

Datasheet for #sbcw27912 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.

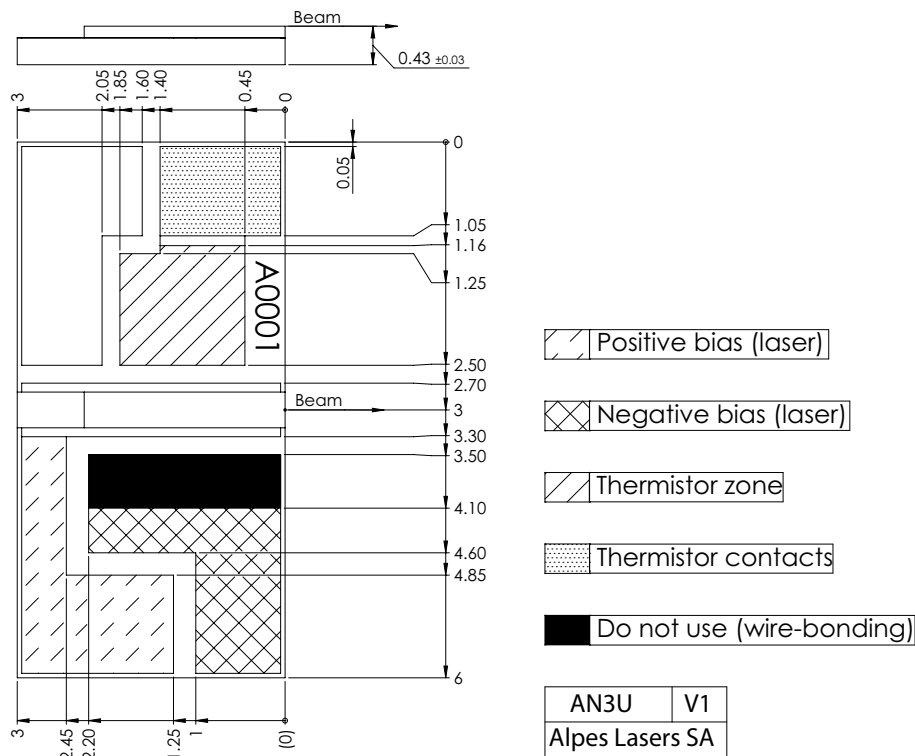


Figure 1: Mechanical and electrical interface for #sbcw27912 DN (please note that AlN submount numbering is A0VTR)

