

Datasheet for #sbcw25278 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 #sbcw25278 DN

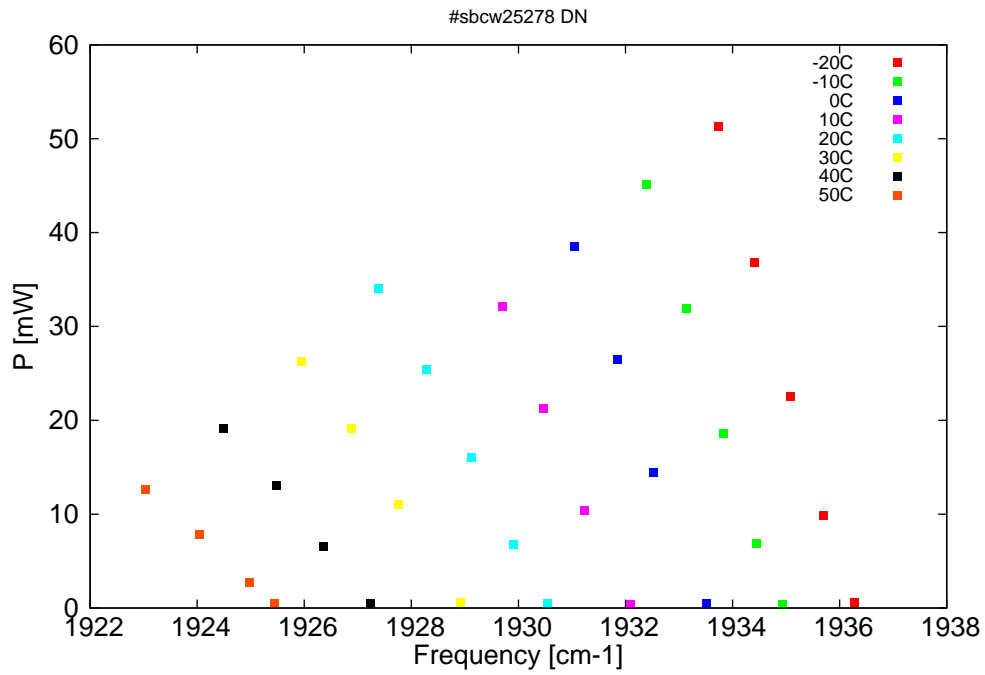


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

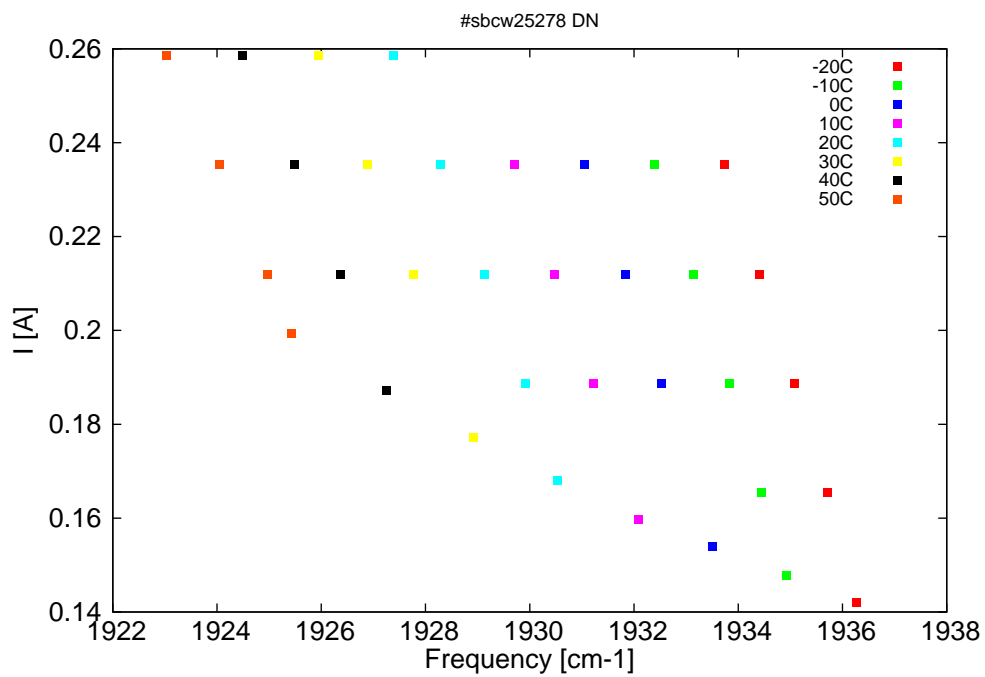


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5164.6	1936.3	0.6	-20	11.28	0.142
5166.1	1935.7	9.8	-20	11.51	0.165
5167.7	1935.1	22.6	-20	11.77	0.189
5169.5	1934.4	36.8	-20	12.05	0.212
5171.4	1933.7	51.3	-20	12.38	0.235
5168.1	1934.9	0.4	-10	11.26	0.148
5169.4	1934.4	6.9	-10	11.43	0.165
5171.1	1933.8	18.6	-10	11.69	0.189
5172.9	1933.1	31.9	-10	11.97	0.212
5174.9	1932.4	45.1	-10	12.3	0.235
5171.9	1933.5	0.5	0	11.26	0.154
5174.6	1932.5	14.5	0	11.64	0.189
5176.4	1931.8	26.5	0	11.93	0.212
5178.5	1931.1	38.6	0	12.26	0.235
5175.7	1932.1	0.4	10	11.27	0.16
5178	1931.2	10.5	10	11.6	0.189
5180.1	1930.5	21.2	10	11.9	0.212
