

Datasheet for #sbcw21075 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 #sbcw21075 DN (please note that AlN submount numbering is A0T2X)

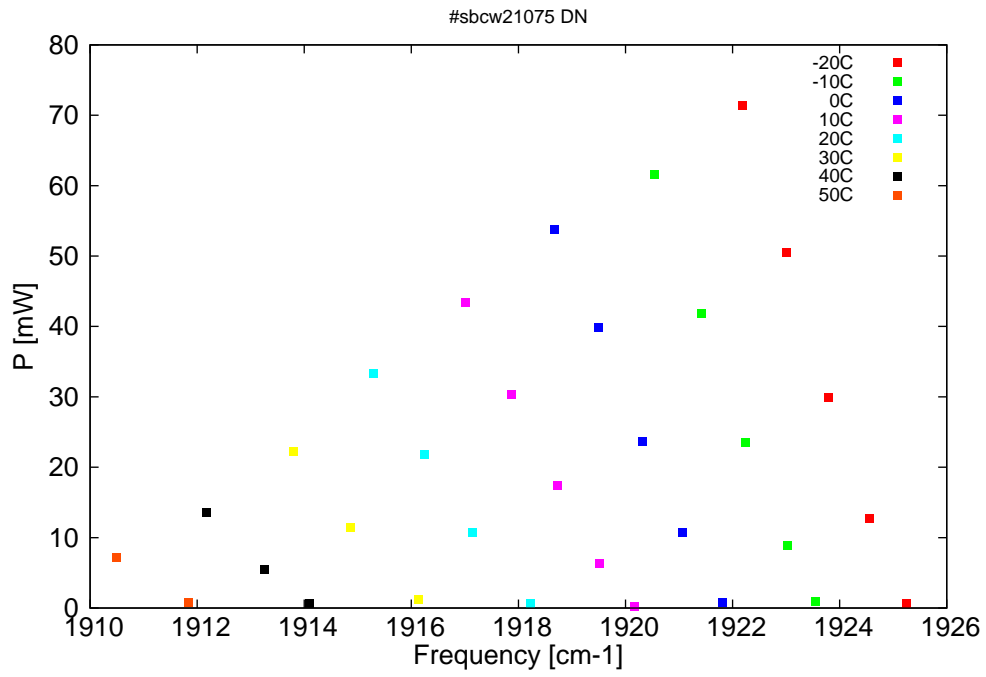


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

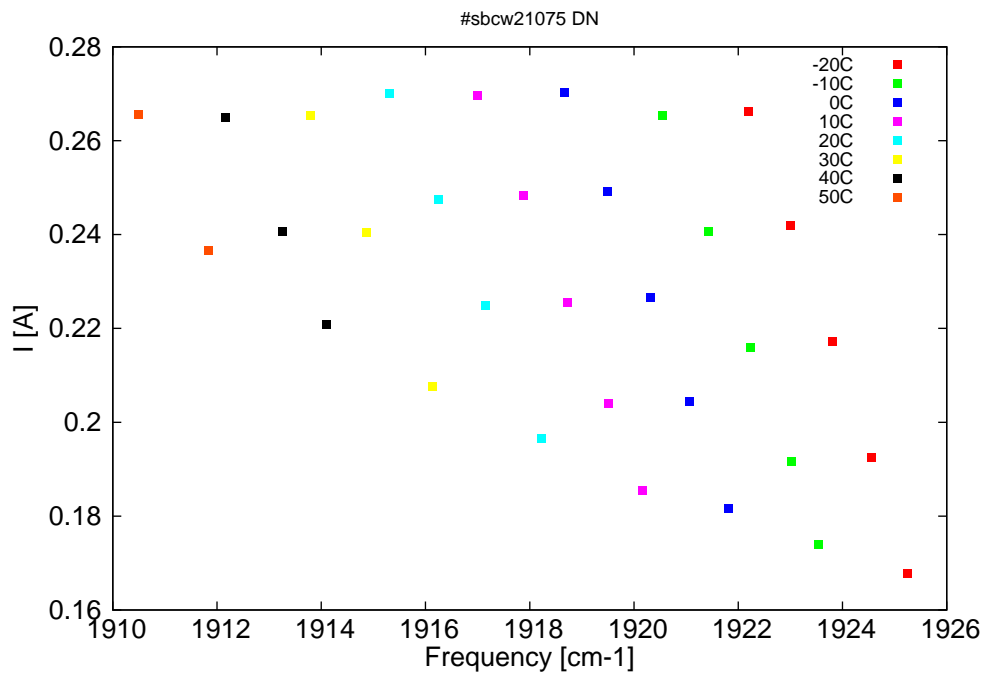


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5194.1	1925.2	0.6	-20	10.62	0.168
5196	1924.6	12.7	-20	10.8	0.193
5198	1923.8	29.9	-20	11	0.217
5200.2	1923	50.5	-20	11.22	0.242
5202.4	1922.2	71.5	-20	11.45	0.266
5198.7	1923.5	0.9	-10	10.55	0.174
5200.2	1923	8.9	-10	10.68	0.192
5202.3	1922.2	23.5	-10	10.89	0.216
5204.5	1921.4	41.9	-10	11.11	0.241
5206.9	1920.5	61.6	-10	11.35	0.265
5203.4	1921.8	0.8	0	10.51	0.182
5205.4	1921.1	10.7	0	10.7	0.204
5207.5	1920.3	23.6	0	10.89	0.227
5209.7	1919.5	39.9	0	11.11	0.249
