

Datasheet for #sbcw25609 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.

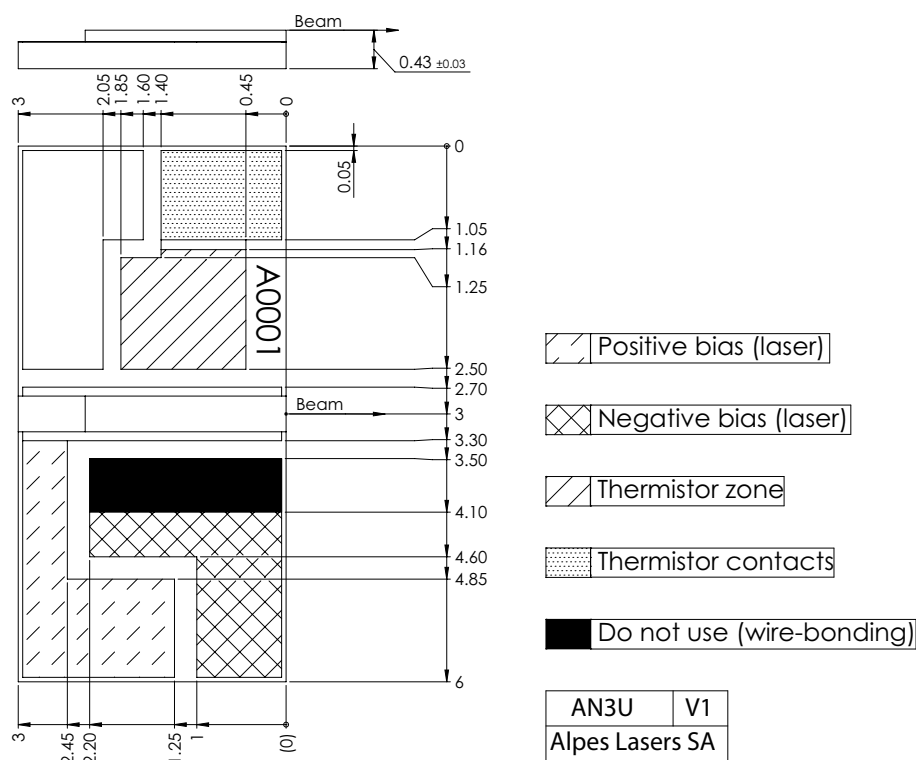


Figure 1: Mechanical and electrical interface for #sbcw25609 DN (please note that AlN submount numbering is A0Y87)