5182.2	1929.7	32.1	10	12.23	0.235
5179.9	1930.5	0.5	20	11.32	0.168
5181.6	1929.9	6.7	20	11.56	0.189
5183.7	1929.1	16	20	11.86	0.212
5185.9	1928.3	25.4	20	12.19	0.235
5188.4	1927.4	34	20	12.56	0.259
5184.2	1928.9	0.6	30	11.38	0.177
5187.3	1927.8	11	30	11.82	0.212
5189.7	1926.9	19.2	30	12.15	0.235
5192.2	1926	26.3	30	12.52	0.259
5188.8	1927.2	0.5	40	11.46	0.187
5191.1	1926.4	6.6	40	11.78	0.212
5193.5	1925.5	13.1	40	12.11	0.235
5196.2	1924.5	19.2	40	12.48	0.259
5193.6	1925.4	0.5	50	11.58	0.199
5194.9	1925	2.7	50	11.74	0.212
5197.4	1924	7.8	50	12.07	0.235
5200.1	1923	12.6	50	12.43	0.259

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

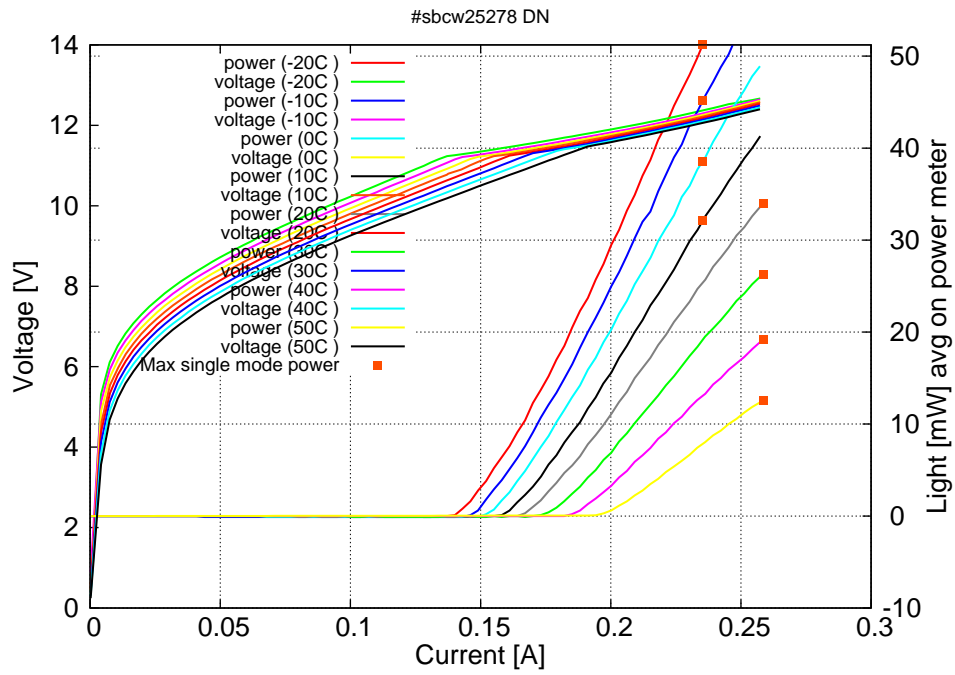


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=11.2V$ (2-wires measurements). Maximum operation current: 0.235A at -20C and 0C, 0.26A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

