

Datasheet for #sbcw24899 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 #sbcw24899 DN (please note that AlN submount numbering is A10F8)

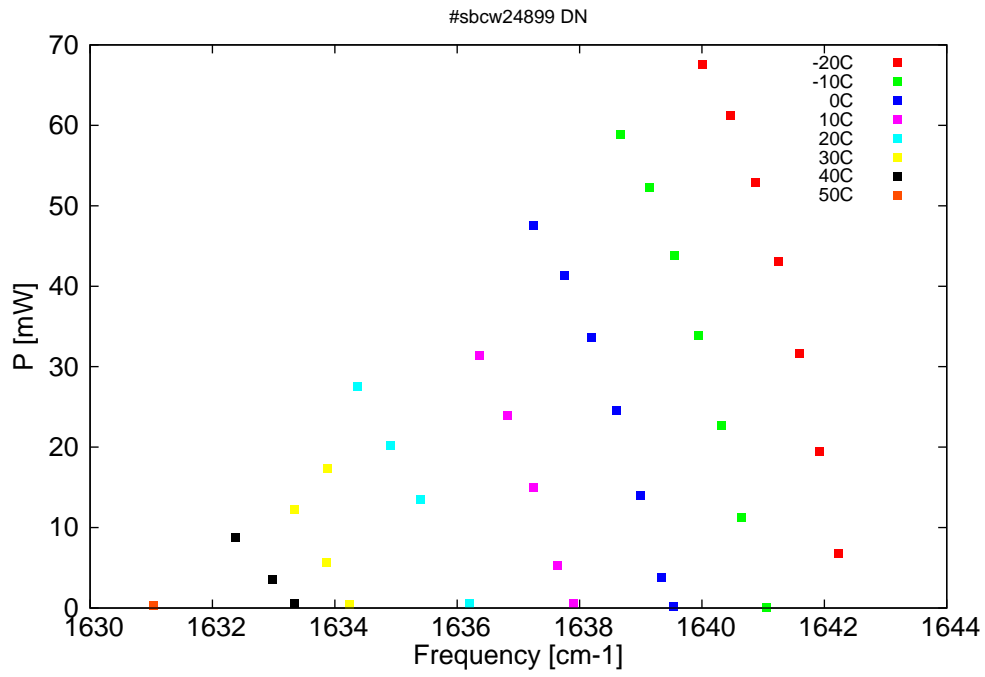


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

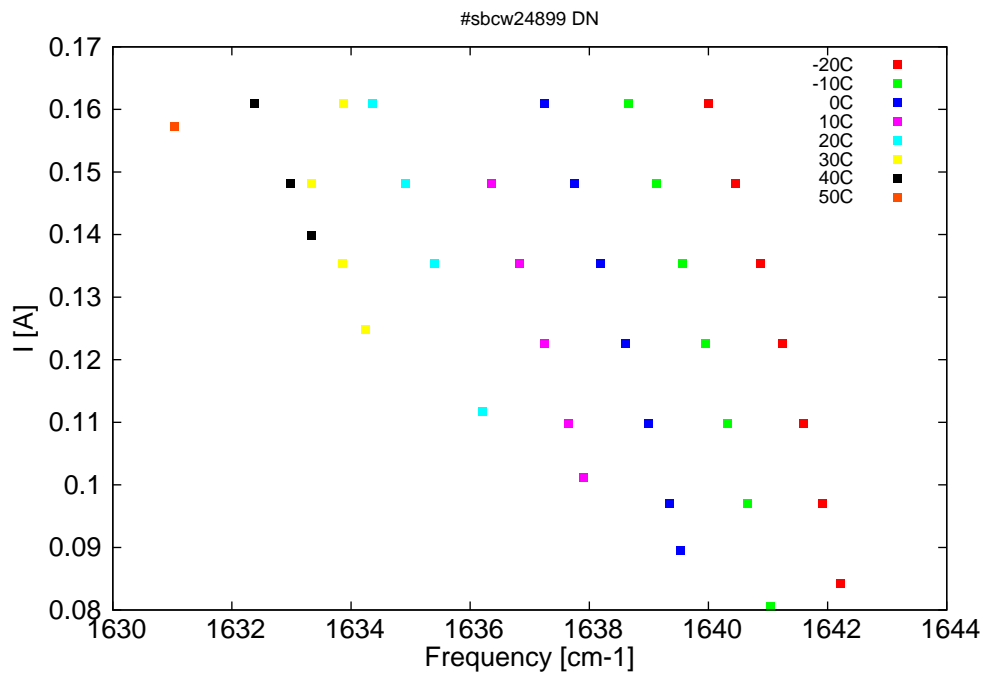


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6089.3	1642.2	6.8	-20	9.48	0.084
6090.4	1641.9	19.5	-20	9.72	0.097
6091.6	1641.6	31.6	-20	9.97	0.11
6092.9	1641.2	43	-20	10.21	0.123
6094.3	1640.9	52.9	-20	10.45	0.135
6095.8	1640.5	61.3	-20	10.71	0.148
6097.5	1640	67.6	-20	10.98	0.161
6093.7	1641	0.1	-10	9.34	0.081
6095.1	1640.7	11.3	-10	9.65	0.097
6096.4	1640.3	22.7	-10	9.89	0.11
6097.7	1639.9	33.9	-10	10.13	0.123
6099.2	1639.6	43.8	-10	10.38	0.135
6100.8	1639.1	52.3	-10	10.64	0.148
6102.5	1638.7	58.8	-10	10.91	0.161
6099.3	1639.5	0.2	0	9.45	0.09
6100	1639.3	3.8	0	9.58	0.097
6101.3	1639	14	0	9.82	0.11
6102.7	1638.6	24.5	0	10.06	0.123
