

Datasheet for #sbcw24790 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 #sbcw24790 DN (please note that AlN submount numbering is A0Z1D)

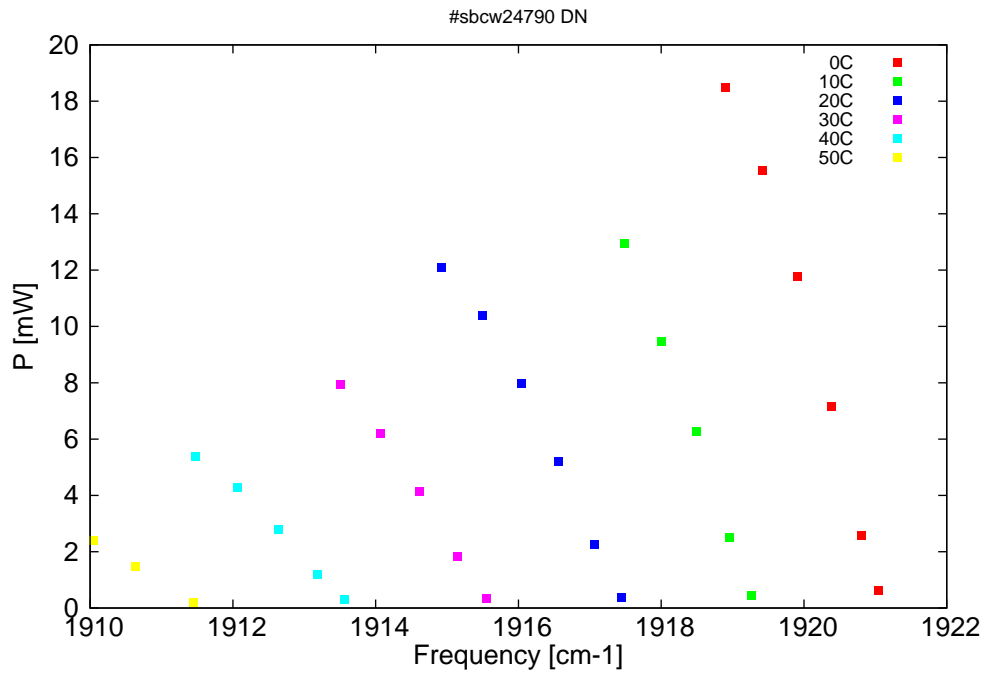


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

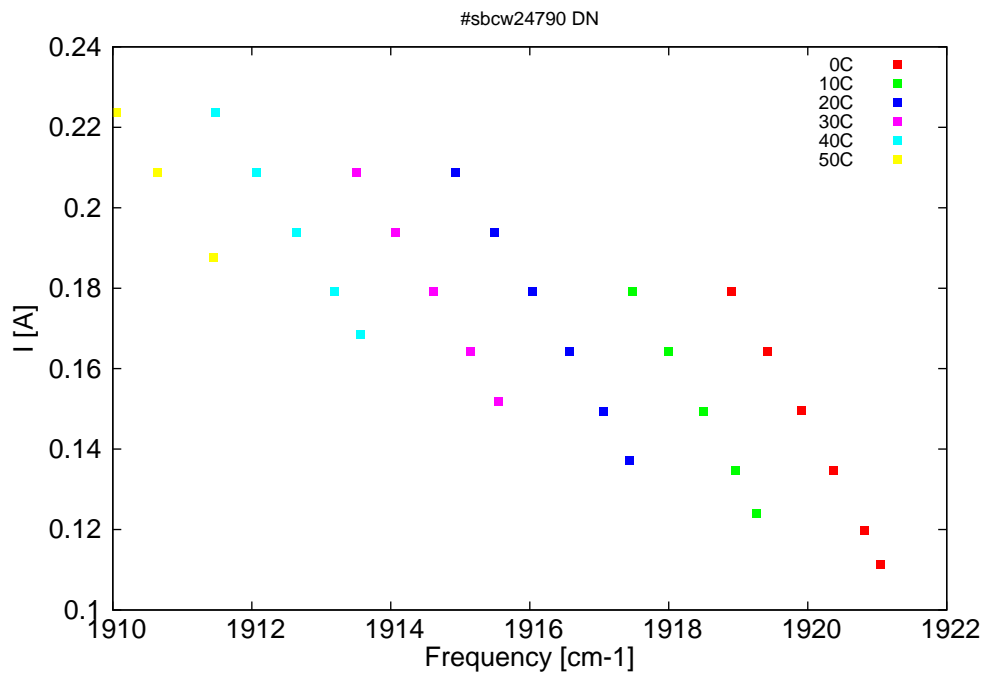


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5205.5	1921	0.6	0	9.53	0.111
5206.1	1920.8	2.6	0	9.69	0.12
5207.3	1920.4	7.2	0	9.98	0.135
5208.6	1919.9	11.8	0	10.27	0.15
5209.9	1919.4	15.6	0	10.58	0.164
5211.3	1918.9	18.5	0	10.89	0.179
5210.3	1919.3	0.5	10	9.62	0.124
5211.2	1919	2.5	10	9.81	0.135
5212.4	1918.5	6.3	10	10.09	0.149
5213.8	1918	9.5	10	10.37	0.164
5215.2	1917.5	13	10	10.66	0.179
5215.3	1917.4	0.4	20	9.7	0.137
5216.3	1917.1	2.3	20	9.92	0.149
5217.7	1916.6	5.2	20	10.18	0.164
5219.1	1916	8	20	10.44	0.179
