

Datasheet for #sbcw25613 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.

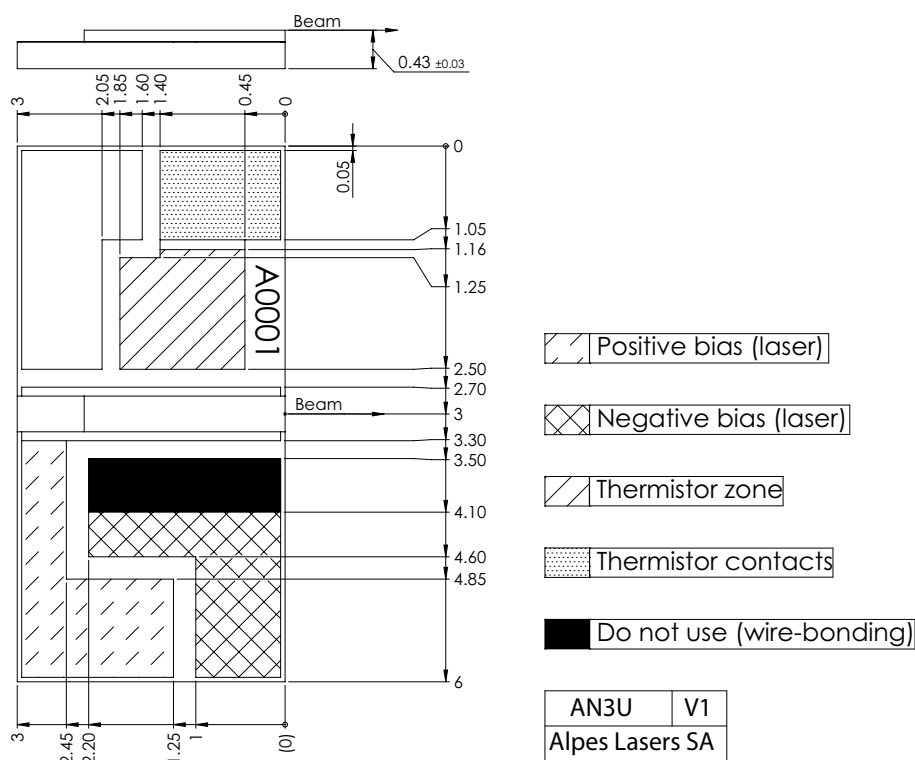


Figure 1: Mechanical and electrical interface for #sbcw25613 DN (please note that AlN submount numbering is A0XJF)

