

Datasheet for #sbcw20483 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 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 #sbcw20483 DN (please note that AlN submount numbering is A0PAW)

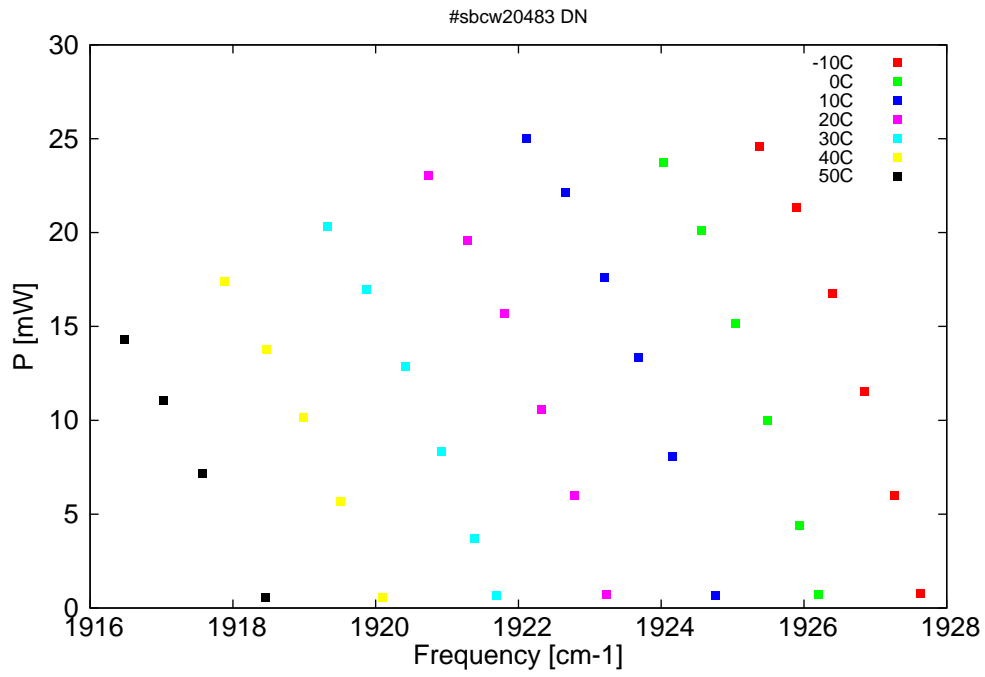


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

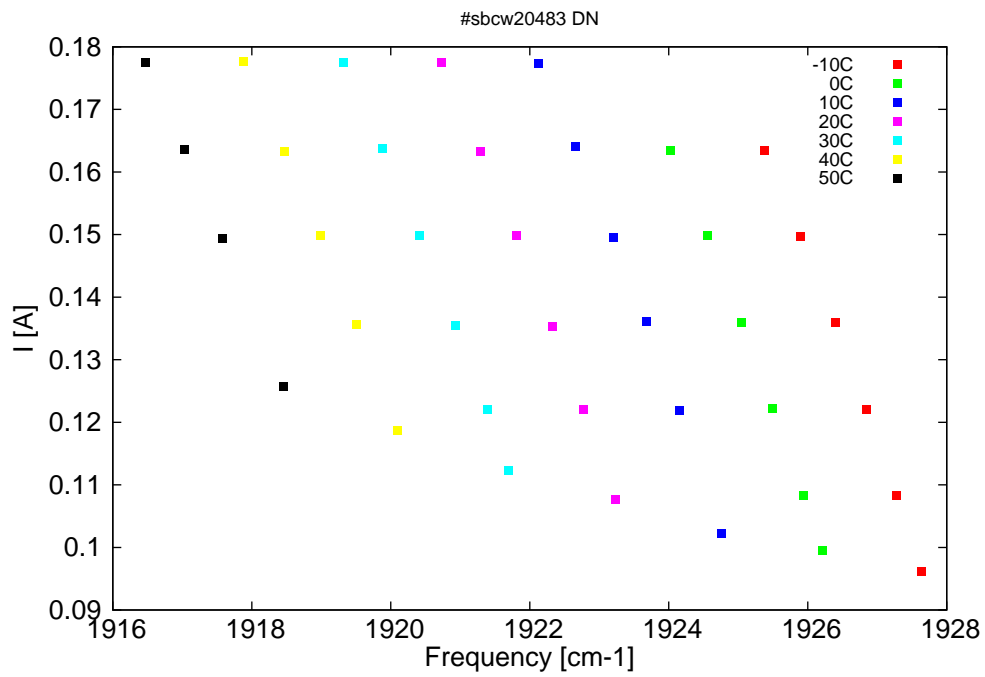


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5187.7	1927.6	0.8	-10	11.78	0.096
5188.7	1927.3	6	-10	12.01	0.108
5189.8	1926.8	11.5	-10	12.28	0.122
5191	1926.4	16.8	-10	12.55	0.136
5192.4	1925.9	21.3	-10	12.84	0.15
5193.8	1925.4	24.6	-10	13.14	0.163
5191.5	1926.2	0.7	0	11.68	0.099
5192.3	1925.9	4.4	0	11.83	0.108
5193.5	1925.5	10	0	12.09	0.122
5194.7	1925	15.1	0	12.36	0.136
5196	1924.6	20.1	0	12.62	0.15
5197.4	1924	23.7	0	12.91	0.163
5195.5	1924.8	0.7	10	11.57	0.102
5197.1	1924.2	8.1	10	11.93	0.122
5198.4	1923.7	13.3	10	12.18	0.136
5199.6	1923.2	17.6	10	12.44	0.149
5201.1	1922.7	22.1	10	12.72	0.164
5202.6	1922.1	25	10	12.99	0.177
