

Datasheet for #sbcw20475 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 #sbcw20475 DN (please note that AlN submount numbering is A0PAM)

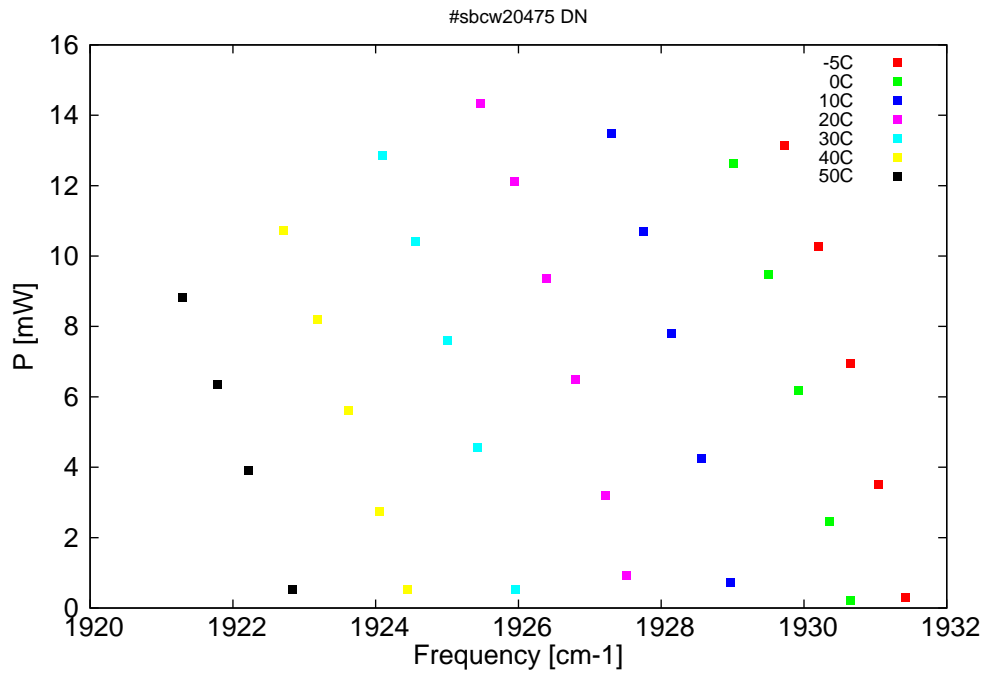


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

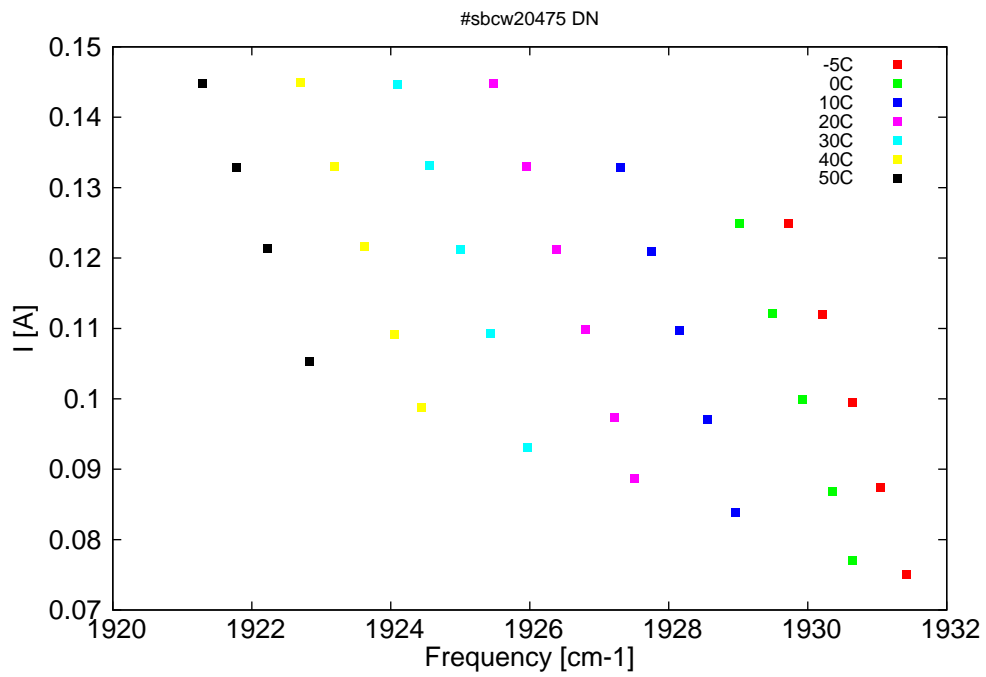


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5177.5	1931.4	0.3	-5	11.52	0.075
5178.5	1931	3.5	-5	11.82	0.087
5179.6	1930.6	7	-5	12.13	0.099
5180.8	1930.2	10.3	-5	12.45	0.112
5182.1	1929.7	13.2	-5	12.8	0.125
5179.6	1930.6	0.2	0	11.48	0.077
5180.4	1930.4	2.5	0	11.71	0.087
5181.5	1929.9	6.2	0	12.04	0.1
5182.7	1929.5	9.5	0	12.34	0.112
5184	1929	12.6	0	12.68	0.125
5184.1	1929	0.7	10	11.42	0.084
5185.2	1928.6	4.3	10	11.72	0.097
5186.3	1928.1	7.8	10	12.02	0.11
5187.4	1927.7	10.7	10	12.29	0.121
5188.6	1927.3	13.5	10	12.58	0.133
5188	1927.5	0.9	20	11.39	0.089
5188.8	1927.2	3.2	20	11.59	0.097
5189.9	1926.8	6.5	20	11.86	0.11