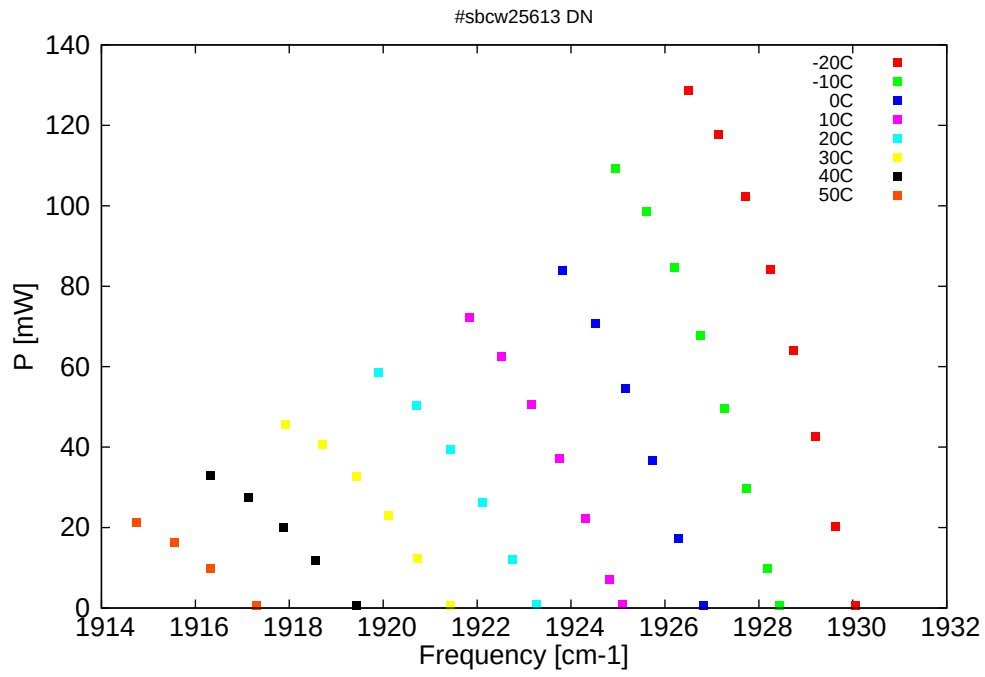


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

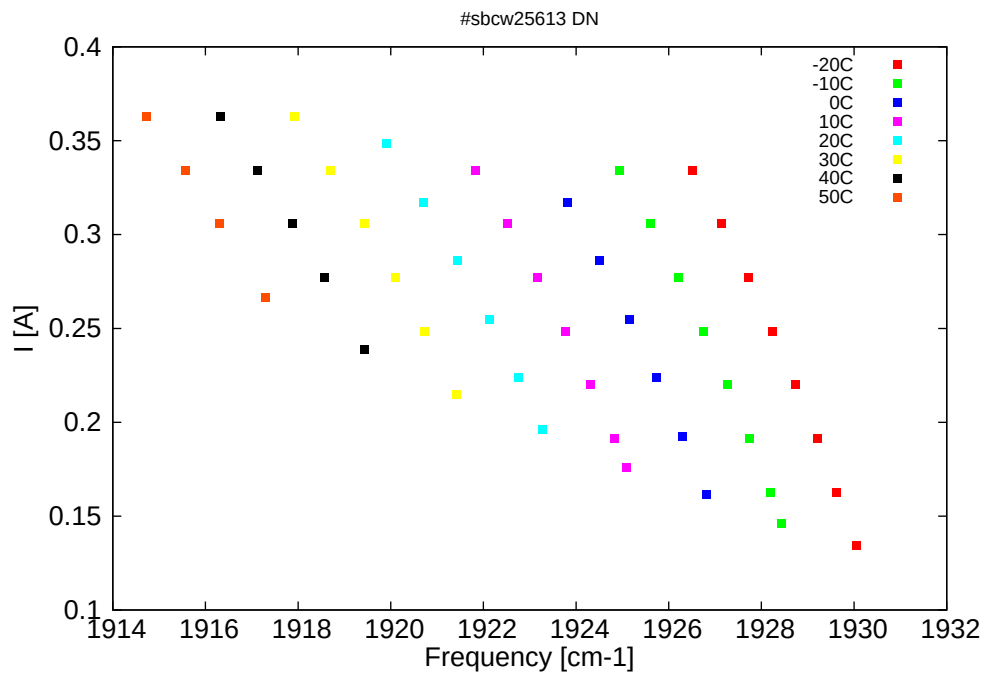


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5181.2	1930	0.6	-20	7.5	0.134
5182.3	1929.6	20.3	-20	7.69	0.163
5183.5	1929.2	42.6	-20	7.88	0.191
5184.7	1928.7	64.1	-20	8.07	0.22
5186	1928.2	84.2	-20	8.26	0.249
5187.5	1927.7	102.3	-20	8.45	0.277
5189	1927.1	117.8	-20	8.66	0.306
5190.8	1926.5	128.7	-20	8.88	0.334
5185.5	1928.4	0.7	-10	7.52	0.146
5186.2	1928.2	9.8	-10	7.63	0.163
5187.4	1927.7	29.8	-10	7.81	0.191
5188.7	1927.3	49.5	-10	8	0.22
5190.1	1926.8	67.9	-10	8.19	0.249
5191.6	1926.2	84.7	-10	8.39	0.277
5193.2	1925.6	98.7	-10	8.59	0.306
5195	1924.9	109.2	-10	8.8	0.334
5189.9	1926.8	0.7	0	7.57	0.161
5191.3	1926.3	17.4	0	7.76	0.193
5192.8	1925.7	36.6	0	7.97	0.224
5194.4	1925.2	54.5	0	8.18	0.255
5196.1	1924.5	70.7	0	8.39	0.286
5198	1923.8	83.8	0	8.62	0.317
5194.5	1925.1	0.8	10	7.6	0.176
5195.3	1924.8	7.1	10	7.69	0.191
5196.7	1924.3	22.3	10	7.88	0.22
5198.2	1923.8	37.2	10	8.07	0.249
5199.8	1923.2	50.6	10	8.26	0.277
5201.5	1922.5	62.5	10	8.46	0.306
