

Datasheet for #sbcw24710 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 #sbcw24710 DN (please note that AlN submount numbering is A12N9)

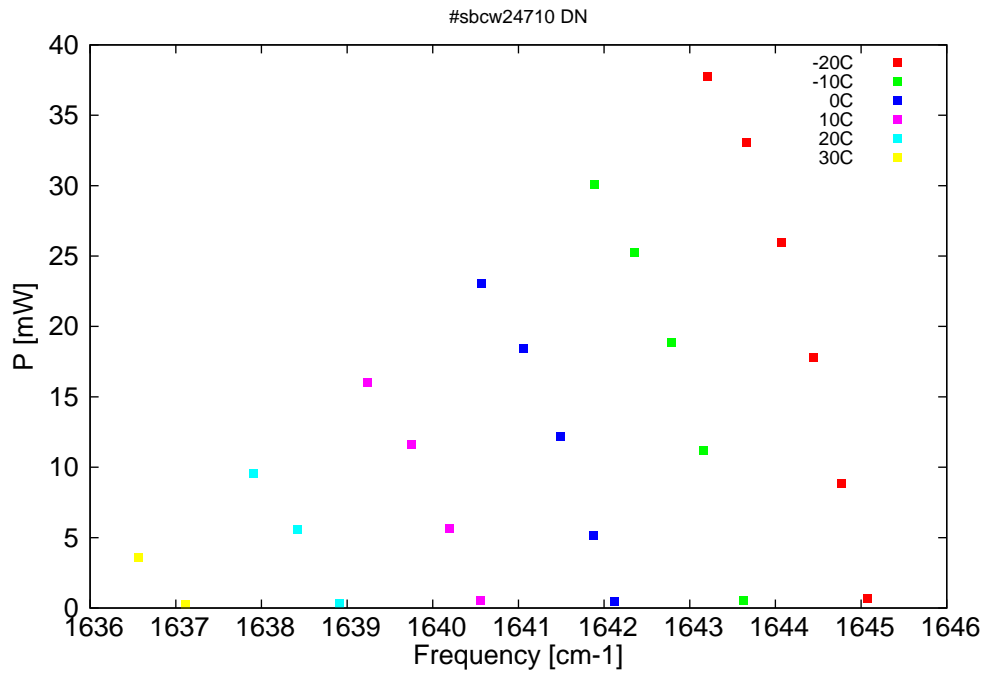


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

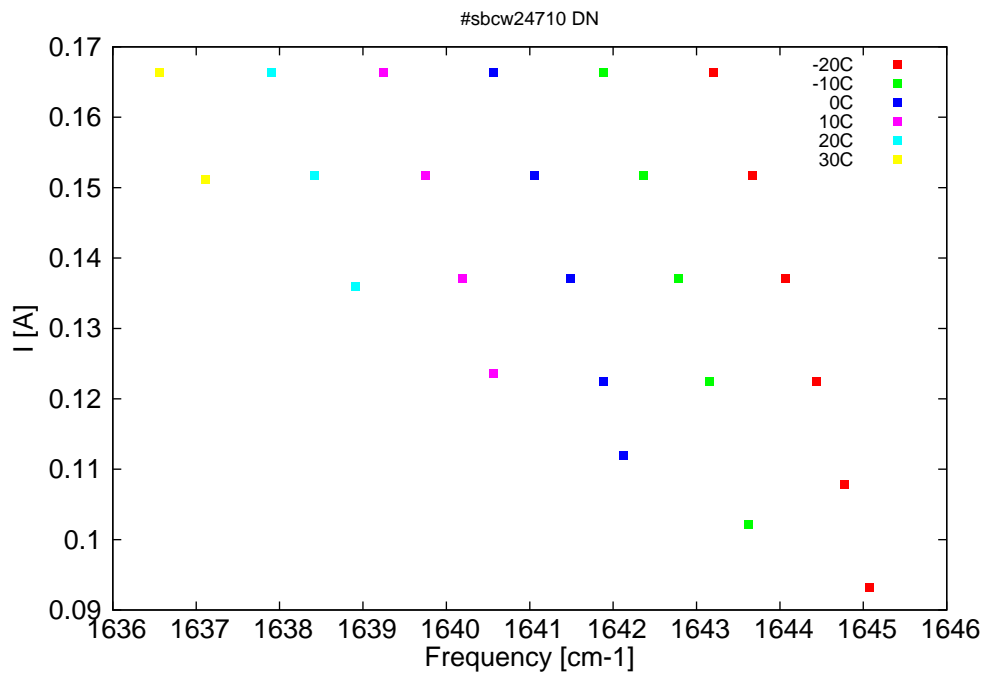


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6078.7	1645.1	0.6	-20	9.72	0.093
6079.9	1644.8	8.9	-20	10	0.108
6081.1	1644.4	17.8	-20	10.27	0.123
6082.5	1644.1	26	-20	10.56	0.137
6084	1643.7	33.1	-20	10.86	0.152
6085.7	1643.2	37.8	-20	11.18	0.166
6084.1	1643.6	0.6	-10	9.82	0.102
6085.9	1643.2	11.2	-10	10.21	0.123
6087.2	1642.8	18.9	-10	10.49	0.137
6088.8	1642.4	25.3	-10	10.79	0.152
6090.6	1641.9	30.1	-10	11.12	0.166
