

Datasheet for #sbcw27908 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 #sbcw27908 DN (please note that AlN submount numbering is A0V5P)

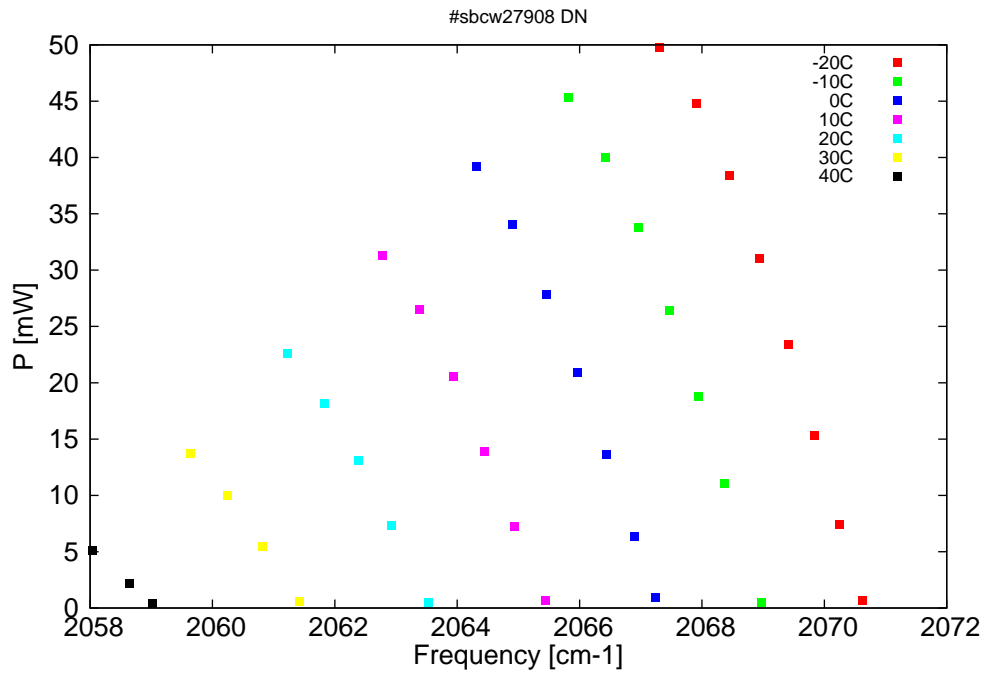


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

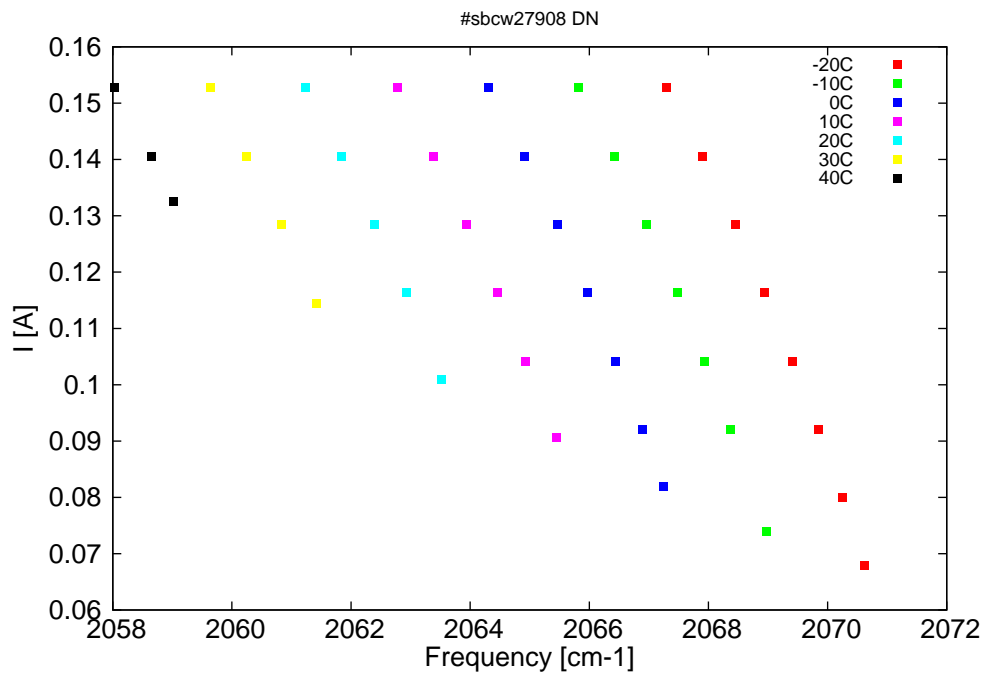


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4829.5	2070.6	0.7	-20	11.9	0.068
4830.3	2070.2	7.4	-20	12.24	0.08
4831.3	2069.8	15.3	-20	12.58	0.092
4832.3	2069.4	23.4	-20	12.92	0.104
4833.4	2068.9	31	-20	13.26	0.116
4834.5	2068.4	38.4	-20	13.62	0.129
4835.8	2067.9	44.8	-20	14.01	0.141
4837.2	2067.3	49.8	-20	14.45	0.153
4833.3	2069	0.5	-10	11.94	0.074
4834.7	2068.4	11.1	-10	12.42	0.092
4835.7	2067.9	18.8	-10	12.74	0.104
4836.8	2067.5	26.4	-10	13.08	0.116
4838	2067	33.8	-10	13.42	0.129
4839.3	2066.4	40	-10	13.79	0.141
4840.7	2065.8	45.3	-10	14.19	0.153
4837.4	2067.2	0.9	0	12.02	0.082
4838.2	2066.9	6.4	0	12.28	0.092
4839.2	2066.4	13.7	0	12.59	0.104
4840.3	2066	20.9	0	12.92	0.116
