

Datasheet for #sbcw25616 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.

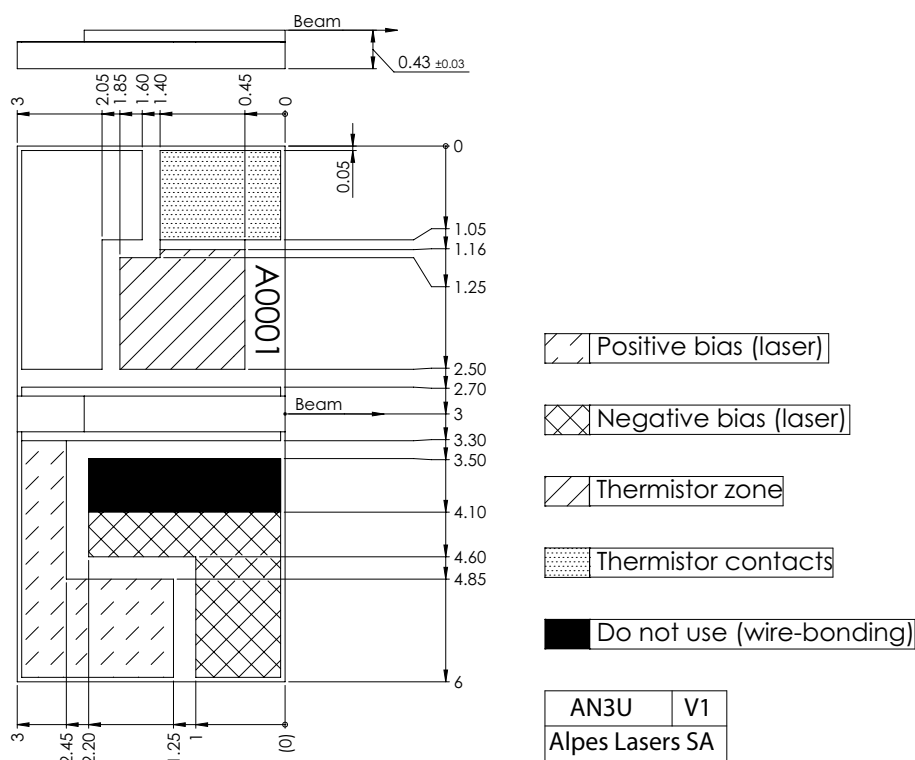


Figure 1: Mechanical and electrical interface for #sbcw25616 DN (please note that AlN submount numbering is A0XHK)

