

Datasheet for #sbcw25292 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

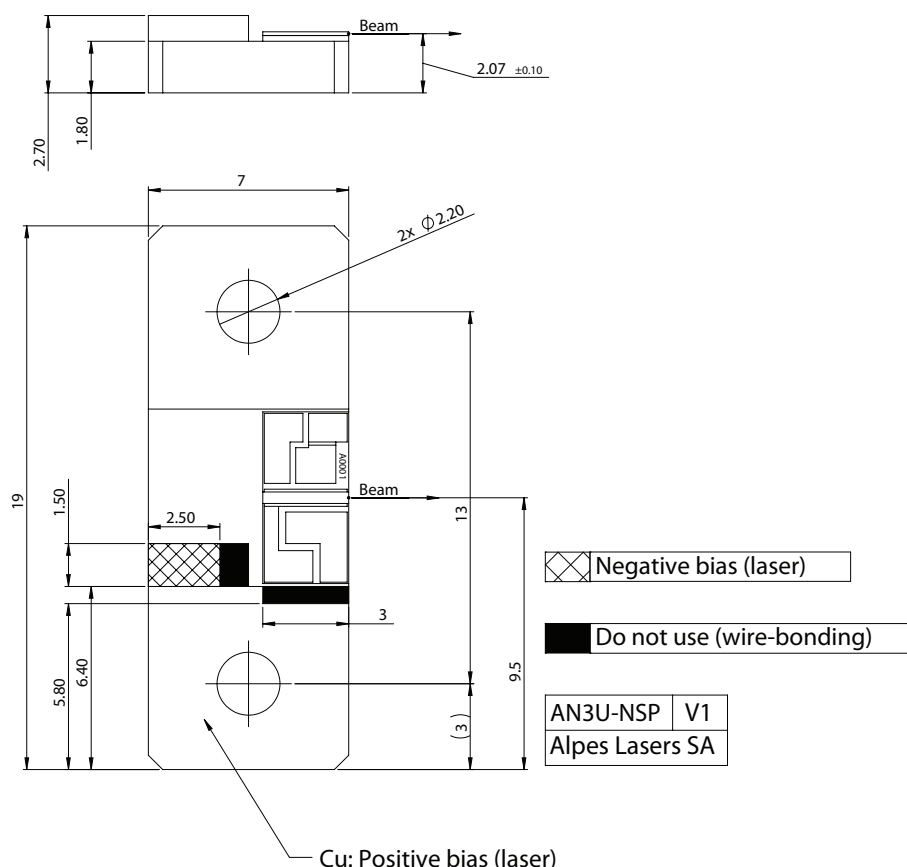


Figure 1: Mechanical and electrical interface for #sbcw25292 DN

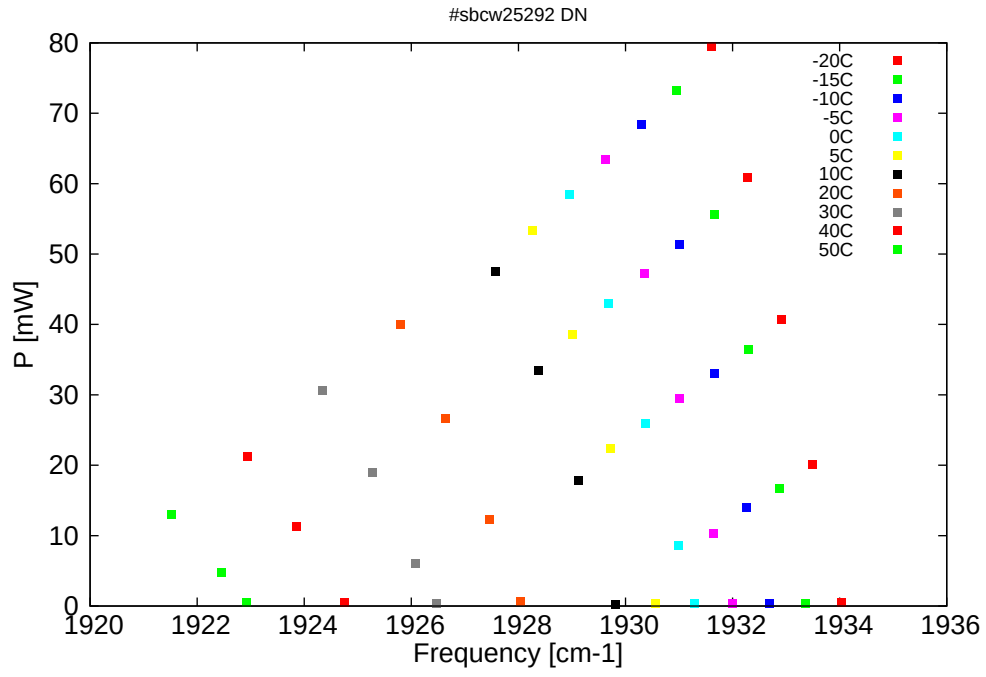


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

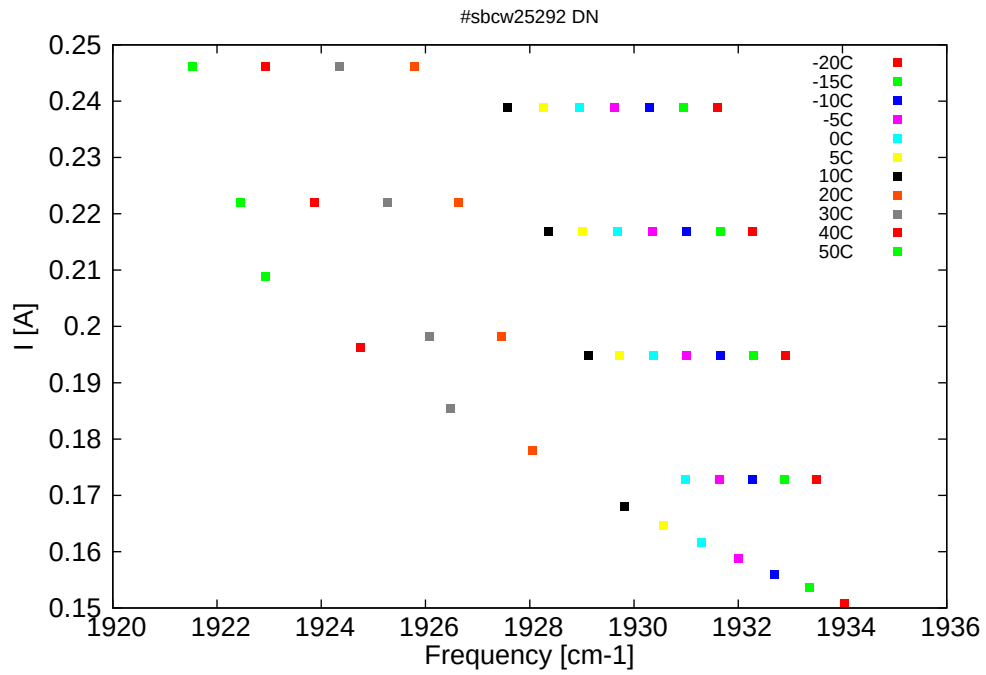


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5170.5	1934	0.5	-20	11.39	0.151
5172	1933.5	20.1	-20	11.58	0.173
5173.5	1932.9	40.7	-20	11.82	0.195
5175.2	1932.3	60.8	-20	12.08	0.217
5177	1931.6	79.4	-20	12.38	0.239
5172.3	1933.4	0.3	-15	11.37	0.154
5173.6	1932.9	16.7	-15	11.54	0.173
5175.2	1932.3	36.5	-15	11.78	0.195
5176.9	1931.7	55.6	-15	12.04	0.217
5178.8	1931	73.3	-15	12.35	0.239
5174.1	1932.7	0.4	-10	11.36	0.156
5175.3	1932.3	14	-10	11.51	0.173
