

Datasheet for #sbcw21079 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 #sbcw21079 DN (please note that AlN submount numbering is A0TZ5)

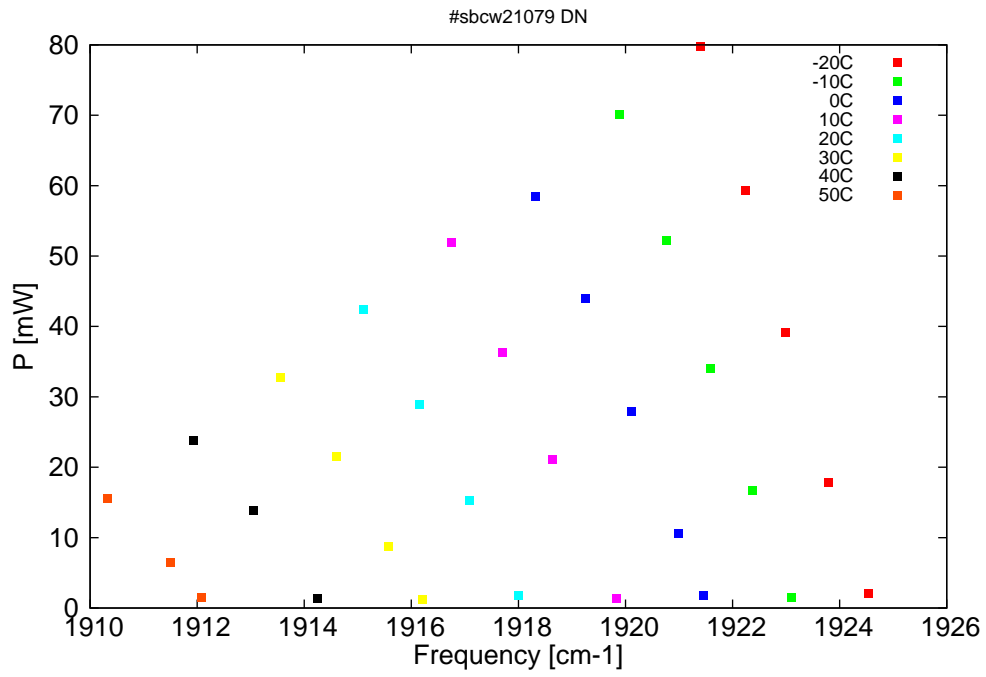


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

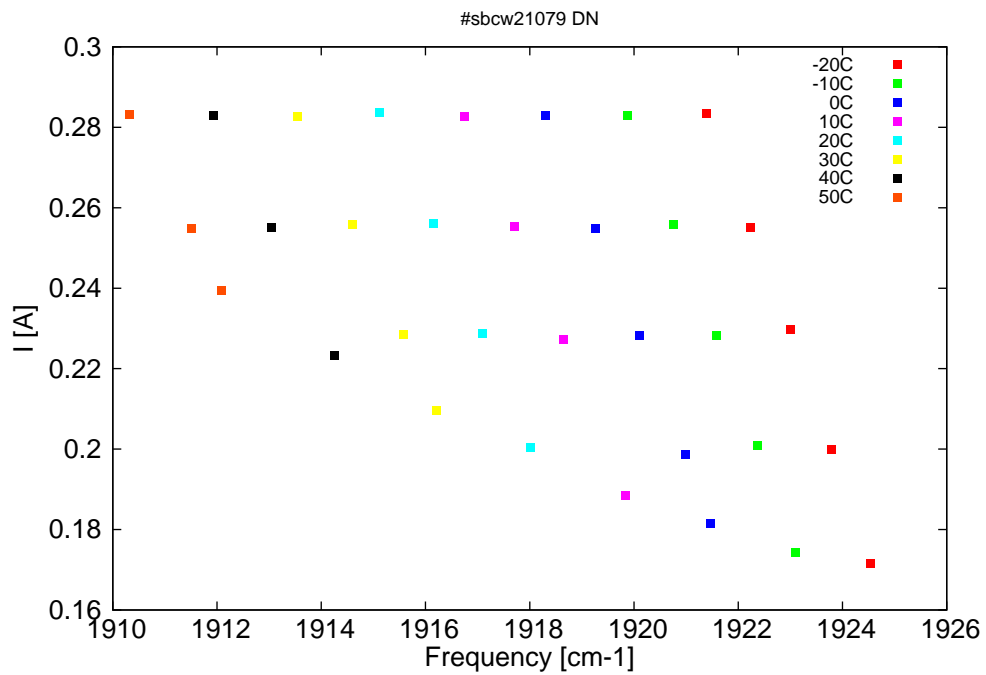


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5196	1924.5	2	-20	10.39	0.171
5198	1923.8	17.8	-20	10.53	0.2
5200.2	1923	39.1	-20	10.7	0.23
5202.3	1922.2	59.3	-20	10.87	0.255
5204.5	1921.4	79.7	-20	11.07	0.283
5199.9	1923.1	1.4	-10	10.34	0.174
5201.9	1922.4	16.6	-10	10.47	0.201
5204	1921.6	34	-10	10.64	0.228
5206.3	1920.8	52.2	-10	10.82	0.256
5208.7	1919.9	70.1	-10	11.03	0.283
5204.4	1921.5	1.8	0	10.32	0.182
5205.6	1921	10.5	0	10.41	0.199
5208	1920.1	28	0	10.59	0.228
5210.4	1919.3	43.9	0	10.78	0.255
5212.9	1918.3	58.4	0	11	0.283
5208.8	1919.8	1.4	10	10.32	0.188