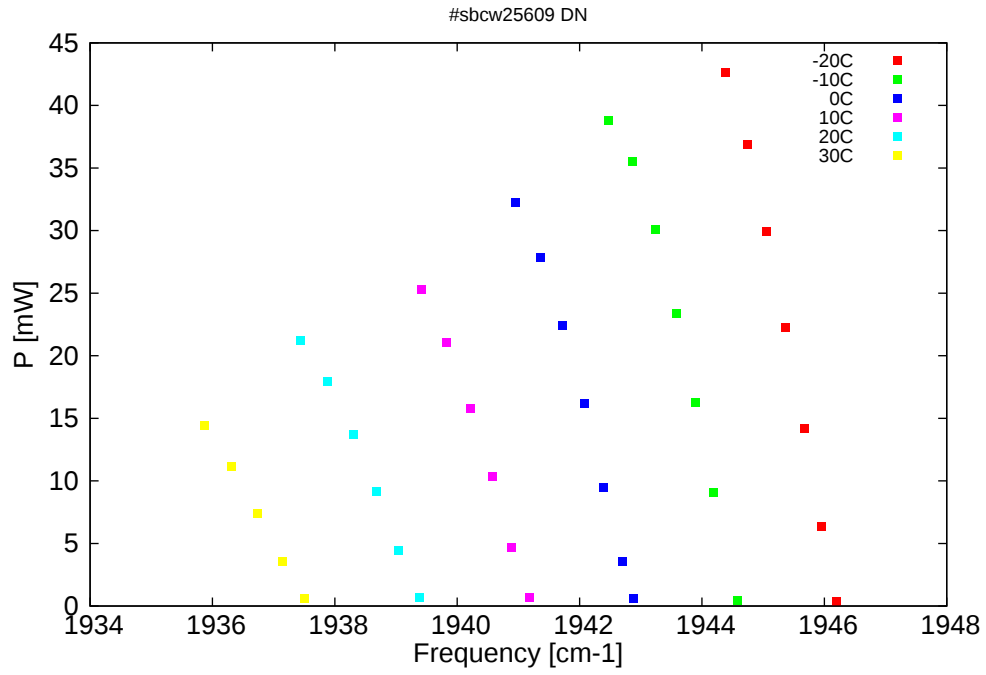


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

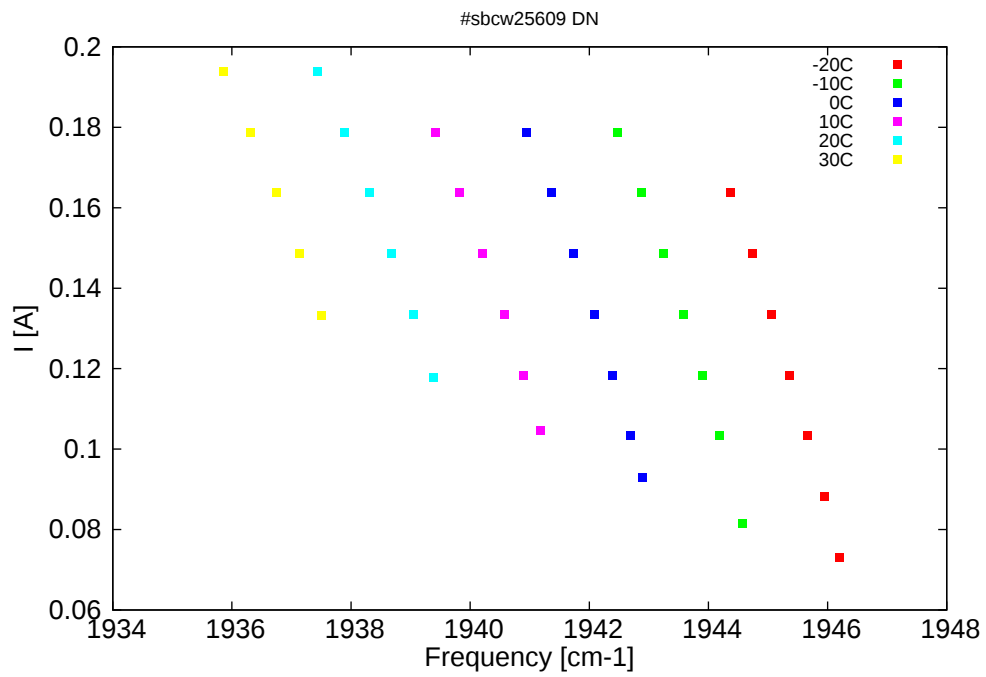


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5138.2	1946.2	0.3	-20	7.6	0.073
5138.9	1945.9	6.3	-20	7.77	0.088
5139.6	1945.7	14.2	-20	7.95	0.103
5140.4	1945.4	22.3	-20	8.14	0.118
5141.2	1945.1	29.9	-20	8.32	0.134
5142.1	1944.7	36.9	-20	8.52	0.149
5143	1944.4	42.6	-20	8.73	0.164
5142.5	1944.6	0.4	-10	7.64	0.082
5143.5	1944.2	9.1	-10	7.89	0.103
5144.3	1943.9	16.3	-10	8.07	0.118
5145.1	1943.6	23.4	-10	8.25	0.134
5146	1943.2	30.1	-10	8.45	0.149
5147	1942.9	35.5	-10	8.65	0.164
5148.1	1942.5	38.8	-10	8.87	0.179
5147	1942.9	0.6	0	7.71	0.093
5147.5	1942.7	3.6	0	7.82	0.103
5148.3	1942.4	9.5	0	8	0.118
5149.1	1942.1	16.2	0	8.18	0.134
5150.1	1941.7	22.4	0	8.37	0.149
5151	1941.4	27.8	0	8.57	0.164
