

Datasheet for #sbcw24815 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

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 #sbcw24815 DN

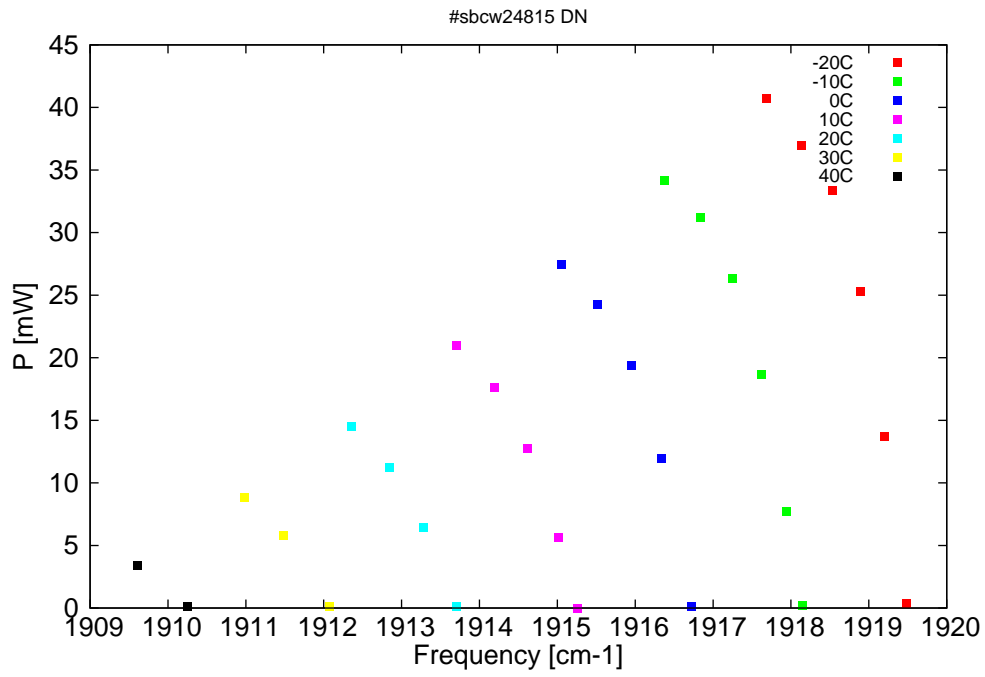


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

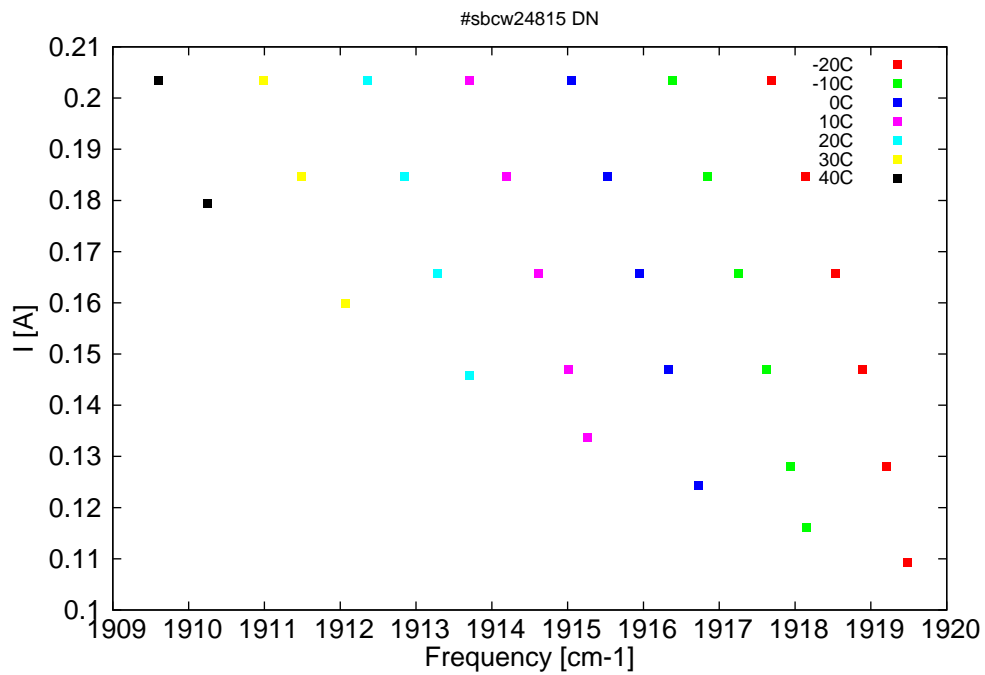


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5209.7	1919.5	0.4	-20	7.74	0.109
5210.5	1919.2	13.7	-20	7.9	0.128
5211.3	1918.9	25.3	-20	8.06	0.147
5212.3	1918.5	33.3	-20	8.23	0.166
5213.4	1918.1	37	-20	8.4	0.185
5214.6	1917.7	40.7	-20	8.59	0.204
5213.4	1918.1	0.2	-10	7.73	0.116
5213.9	1917.9	7.7	-10	7.83	0.128
5214.8	1917.6	18.6	-10	7.99	0.147
5215.8	1917.3	26.3	-10	8.16	0.166
5216.9	1916.8	31.2	-10	8.33	0.185
5218.2	1916.4	34.1	-10	8.52	0.204
5217.2	1916.7	0.2	0	7.73	0.124
5218.3	1916.3	11.9	0	7.92	0.147