6104.3	1638.2	33.6	0	10.3	0.135
6106	1637.7	41.3	0	10.56	0.148
6107.8	1637.3	47.5	0	10.83	0.161
6105.4	1637.9	0.5	10	9.6	0.101
6106.3	1637.6	5.3	10	9.76	0.11
6107.8	1637.3	15	10	10	0.123
6109.4	1636.8	23.9	10	10.25	0.135
6111.1	1636.4	31.3	10	10.5	0.148
6111.7	1636.2	0.6	20	9.74	0.112
6114.7	1635.4	13.5	20	10.19	0.135
6116.5	1634.9	20.2	20	10.44	0.148
6118.6	1634.4	27.5	20	10.71	0.161
6119	1634.2	0.5	30	9.94	0.125
6120.5	1633.9	5.7	30	10.13	0.135
6122.4	1633.3	12.2	30	10.39	0.148
6120.4	1633.9	17.3	30	10.65	0.161
6122.4	1633.3	0.5	40	10.17	0.14
6123.8	1633	3.6	40	10.33	0.148
6126	1632.4	8.8	40	10.6	0.161
6131.1	1631	0.4	50	10.47	0.157

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

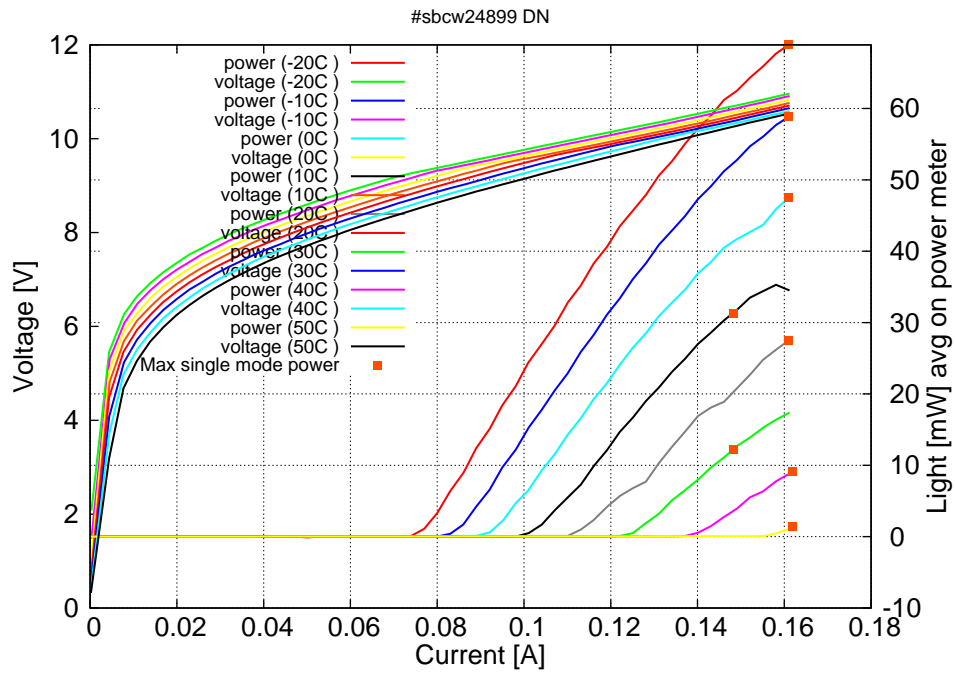


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=9.3V$ (2-wires measurements). Maximum operation current: 0.162A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