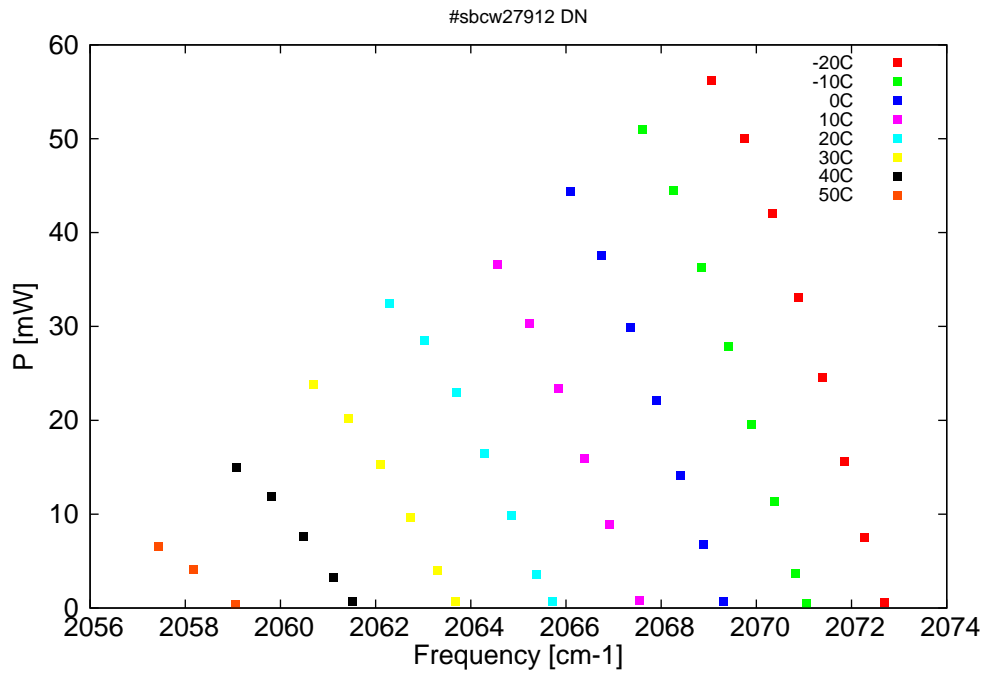


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

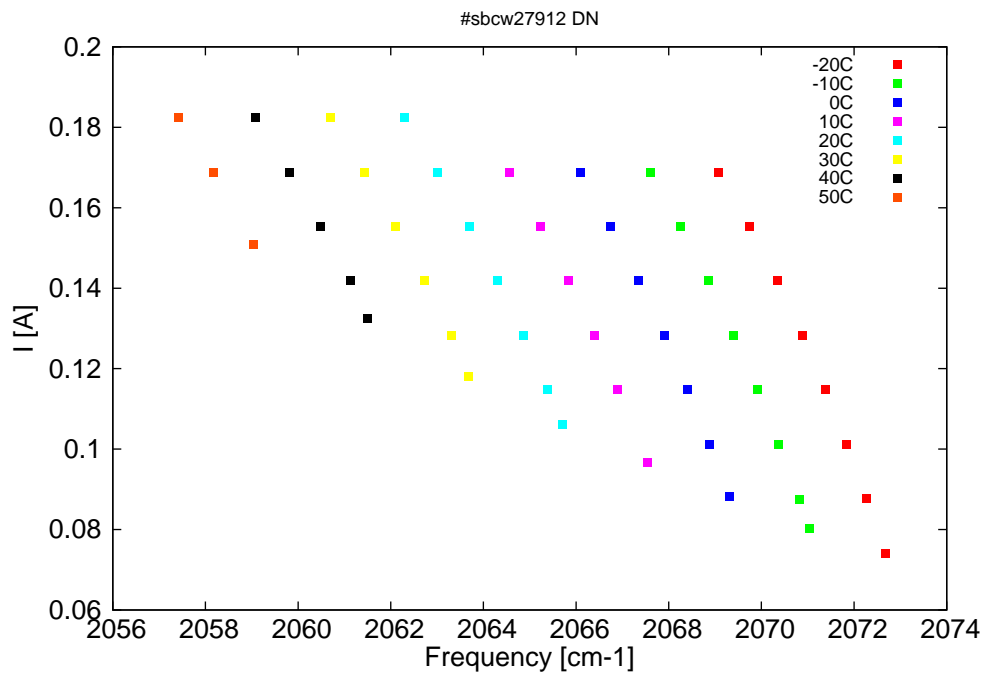


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4824.7	2072.7	0.5	-20	12.28	0.074
4825.6	2072.3	7.5	-20	12.65	0.088
4826.6	2071.8	15.6	-20	13.02	0.101
4827.7	2071.4	24.6	-20	13.36	0.115
4828.9	2070.9	33.1	-20	13.71	0.128
4830.1	2070.3	42.1	-20	14.07	0.142
4831.5	2069.7	50	-20	14.48	0.155
4833.1	2069.1	56.2	-20	14.95	0.169
4828.5	2071	0.4	-10	12.22	0.08
4829	2070.8	3.7	-10	12.41	0.088
4830	2070.4	11.4	-10	12.74	0.101
4831.1	2069.9	19.5	-10	13.09	0.115
4832.3	2069.4	27.9	-10	13.43	0.128
4833.6	2068.9	36.3	-10	13.79	0.142
4835	2068.3	44.4	-10	14.18	0.155
4836.5	2067.6	51	-10	14.61	0.169
4832.5	2069.3	0.7	0	12.29	0.088
4833.5	2068.9	6.8	0	12.6	0.101
4834.6	2068.4	14.1	0	12.93	0.115
4835.8	2067.9	22.1	0	13.26	0.128
4837.1	2067.4	29.9	0	13.61	0.142
4838.5	2066.8	37.6	0	13.97	0.155
4840	2066.1	44.3	0	14.38	0.169
4836.7	2067.5	0.8	10	12.37	0.097
4838.2	2066.9	8.9	10	12.78	0.115
4839.4	2066.4	15.9	10	13.11	0.128
4840.7	2065.8	23.4	10	13.44	0.142