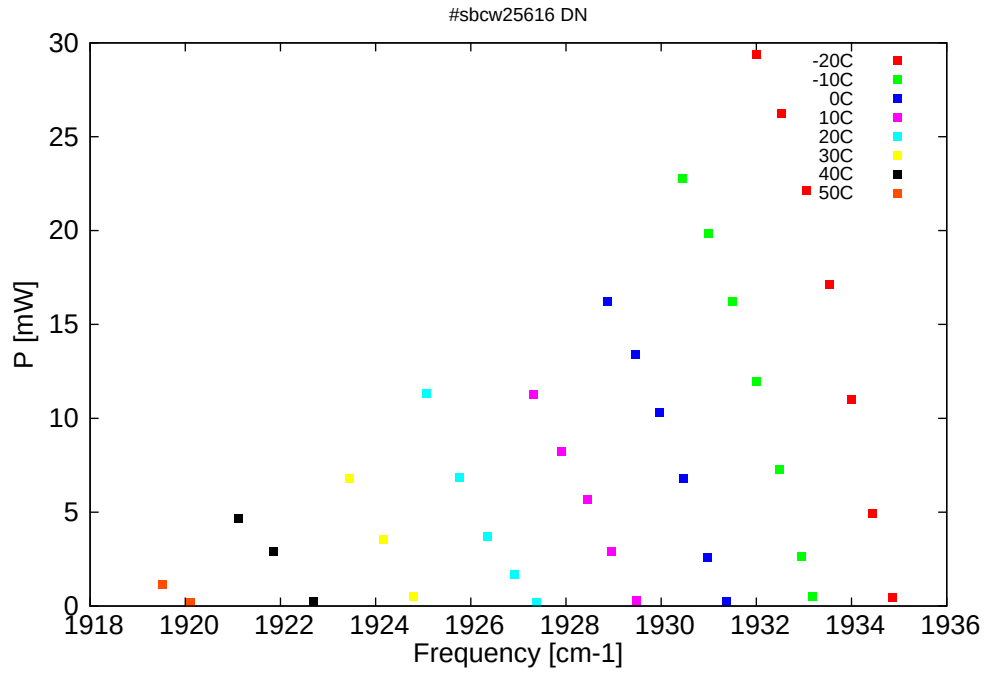


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

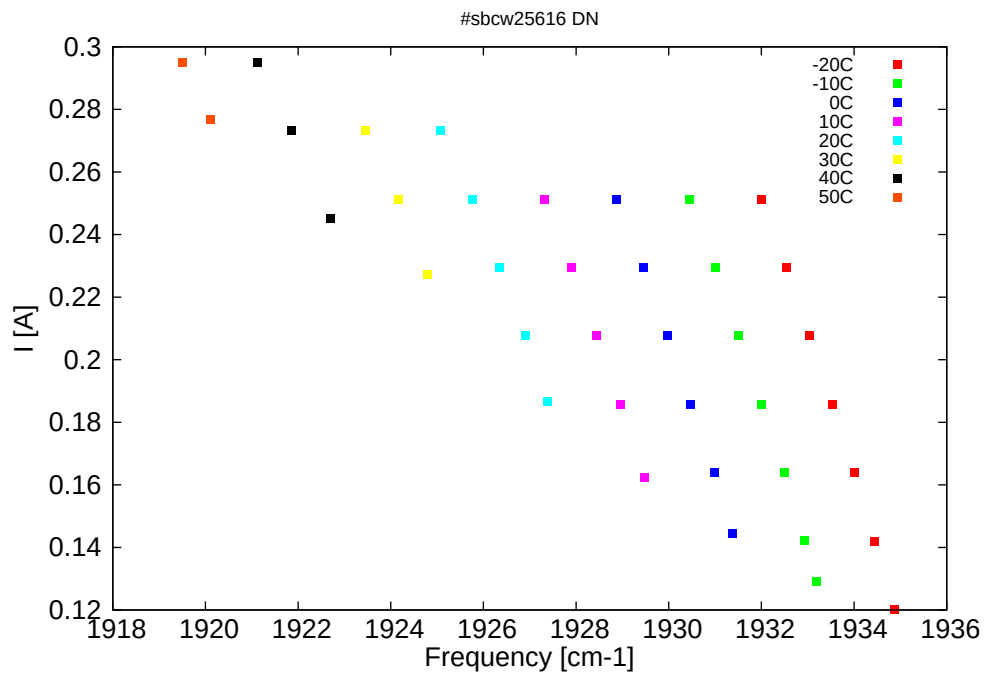


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5168.3	1934.9	0.5	-20	7.8	0.12
5169.4	1934.5	4.9	-20	7.99	0.142
5170.6	1934	11	-20	8.2	0.164
5171.9	1933.5	17.1	-20	8.4	0.186
5173.2	1933	22.1	-20	8.6	0.208
5174.6	1932.5	26.3	-20	8.82	0.229
5176	1932	29.4	-20	9.06	0.251
5172.8	1933.2	0.5	-10	7.78	0.129
5173.5	1932.9	2.7	-10	7.9	0.142
5174.7	1932.5	7.3	-10	8.1	0.164
5176	1932	12	-10	8.3	0.186
5177.3	1931.5	16.2	-10	8.5	0.208
5178.7	1931	19.8	-10	8.72	0.229
5180.2	1930.4	22.8	-10	8.95	0.251
5177.7	1931.4	0.2	0	7.84	0.145
5178.7	1931	2.6	0	8.01	0.164
5180.1	1930.5	6.8	0	8.2	0.186
5181.4	1930	10.3	0	8.4	0.208
5182.8	1929.5	13.4	0	8.61	0.229
5184.4	1928.9	16.2	0	8.83	0.251
5182.7	1929.5	0.3	10	7.92	0.162