5203.4	1921.8	72.2	10	8.67	0.334
5199.5	1923.3	0.9	20	7.67	0.196
5200.9	1922.8	12.1	20	7.85	0.224
5202.6	1922.1	26.2	20	8.06	0.255
5204.4	1921.4	39.3	20	8.27	0.286
5206.4	1920.7	50.3	20	8.48	0.317
5208.6	1919.9	58.5	20	8.71	0.349
5204.5	1921.4	0.8	30	7.73	0.215
5206.3	1920.7	12.2	30	7.95	0.249
5208.1	1920.1	23.1	30	8.14	0.277
5209.9	1919.4	32.8	30	8.33	0.306
5211.9	1918.7	40.8	30	8.53	0.334
5214	1917.9	45.8	30	8.74	0.363
5209.9	1919.4	0.7	40	7.82	0.239
5212.2	1918.6	11.9	40	8.07	0.277
5214.1	1917.9	20.1	40	8.26	0.306
5216.1	1917.1	27.5	40	8.45	0.334
5218.3	1916.3	32.9	40	8.66	0.363
5215.7	1917.3	0.6	50	7.93	0.267
5218.3	1916.3	9.8	50	8.18	0.306
5220.4	1915.6	16.2	50	8.38	0.334

continued on next page

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5222.7	1914.7	21.2	50	8.58	0.363

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

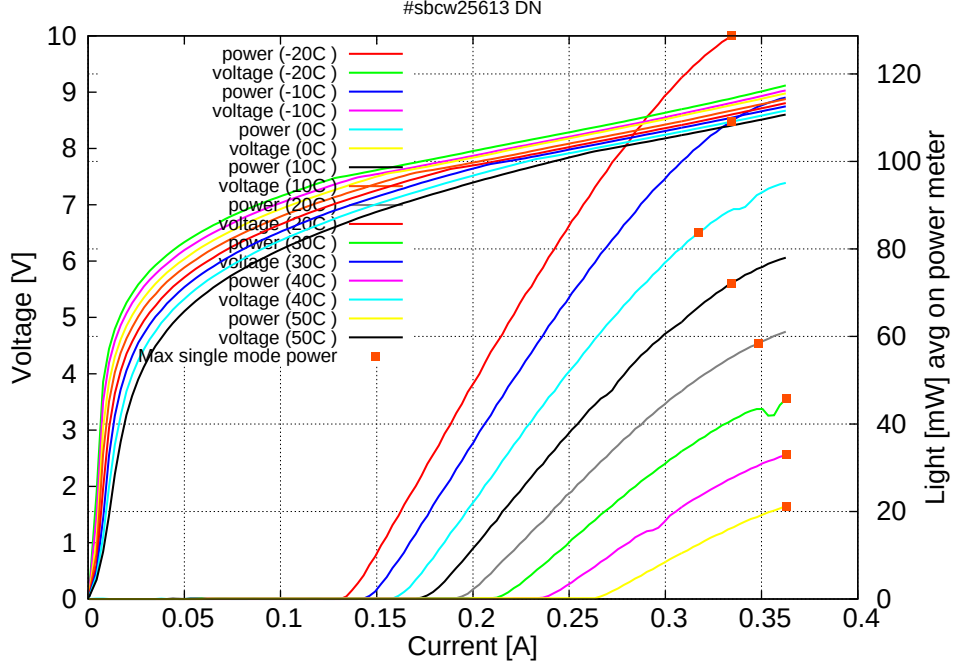


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13\text{A}$ / $V_{th}=7.5\text{V}$ (2-wires measurements). Maximum operation current: 0.335A between -20C and 10C, 0.35A at 20C, 0.365A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