5219.4	1915.9	19.4	0	8.08	0.166
5220.5	1915.5	24.2	0	8.26	0.185
5221.8	1915.1	27.5	0	8.44	0.204
5221.2	1915.3	0	10	7.74	0.134
5221.9	1915	5.6	10	7.85	0.147
5223	1914.6	12.7	10	8.01	0.166
5224.1	1914.2	17.6	10	8.18	0.185
5225.5	1913.7	21	10	8.36	0.204
5225.5	1913.7	0.1	20	7.77	0.146
5226.6	1913.3	6.4	20	7.93	0.166
5227.8	1912.8	11.2	20	8.1	0.185
5229.2	1912.4	14.5	20	8.28	0.204
5229.9	1912.1	0.1	30	7.82	0.16
5231.5	1911.5	5.8	30	8.02	0.185
5232.9	1911	8.9	30	8.2	0.204
5234.9	1910.2	0.1	40	7.91	0.179
5236.7	1909.6	3.4	40	8.12	0.204

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

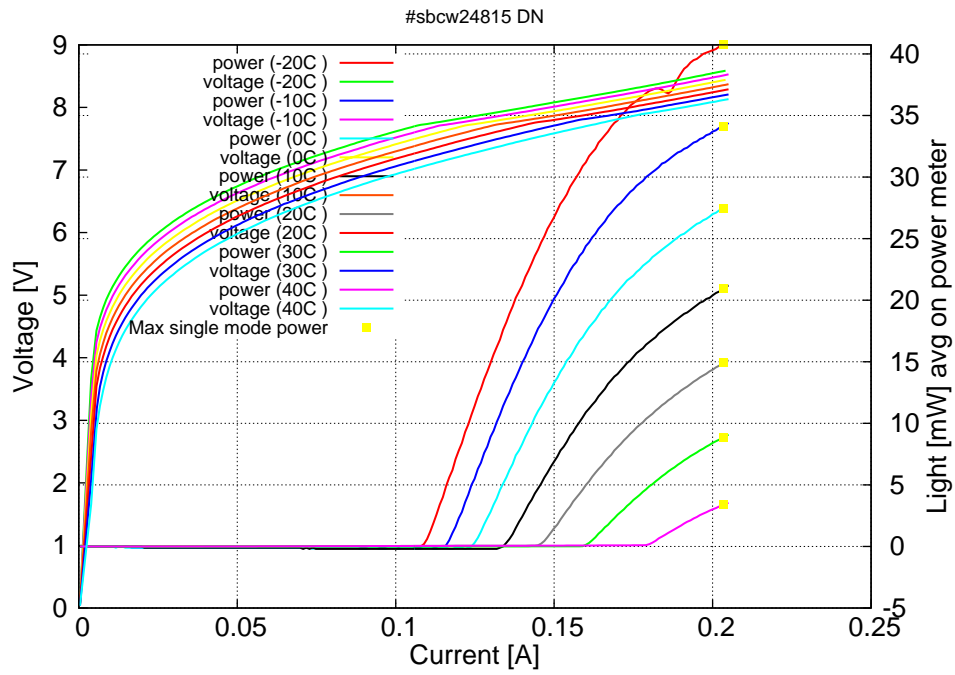


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=7.7V$ (2-wires measurements). Maximum operation current: 0.205A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

