

Datasheet for #sbcw24970 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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 #sbcw24970 DN (please note that AlN submount numbering is A10KJ)

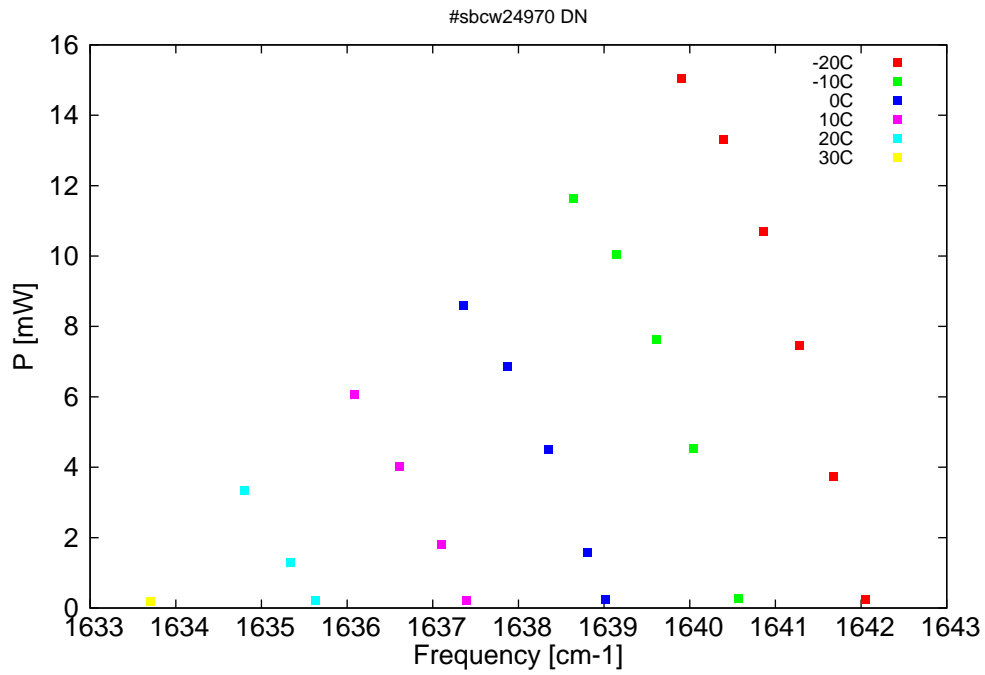


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

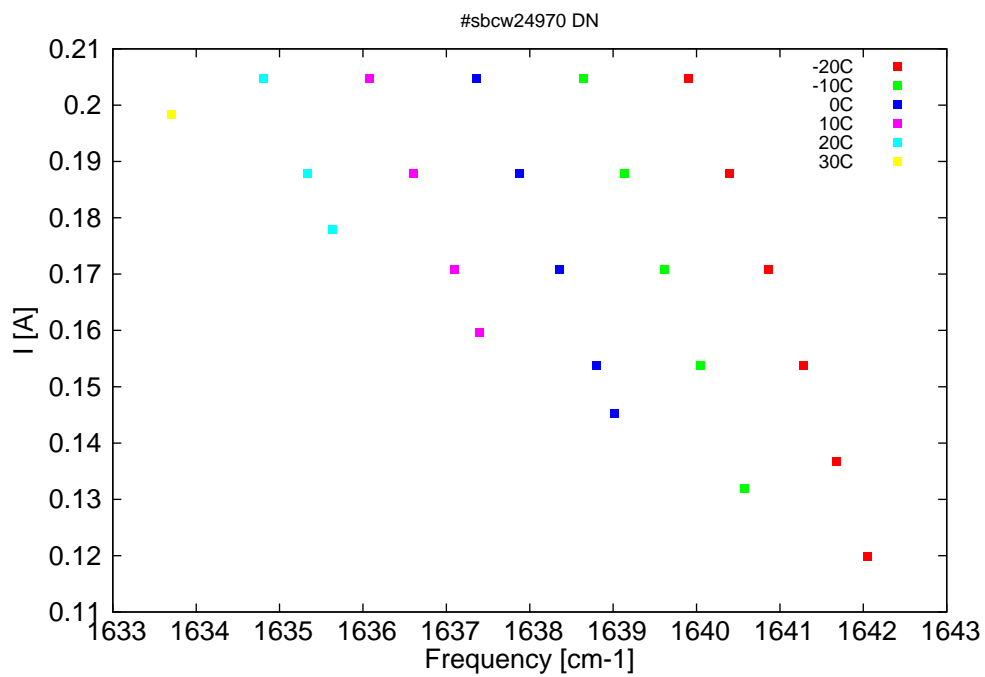


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6089.9	1642.1	0.3	-20	10.26	0.12
6091.3	1641.7	3.7	-20	10.56	0.137
6092.8	1641.3	7.5	-20	10.85	0.154
6094.4	1640.9	10.7	-20	11.15	0.171
6096.1	1640.4	13.3	-20	11.44	0.188
6097.9	1639.9	15	-20	11.74	0.205
6095.4	1640.6	0.3	-10	10.34	0.132
6097.4	1640.1	4.5	-10	10.72	0.154
6099	1639.6	7.6	-10	11.01	0.171
6100.8	1639.1	10	-10	11.31	0.188
