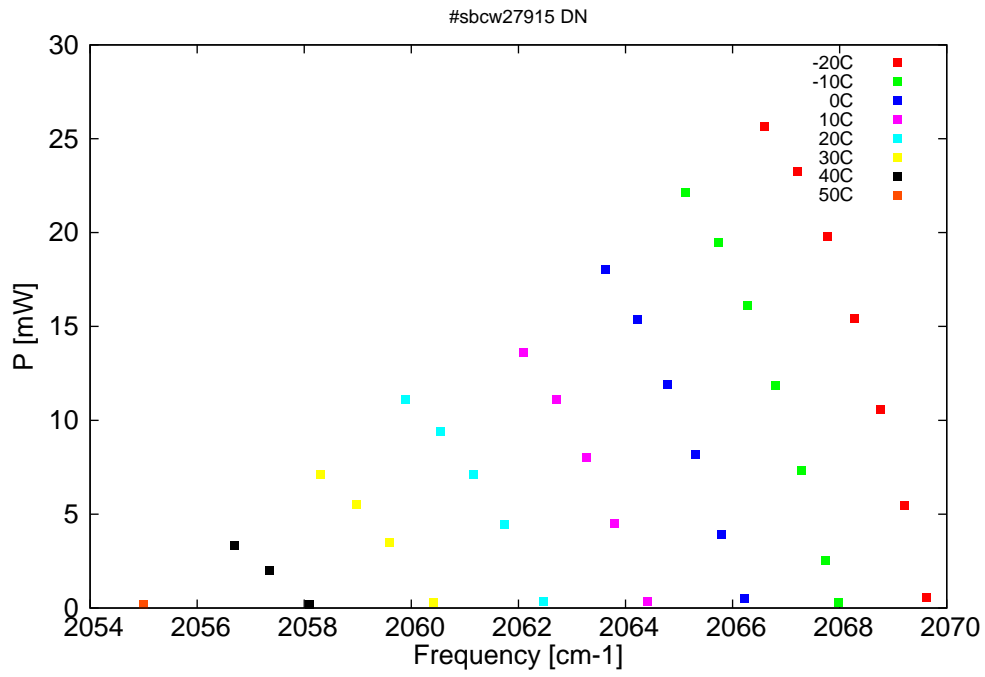


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

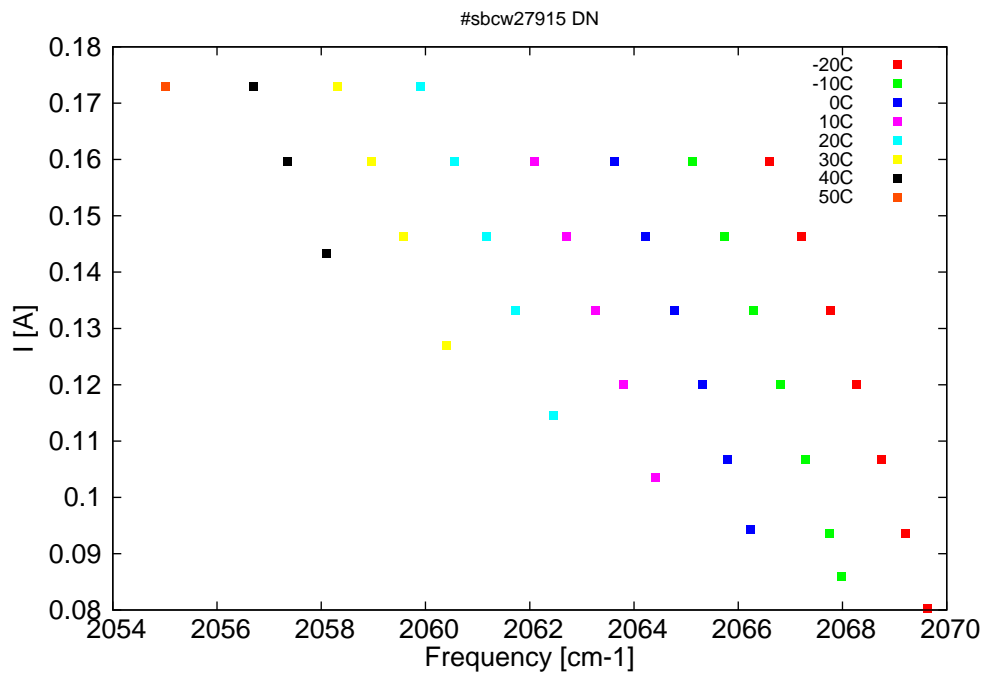


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4831.8	2069.6	0.6	-20	12.55	0.08
4832.8	2069.2	5.5	-20	12.89	0.094
4833.8	2068.8	10.6	-20	13.23	0.107
4835	2068.3	15.4	-20	13.58	0.12
4836.1	2067.8	19.8	-20	13.93	0.133
4837.4	2067.2	23.3	-20	14.32	0.146
4838.9	2066.6	25.7	-20	14.75	0.16
4835.6	2068	0.3	-10	12.54	0.086
4836.2	2067.7	2.5	-10	12.72	0.094
4837.3	2067.3	7.3	-10	13.05	0.107
4838.4	2066.8	11.9	-10	13.38	0.12
4839.6	2066.3	16.1	-10	13.73	0.133
4840.9	2065.7	19.5	-10	14.08	0.146
4842.3	2065.1	22.2	-10	14.48	0.16
4839.7	2066.2	0.5	0	12.6	0.094
4840.7	2065.8	3.9	0	12.89	0.107
4841.9	2065.3	8.2	0	13.21	0.12
4843.1	2064.8	11.9	0	13.54	0.133
4844.4	2064.2	15.3	0	13.88	0.146
4845.8	2063.6	18.1	0	14.25	0.16