5176.9	1931.7	33	-10	11.75	0.195
5178.6	1931	51.4	-10	12.01	0.217
5180.6	1930.3	68.4	-10	12.32	0.239
5176	1932	0.4	-5	11.35	0.159
5177	1931.6	10.3	-5	11.48	0.173
5178.6	1931	29.5	-5	11.72	0.195
5180.4	1930.3	47.3	-5	11.99	0.217
5182.3	1929.6	63.4	-5	12.29	0.239
5177.9	1931.3	0.4	0	11.35	0.162
5178.7	1931	8.5	0	11.44	0.173
5180.3	1930.4	26	0	11.69	0.195
5182.2	1929.7	43	0	11.96	0.217
5184.2	1928.9	58.4	0	12.27	0.239
5179.8	1930.6	0.4	5	11.35	0.165
5182.1	1929.7	22.4	5	11.66	0.195
5184	1929	38.6	5	11.93	0.217
5186	1928.3	53.4	5	12.24	0.239
5181.8	1929.8	0.3	10	11.36	0.168
5183.7	1929.1	17.9	10	11.63	0.195
5185.7	1928.4	33.5	10	11.91	0.217
5187.9	1927.6	47.5	10	12.21	0.239
5186.6	1928	0.7	20	11.33	0.178
5188.2	1927.5	12.3	20	11.54	0.198
5190.4	1926.6	26.7	20	11.83	0.222