6089.7	1642.1	0.5	0	9.94	0.112
6090.6	1641.9	5.1	0	10.14	0.123
6092	1641.5	12.2	0	10.43	0.137
6093.6	1641.1	18.5	0	10.73	0.152
6095.4	1640.6	23.1	0	11.06	0.166
6095.5	1640.6	0.5	10	10.11	0.124
6096.9	1640.2	5.6	10	10.37	0.137
6098.5	1639.7	11.6	10	10.67	0.152
6100.4	1639.2	16	10	11	0.166
6101.6	1638.9	0.4	20	10.3	0.136
6103.4	1638.4	5.6	20	10.62	0.152
6105.4	1637.9	9.6	20	10.95	0.166
6108.3	1637.1	0.3	30	10.56	0.151
6110.4	1636.6	3.6	30	10.9	0.166

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

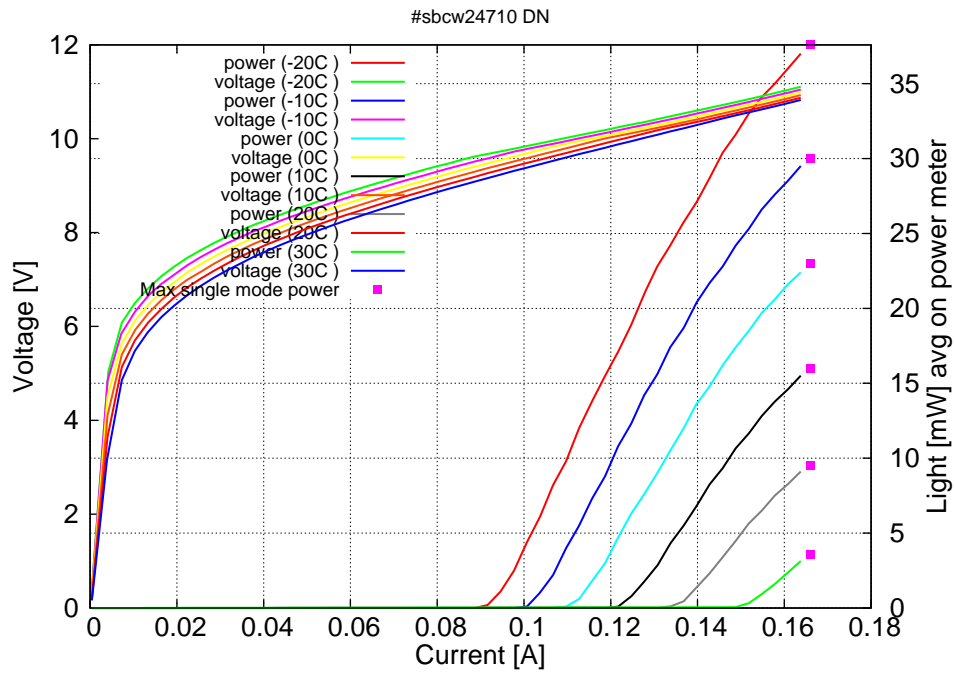


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=9.7V$ (2-wires measurements). Maximum operation current: 0.166A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