5199.6	1923.2	0.7	20	11.53	0.108
5200.8	1922.8	6	20	11.77	0.122
5202	1922.3	10.6	20	12.01	0.135
5203.4	1921.8	15.7	20	12.28	0.15
5204.8	1921.3	19.6	20	12.53	0.163
5206.3	1920.7	23.1	20	12.8	0.178
5203.8	1921.7	0.6	30	11.48	0.112
5204.6	1921.4	3.7	30	11.64	0.122
5205.8	1920.9	8.3	30	11.86	0.135
5207.2	1920.4	12.9	30	12.12	0.15
5208.7	1919.9	17	30	12.37	0.164
5210.2	1919.3	20.3	30	12.62	0.177
5208.1	1920.1	0.6	40	11.46	0.119
5209.7	1919.5	5.7	40	11.74	0.136
5211.1	1919	10.1	40	11.98	0.15
5212.5	1918.5	13.8	40	12.21	0.163
5214.1	1917.9	17.4	40	12.46	0.178
5212.5	1918.5	0.6	50	11.46	0.126
5214.9	1917.6	7.2	50	11.84	0.149
5216.4	1917	11	50	12.07	0.164
5217.9	1916.5	14.3	50	12.3	0.177

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

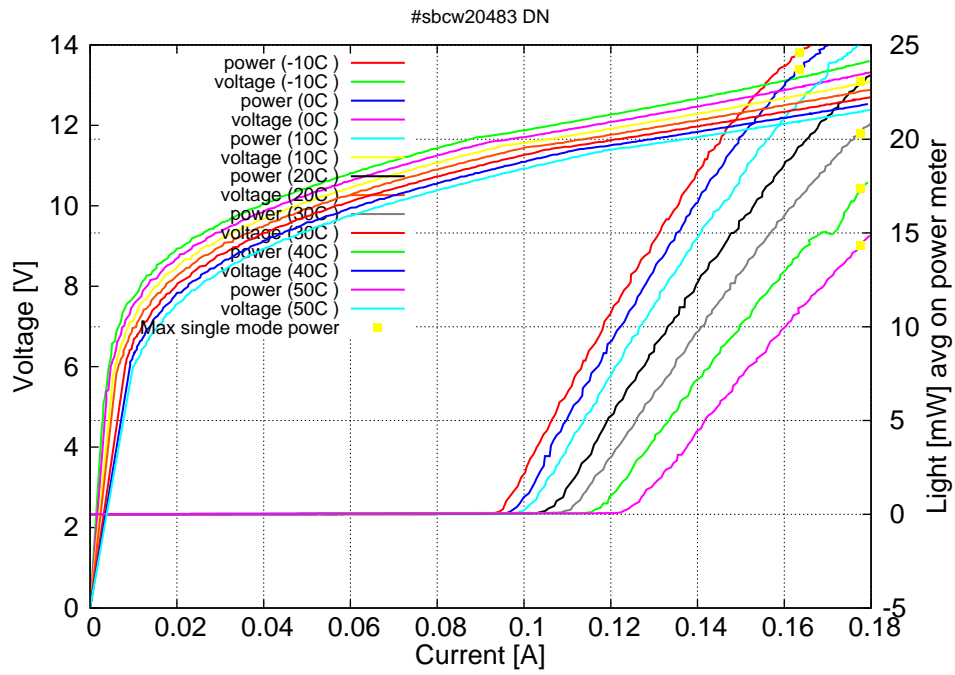


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.09A$ / $V_{th}=11.8V$ (2-wires measurements). Maximum operation current: 0.165A between -10C and 0C, 0.18A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