5212	1918.6	21.1	10	10.55	0.227
5214.6	1917.7	36.3	10	10.75	0.255
5217.2	1916.7	51.9	10	10.97	0.283
5213.7	1918	1.8	20	10.35	0.2
5216.2	1917.1	15.4	20	10.53	0.229
5218.8	1916.1	28.8	20	10.73	0.256
5221.6	1915.1	42.4	20	10.96	0.284
5218.6	1916.2	1.2	30	10.38	0.21
5220.4	1915.6	8.7	30	10.5	0.228
5223	1914.6	21.5	30	10.7	0.256
5225.9	1913.5	32.8	30	10.93	0.283
5224	1914.2	1.4	40	10.44	0.223
5227.2	1913.1	13.9	40	10.67	0.255
5230.3	1911.9	23.8	40	10.91	0.283
5229.9	1912.1	1.4	50	10.55	0.239
5231.5	1911.5	6.5	50	10.66	0.255
5234.7	1910.3	15.6	50	10.9	0.283

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

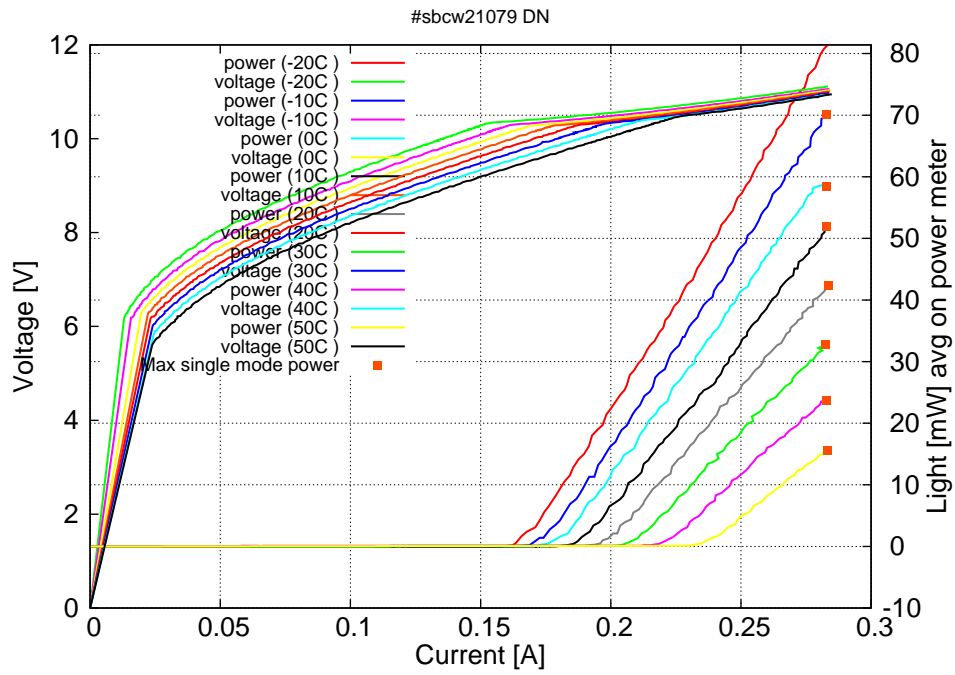


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=10.4V$ (2-wires measurements). Maximum operation current: 0.285A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