6102.6	1638.6	11.6	-10	11.6	0.205
6101.2	1639	0.2	0	10.48	0.145
6102	1638.8	1.6	0	10.63	0.154
6103.7	1638.4	4.5	0	10.91	0.171
6105.5	1637.9	6.9	0	11.21	0.188
6107.4	1637.4	8.6	0	11.5	0.205
6107.2	1637.4	0.2	10	10.62	0.16
6108.4	1637.1	1.8	10	10.8	0.171
6110.2	1636.6	4	10	11.1	0.188
6112.2	1636.1	6.1	10	11.39	0.205
6113.9	1635.6	0.2	20	10.84	0.178
6114.9	1635.3	1.3	20	11	0.188
6116.9	1634.8	3.3	20	11.29	0.205
6121	1633.7	0.2	30	11.1	0.198

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

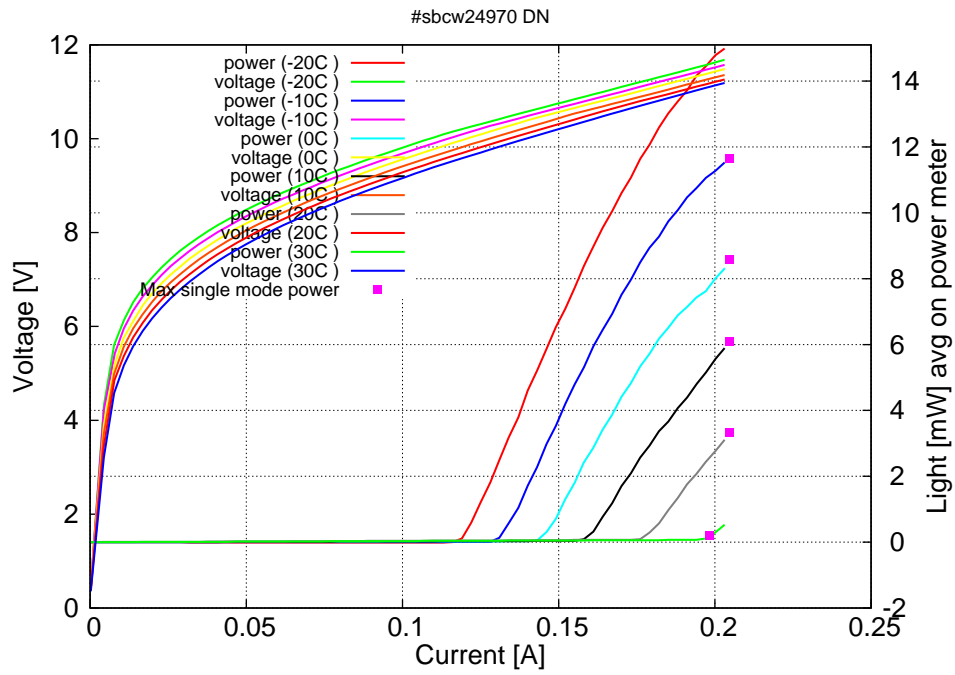


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=10.1V$ (2-wires measurements). Maximum operation current: 0.205A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