5211.9	1918.7	53.8	0	11.33	0.27
5207.9	1920.2	0.3	10	10.46	0.186
5209.6	1919.5	6.3	10	10.61	0.204
5211.8	1918.7	17.5	10	10.8	0.226
5214.1	1917.9	30.4	10	11.03	0.248
5216.5	1917	43.4	10	11.26	0.27
5213.1	1918.2	0.7	20	10.47	0.197
5216.1	1917.1	10.8	20	10.73	0.225
5218.5	1916.2	21.8	20	10.95	0.247
5221.1	1915.3	33.3	20	11.19	0.27
5218.9	1916.1	1.2	30	10.52	0.208
5222.3	1914.9	11.5	30	10.84	0.24
5225.2	1913.8	22.3	30	11.11	0.265
5224.4	1914.1	0.7	40	10.58	0.221
5226.7	1913.3	5.5	40	10.77	0.241
5229.7	1912.2	13.6	40	11.03	0.265
5230.6	1911.8	0.8	50	10.67	0.237
5234.3	1910.5	7.1	50	10.96	0.265

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

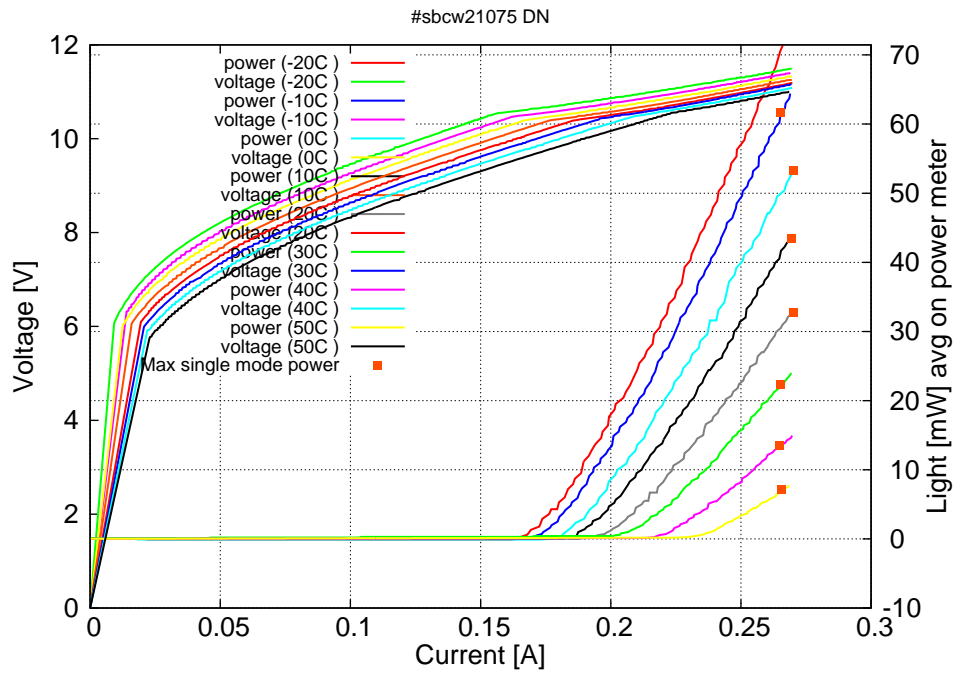


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=10.6V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