5152.1	1940.9	32.2	0	8.78	0.179
5151.5	1941.2	0.7	10	7.79	0.105
5152.3	1940.9	4.6	10	7.93	0.118
5153.1	1940.6	10.4	10	8.11	0.134
5154.1	1940.2	15.8	10	8.29	0.149
5155.1	1939.8	21	10	8.49	0.164
5156.2	1939.4	25.3	10	8.69	0.179
5156.3	1939.4	0.6	20	7.89	0.118
5157.2	1939	4.4	20	8.05	0.134
5158.1	1938.7	9.1	20	8.22	0.149
5159.2	1938.3	13.8	20	8.41	0.164
5160.3	1937.9	17.9	20	8.6	0.179
5161.4	1937.4	21.2	20	8.81	0.194
5161.3	1937.5	0.6	30	8.01	0.133
5162.2	1937.1	3.6	30	8.16	0.149
5163.3	1936.7	7.4	30	8.34	0.164
5164.4	1936.3	11.2	30	8.52	0.179
5165.7	1935.9	14.4	30	8.72	0.194

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

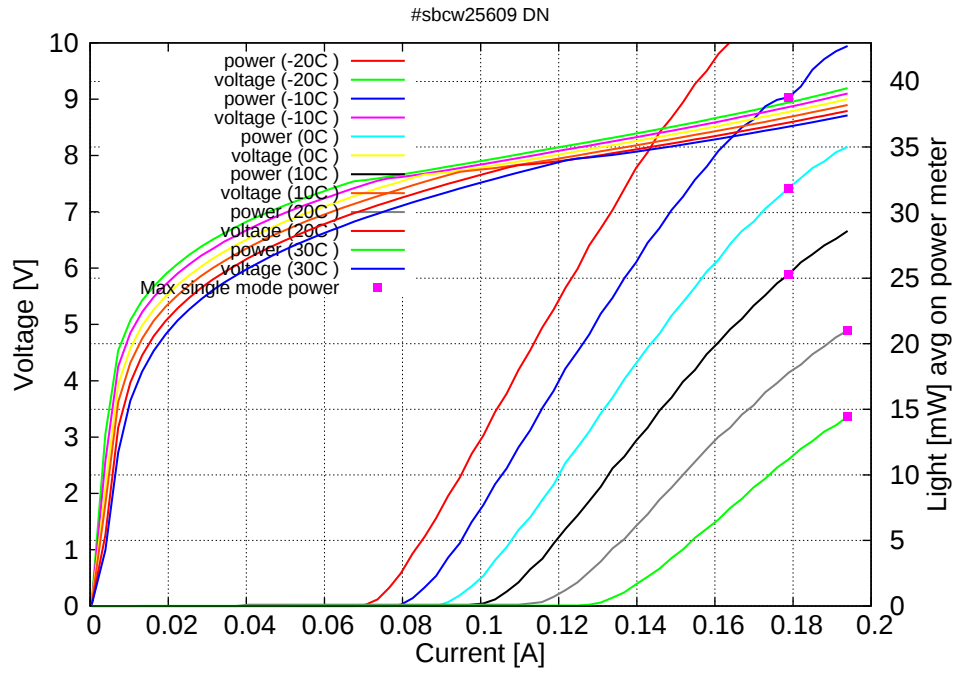


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.165A at -20C, 0.18A between -10C and 10C, 0.195A between 20C and 30C.

Figure 3: spectra at different temperatures for various DC currents