4841.5	2065.5	27.8	0	13.24	0.129
4842.8	2064.9	34.1	0	13.59	0.141
4844.2	2064.3	39.2	0	13.96	0.153
4841.6	2065.4	0.7	10	12.14	0.091
4842.8	2064.9	7.3	10	12.47	0.104
4843.9	2064.5	13.9	10	12.78	0.116
4845.1	2063.9	20.5	10	13.09	0.129
4846.4	2063.4	26.5	10	13.42	0.141
4847.8	2062.8	31.3	10	13.77	0.153
4846.1	2063.5	0.5	20	12.3	0.101
4847.5	2062.9	7.3	20	12.66	0.116
4848.7	2062.4	13.1	20	12.97	0.129
4850	2061.8	18.1	20	13.28	0.141
4851.5	2061.2	22.6	20	13.61	0.153
4851	2061.4	0.6	30	12.53	0.115
4852.4	2060.8	5.4	30	12.85	0.129
4853.8	2060.3	10	30	13.15	0.141
4855.2	2059.6	13.8	30	13.46	0.153
4856.7	2059	0.4	40	12.88	0.133
4857.5	2058.7	2.1	40	13.06	0.141
4859	2058	5.1	40	13.35	0.153

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

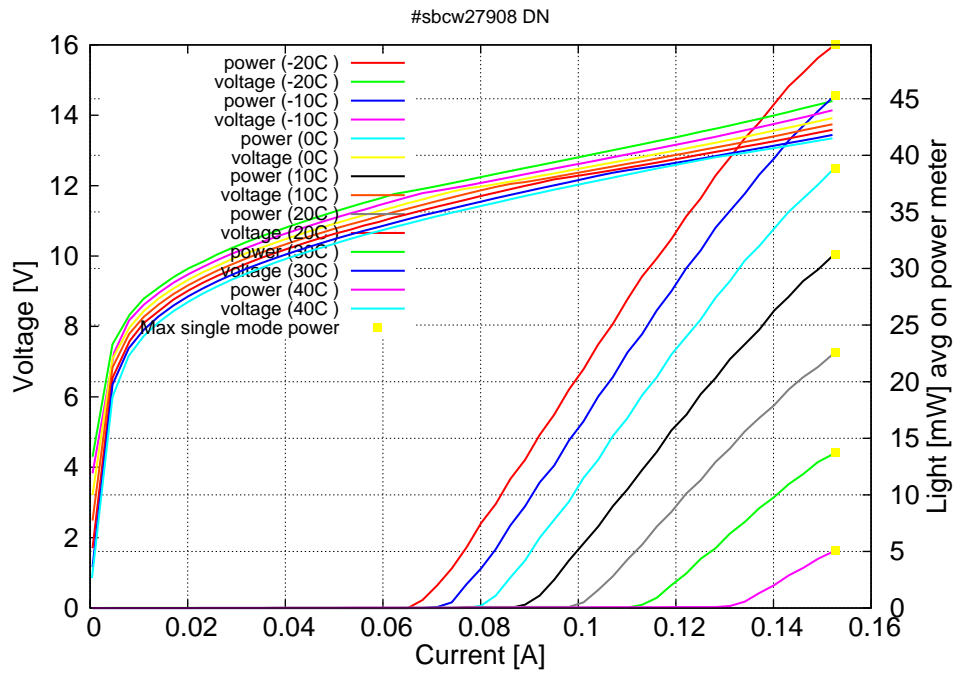


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=11.9V$ (2-wires measurements). Maximum operation current: 0.155A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