4842.1	2065.2	30.4	10	13.79	0.155
4843.6	2064.6	36.6	10	14.17	0.169
4841	2065.7	0.7	20	12.49	0.106
4841.7	2065.4	3.6	20	12.67	0.115
4842.9	2064.9	9.8	20	12.98	0.128
4844.3	2064.3	16.5	20	13.3	0.142
4845.7	2063.7	22.9	20	13.64	0.155
4847.3	2063	28.5	20	13.99	0.169
4849	2062.3	32.5	20	14.39	0.182
4845.7	2063.7	0.7	30	12.65	0.118
4846.6	2063.3	4	30	12.87	0.128
4848	2062.7	9.7	30	13.17	0.142
4849.4	2062.1	15.3	30	13.49	0.155
4851	2061.4	20.2	30	13.84	0.169
4852.7	2060.7	23.9	30	14.22	0.182
4850.8	2061.5	0.6	40	12.88	0.133
4851.7	2061.1	3.3	40	13.07	0.142
4853.2	2060.5	7.6	40	13.37	0.155
4854.8	2059.8	11.9	40	13.7	0.169
4856.6	2059.1	15	40	14.06	0.182
4856.6	2059	0.4	50	13.2	0.151
4858.7	2058.2	4.1	50	13.6	0.169

continued on next page

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4860.4	2057.4	6.5	50	13.93	0.182

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

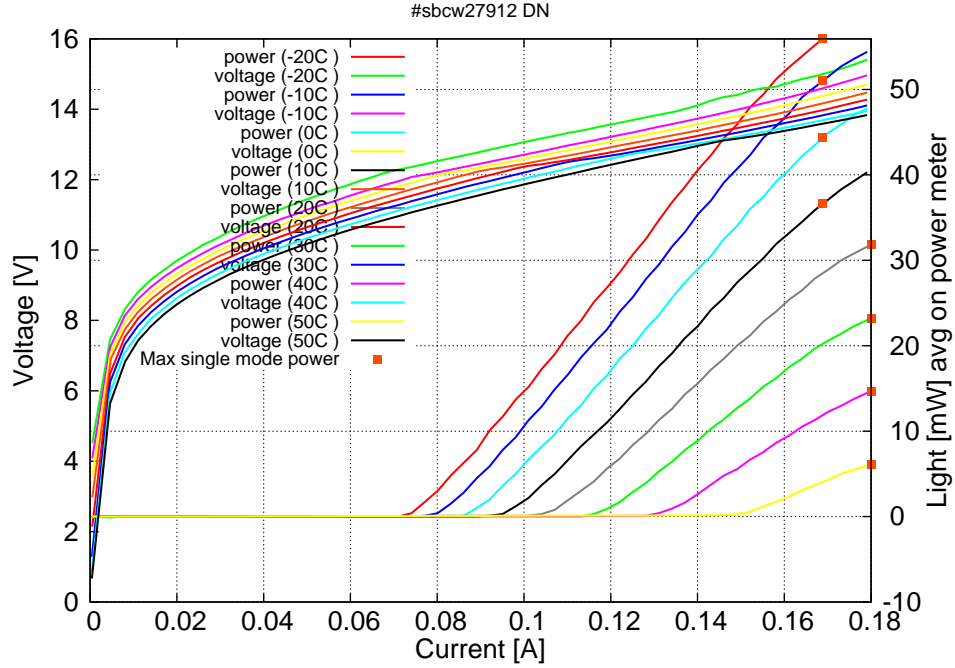


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=12.2V$ (2-wires measurements). Maximum operation current: 0.17A between -20C and 10C, 0.18A between 20C and 50C.