5192.7	1925.8	40	20	12.15	0.246
5190.8	1926.5	0.3	30	11.36	0.186
5191.9	1926.1	6.1	30	11.49	0.198
5194.1	1925.3	18.9	30	11.78	0.222
5196.6	1924.3	30.6	30	12.1	0.246
5195.5	1924.7	0.5	40	11.44	0.196
5197.9	1923.9	11.3	40	11.73	0.222
5200.4	1922.9	21.2	40	12.04	0.246
5200.4	1922.9	0.4	50	11.54	0.209
5201.7	1922.5	4.7	50	11.69	0.222
5204.2	1921.5	13	50	11.99	0.246

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$\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{\text{LASER}}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

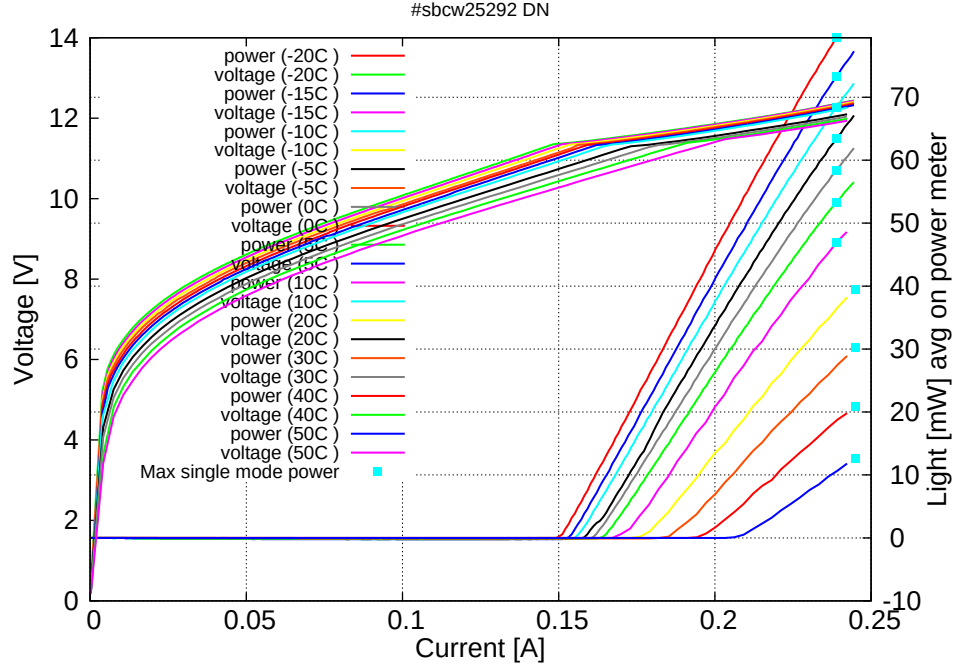


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{\text{th}}=0.15\text{A}$ / $V_{\text{th}}=11.4\text{V}$ (2-wires measurements). Maximum operation current: 0.245A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

