

Datasheet for #sbcw24709 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 #sbcw24709 DN (please note that AlN submount numbering is A11X7)

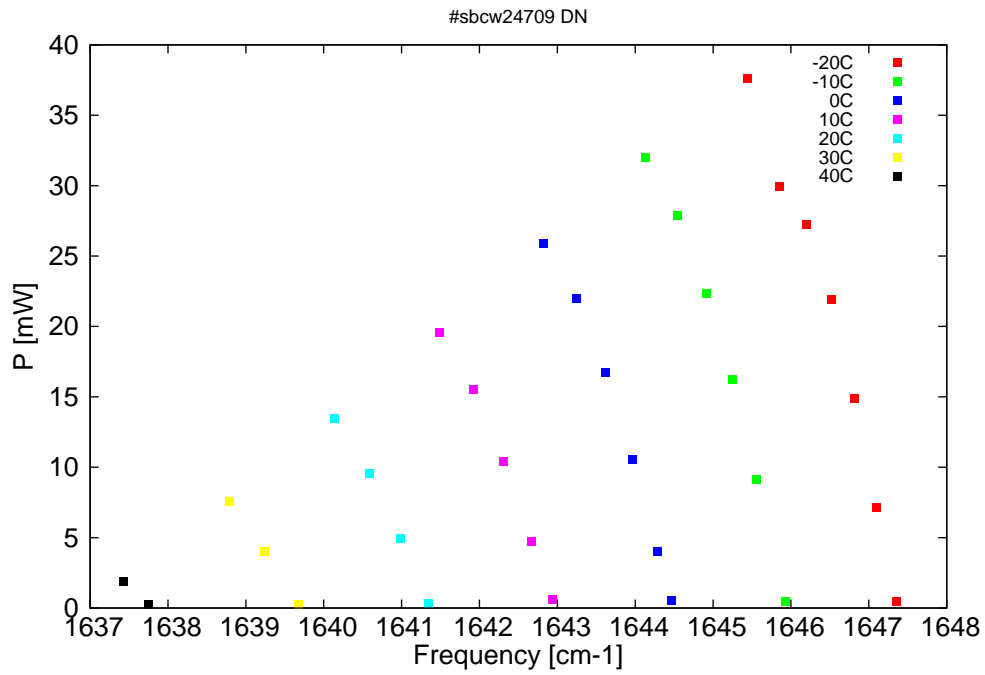


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

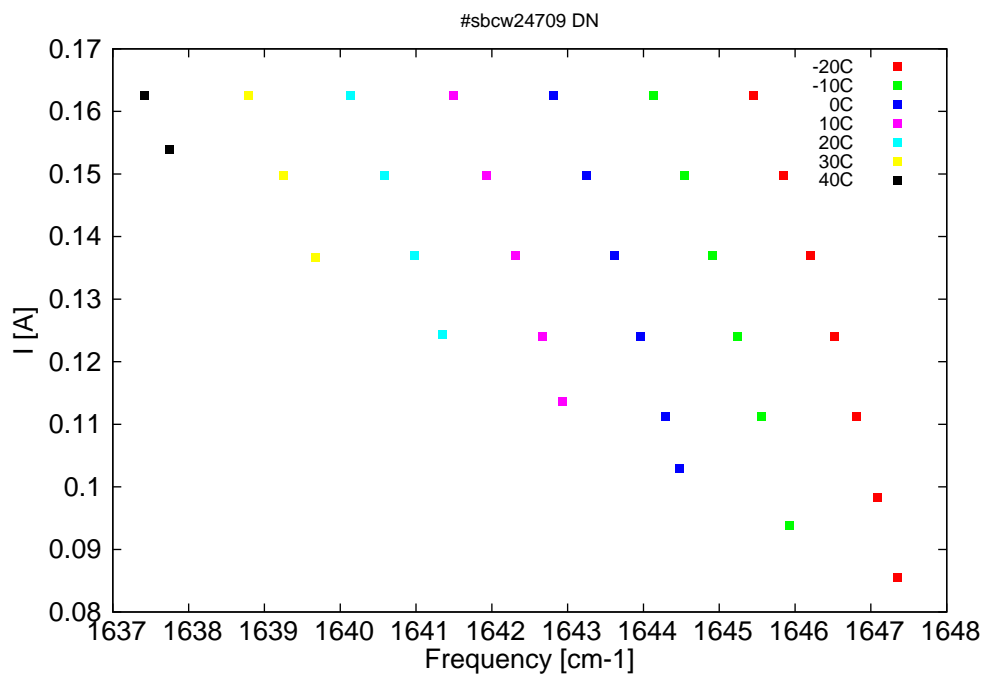


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6070.3	1647.4	0.5	-20	9.49	0.086
6071.3	1647.1	7.2	-20	9.73	0.098
6072.3	1646.8	14.9	-20	9.96	0.111
6073.4	1646.5	21.9	-20	10.2	0.124
6074.6	1646.2	27.2	-20	10.43	0.137
6075.9	1645.8	29.9	-20	10.68	0.15
6077.4	1645.4	37.6	-20	10.96	0.163
6075.6	1645.9	0.5	-10	9.59	0.094
6077	1645.6	9.1	-10	9.91	0.111
6078.1	1645.2	16.2	-10	10.14	0.124
6079.4	1644.9	22.3	-10	10.38	0.137
6080.7	1644.5	27.9	-10	10.63	0.15
6082.2	1644.1	32	-10	10.9	0.163
6081	1644.5	0.6	0	9.7	0.103
6081.7	1644.3	4	0	9.85	0.111