5191.1	1926.4	9.4	20	12.13	0.121
5192.2	1926	12.1	20	12.4	0.133
5193.5	1925.5	14.3	20	12.7	0.145
5192.2	1926	0.5	30	11.37	0.093
5193.6	1925.4	4.5	30	11.71	0.109
5194.8	1925	7.6	30	11.98	0.121
5196	1924.6	10.4	30	12.25	0.133
5197.2	1924.1	12.9	30	12.52	0.145
5196.3	1924.4	0.5	40	11.36	0.099
5197.4	1924.1	2.7	40	11.58	0.109
5198.5	1923.6	5.6	40	11.83	0.122
5199.7	1923.2	8.2	40	12.09	0.133
5201	1922.7	10.7	40	12.35	0.145
5200.7	1922.8	0.5	50	11.38	0.105
5202.3	1922.2	3.9	50	11.7	0.121
5203.5	1921.8	6.3	50	11.94	0.133
5204.8	1921.3	8.8	50	12.2	0.145

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

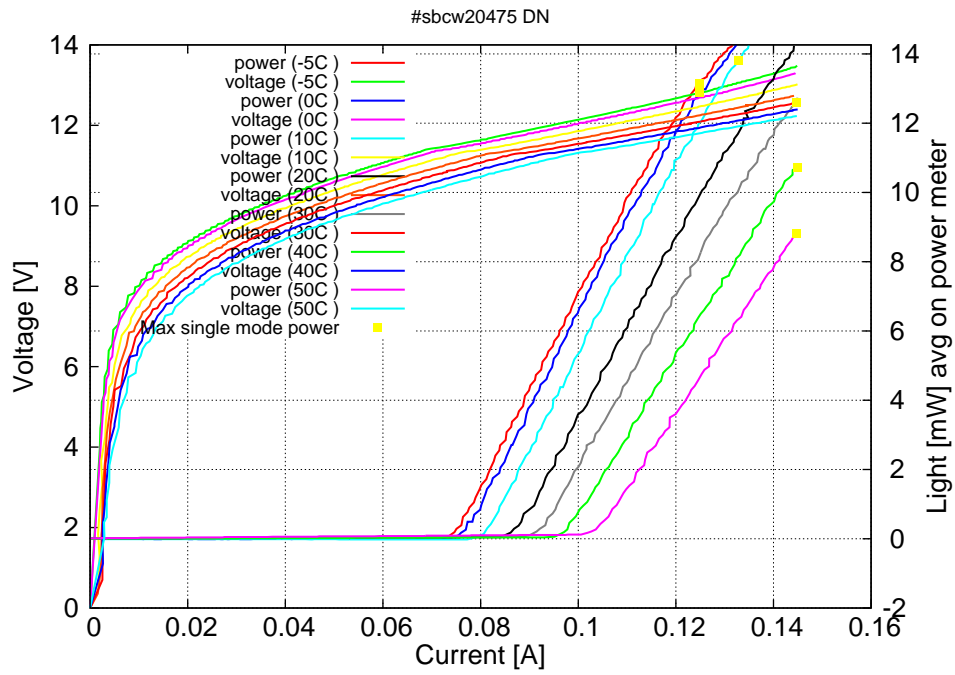


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -5C: $I_{th}=0.07A$ / $V_{th}=11.5V$ (2-wires measurements). Maximum operation current: 0.125A between -5C and 0C, 0.135A at 10C, 0.145A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