5184.1	1929	2.9	10	8.12	0.186
5185.5	1928.4	5.7	10	8.31	0.208
5187	1927.9	8.2	10	8.51	0.229
5188.6	1927.3	11.3	10	8.71	0.251
5188.4	1927.4	0.2	20	8.07	0.187
5189.7	1926.9	1.7	20	8.23	0.208
5191.2	1926.4	3.7	20	8.42	0.229
5192.8	1925.8	6.9	20	8.59	0.251
5194.6	1925.1	11.3	20	8.78	0.273
5195.4	1924.8	0.5	30	8.33	0.227
5197.1	1924.2	3.5	30	8.49	0.251
5199	1923.5	6.8	30	8.68	0.273
5201	1922.7	0.2	40	8.37	0.245
5203.3	1921.8	2.9	40	8.57	0.273
5205.3	1921.1	4.7	40	8.76	0.295
5208	1920.1	0.2	50	8.52	0.277
5209.7	1919.5	1.1	50	8.66	0.295

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

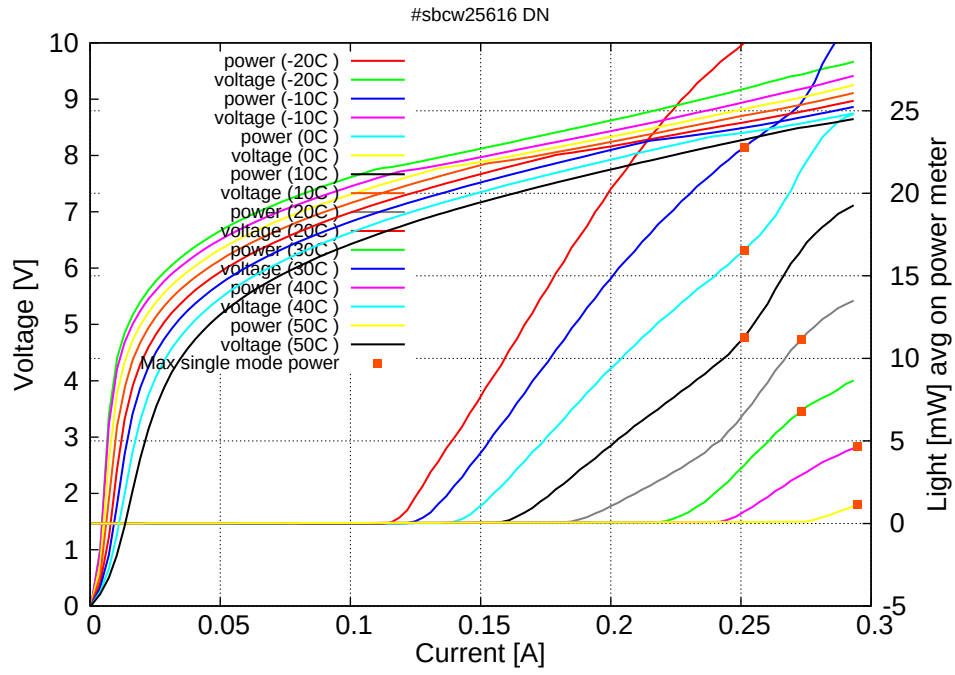


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=7.8V$ (2-wires measurements). Maximum operation current: 0.25A between -20C and 10C, 0.275A between 20C and 30C, 0.295A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