4844	2064.4	0.3	10	12.69	0.104
4845.4	2063.8	4.5	10	13.06	0.12
4846.7	2063.3	8	10	13.37	0.133
4848	2062.7	11.1	10	13.7	0.146
4849.4	2062.1	13.6	10	14.05	0.16
4848.6	2062.5	0.4	20	12.82	0.115
4850.3	2061.7	4.4	20	13.24	0.133
4851.6	2061.2	7.1	20	13.56	0.146
4853.1	2060.6	9.4	20	13.89	0.16
4854.6	2059.9	11.1	20	14.25	0.173
4853.4	2060.4	0.3	30	13.01	0.127
4855.3	2059.6	3.5	30	13.43	0.146
4856.8	2059	5.5	30	13.75	0.16
4858.4	2058.3	7.1	30	14.09	0.173
4858.9	2058.1	0.2	40	13.27	0.143
4860.6	2057.4	2	40	13.62	0.16
4862.2	2056.7	3.3	40	13.94	0.173
4866.2	2055	0.2	50	13.87	0.173

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

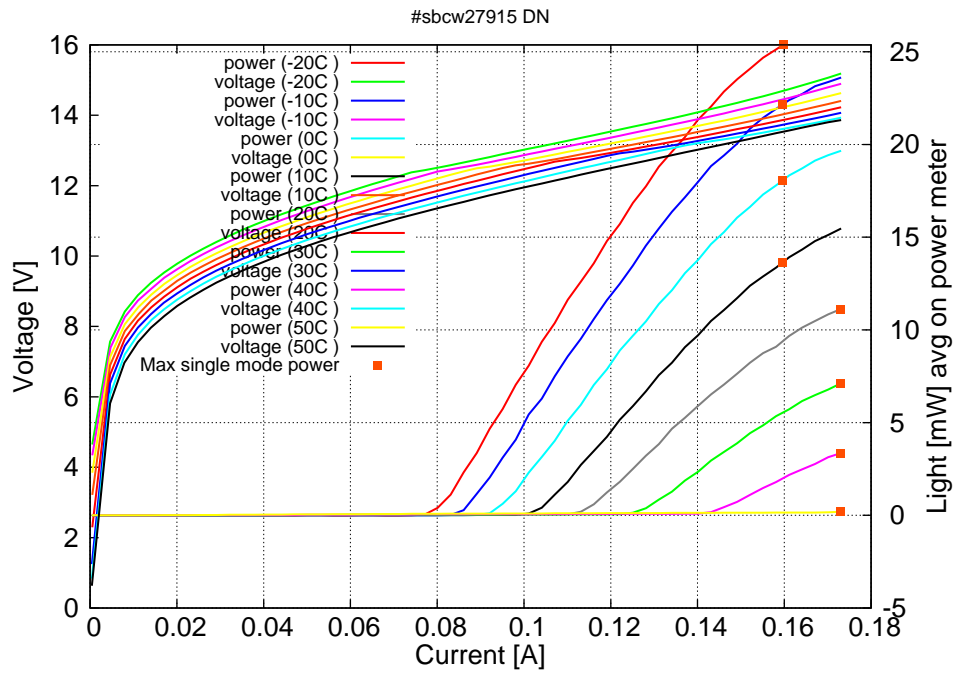


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=12.5V$ (2-wires measurements). Maximum operation current: 0.16A between -20C and 10C, 0.175A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