5220.6	1915.5	10.4	20	10.71	0.194
5222.1	1914.9	12.1	20	10.97	0.209
5220.4	1915.6	0.3	30	9.8	0.152
5221.5	1915.1	1.8	30	10	0.164
5223	1914.6	4.1	30	10.24	0.179
5224.5	1914.1	6.2	30	10.49	0.194
5226	1913.5	8	30	10.73	0.209
5225.9	1913.6	0.3	40	9.9	0.169
5226.9	1913.2	1.2	40	10.06	0.179
5228.4	1912.6	2.8	40	10.28	0.194
5229.9	1912.1	4.3	40	10.51	0.209
5231.6	1911.5	5.4	40	10.73	0.224
5231.6	1911.5	0.2	50	10	0.188
5233.8	1910.6	1.5	50	10.29	0.209
5235.5	1910.1	2.4	50	10.5	0.224

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

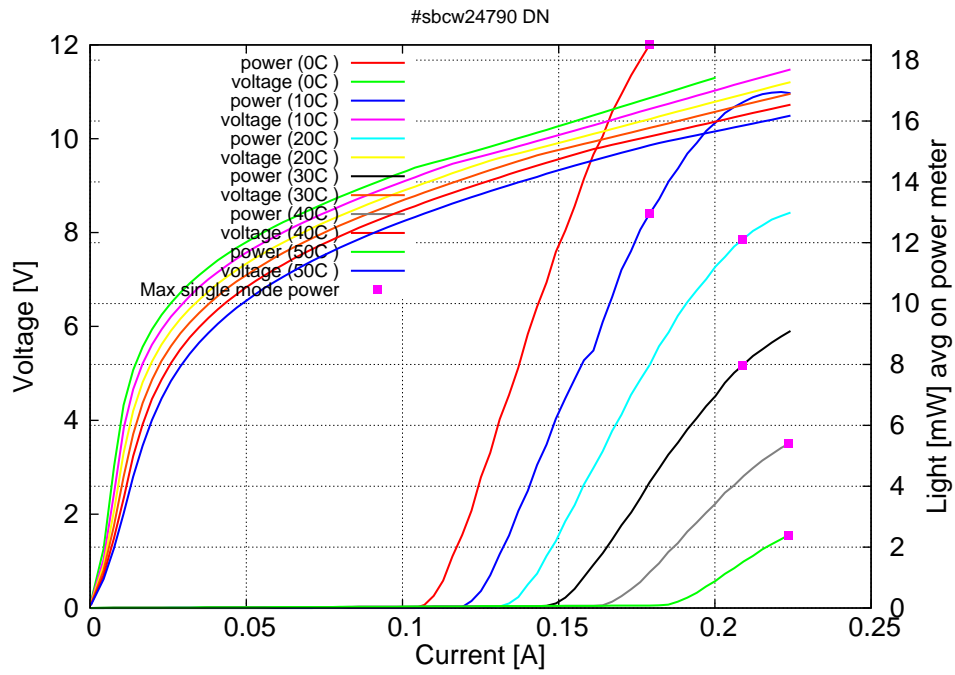


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.10A$ / $V_{th}=9.4V$ (2-wires measurements). Maximum operation current: 0.18A between 0C and 10C, 0.21A between 20C and 30C, 0.25A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

