

Datasheet for #sbcw16069 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 #sbcw16069 DN (please note that AlN submount numbering is A0AJ4)

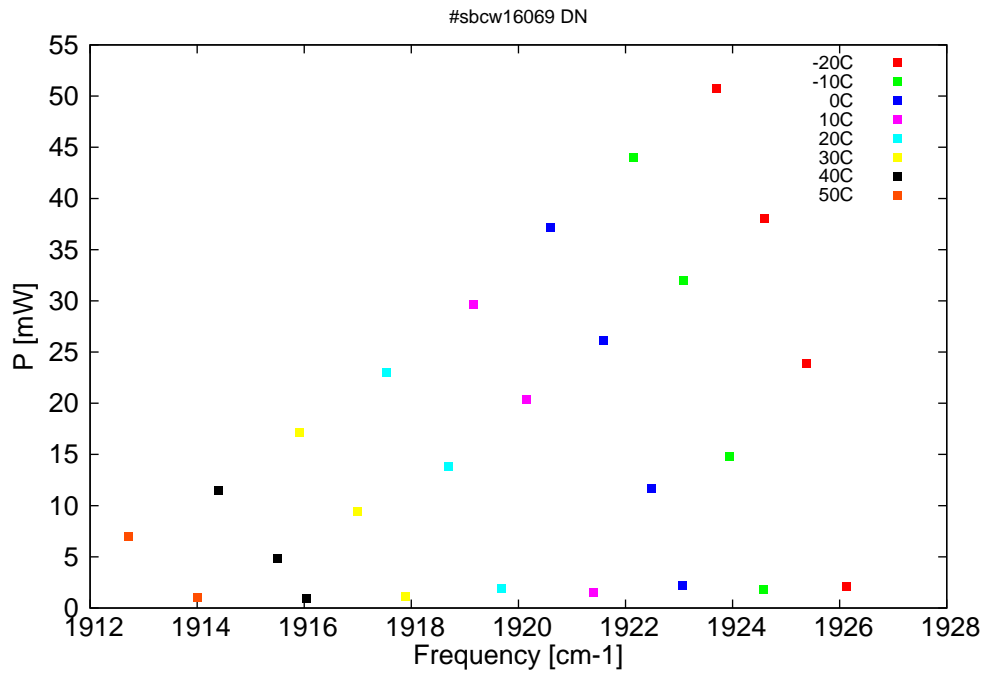


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

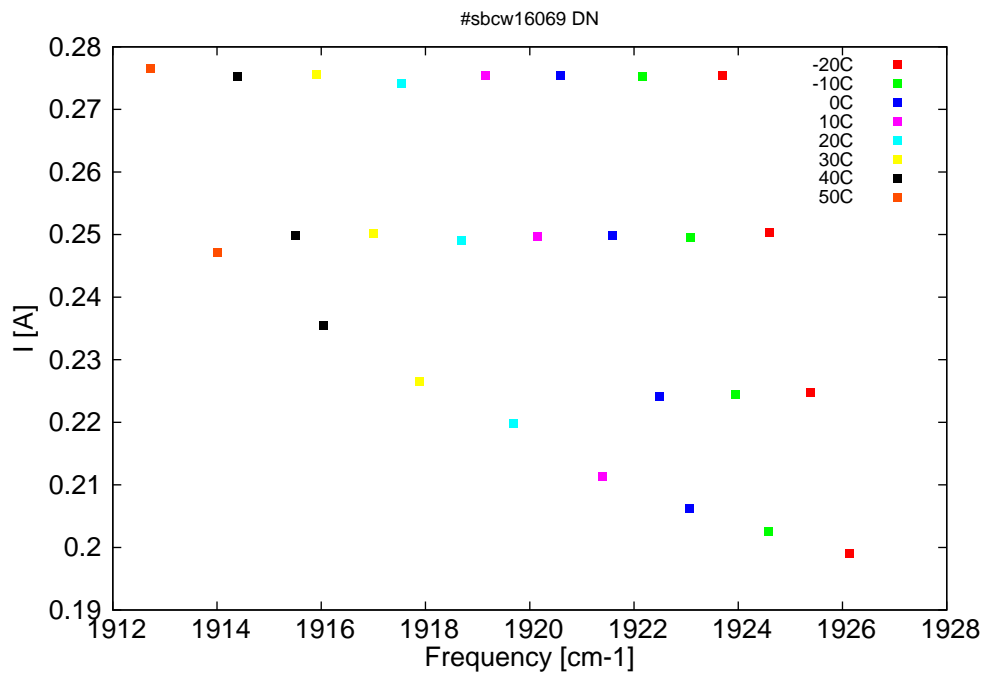


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5191.7	1926.1	2.1	-20	11.85	0.199
5193.8	1925.4	23.9	-20	12.04	0.225
5195.9	1924.6	38	-20	12.27	0.25
5198.3	1923.7	50.7	-20	12.56	0.275
5195.9	1924.6	1.8	-10	11.76	0.203
5197.7	1923.9	14.8	-10	11.93	0.224
5200	1923.1	32	-10	12.17	0.25
5202.5	1922.2	44	-10	12.45	0.275
5200	1923.1	2.2	0	11.69	0.206
5201.6	1922.5	11.7	0	11.83	0.224
5204	1921.6	26.1	0	12.08	0.25
5206.7	1920.6	37.1	0	12.37	0.275