6082.9	1644	10.6	0	10.08	0.124
6084.1	1643.6	16.7	0	10.32	0.137
6085.5	1643.2	22	0	10.58	0.15
6087.1	1642.8	25.9	0	10.85	0.163
6086.7	1642.9	0.6	10	9.84	0.114
6087.7	1642.7	4.7	10	10.03	0.124
6089	1642.3	10.4	10	10.27	0.137
6090.4	1641.9	15.5	10	10.53	0.15
6092	1641.5	19.6	10	10.8	0.163
6092.6	1641.3	0.4	20	9.99	0.124
6093.9	1641	4.9	20	10.22	0.137
6095.4	1640.6	9.6	20	10.47	0.15
6097	1640.1	13.4	20	10.75	0.163
6098.8	1639.7	0.3	30	10.18	0.137
6100.4	1639.2	4	30	10.43	0.15
6102.1	1638.8	7.6	30	10.71	0.163
6105.9	1637.8	0.3	40	10.47	0.154
6107.2	1637.4	1.9	40	10.65	0.163

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

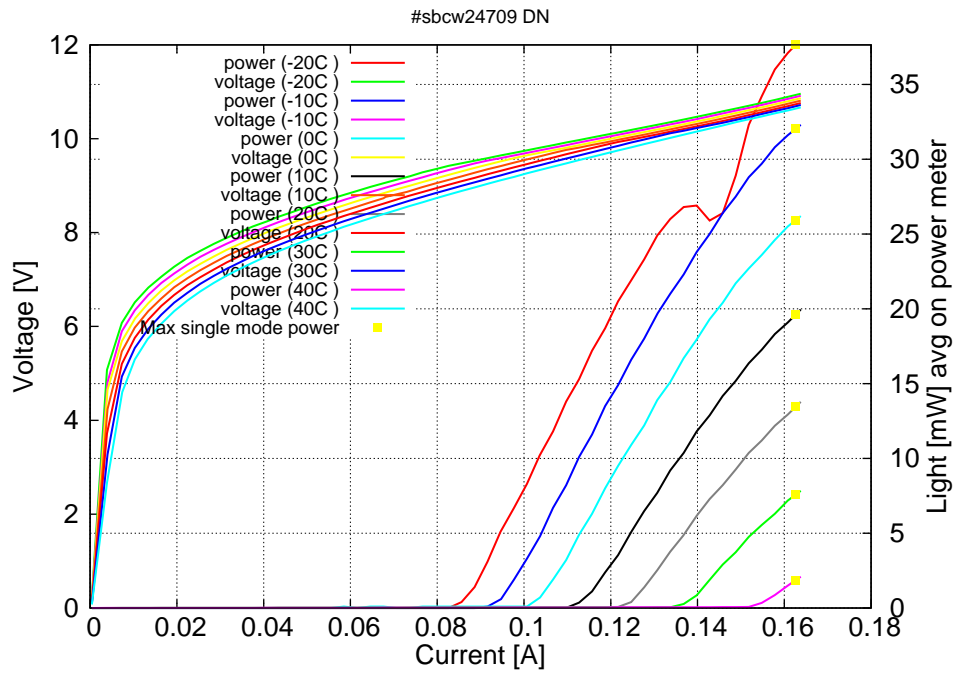


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=9.5V$ (2-wires measurements). Maximum operation current: 0.165A for all temperatures.