5204.5	1921.4	1.5	10	11.64	0.211
5207.9	1920.1	20.4	10	11.99	0.25
5210.6	1919.2	29.6	10	12.28	0.275
5209.2	1919.7	1.9	20	11.63	0.22
5211.9	1918.7	13.8	20	11.91	0.249
5215	1917.5	23.1	20	12.19	0.274
5214.1	1917.9	1.1	30	11.61	0.227
5216.5	1917	9.4	30	11.84	0.25
5219.5	1915.9	17.2	30	12.12	0.276
5219.1	1916	0.9	40	11.62	0.236
5220.6	1915.5	4.9	40	11.76	0.25
5223.6	1914.4	11.5	40	12.04	0.275
5224.6	1914	1	50	11.66	0.247
5228.2	1912.7	7	50	11.97	0.277

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

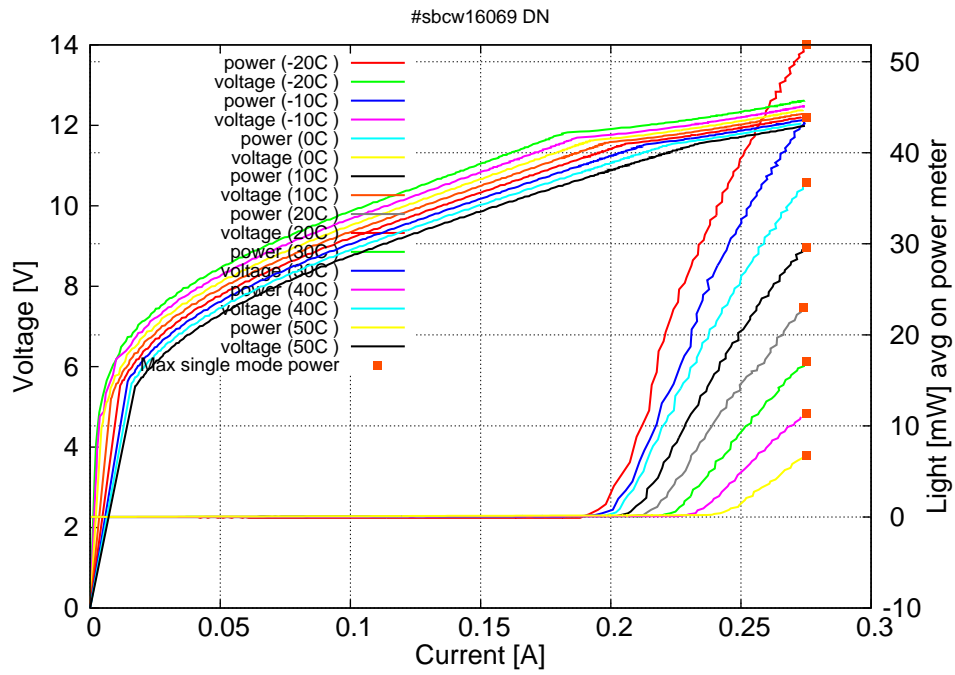


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=11.9V$ (2-wires measurements). Maximum operation current: 0.275A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

