

Datasheet for #sbcw27690 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 #sbcw27690 DN (please note that AlN submount numbering is A0U XR)

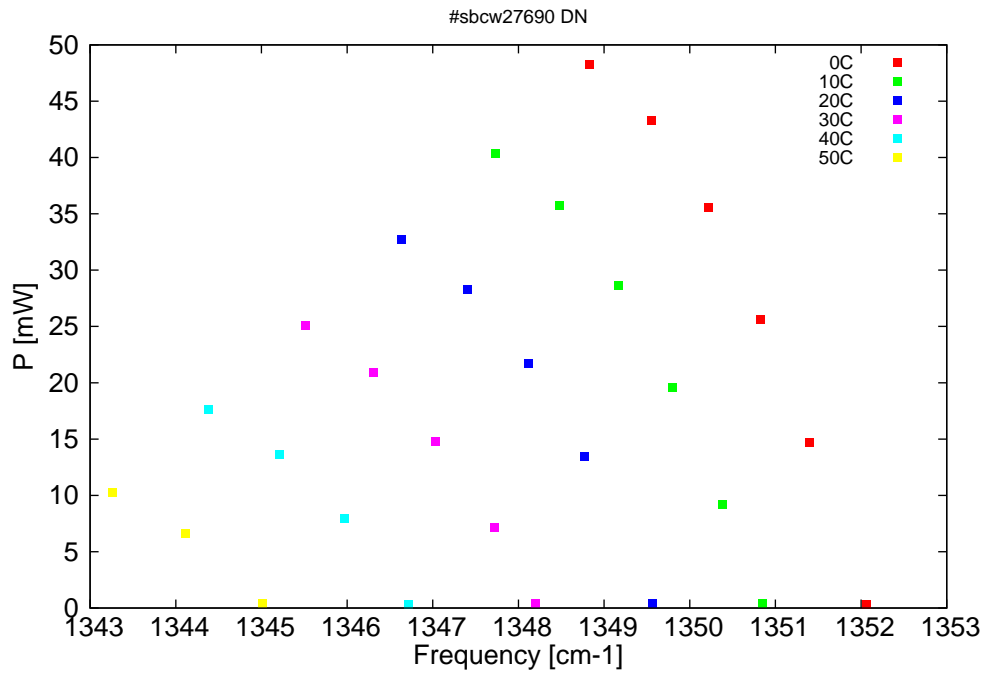


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

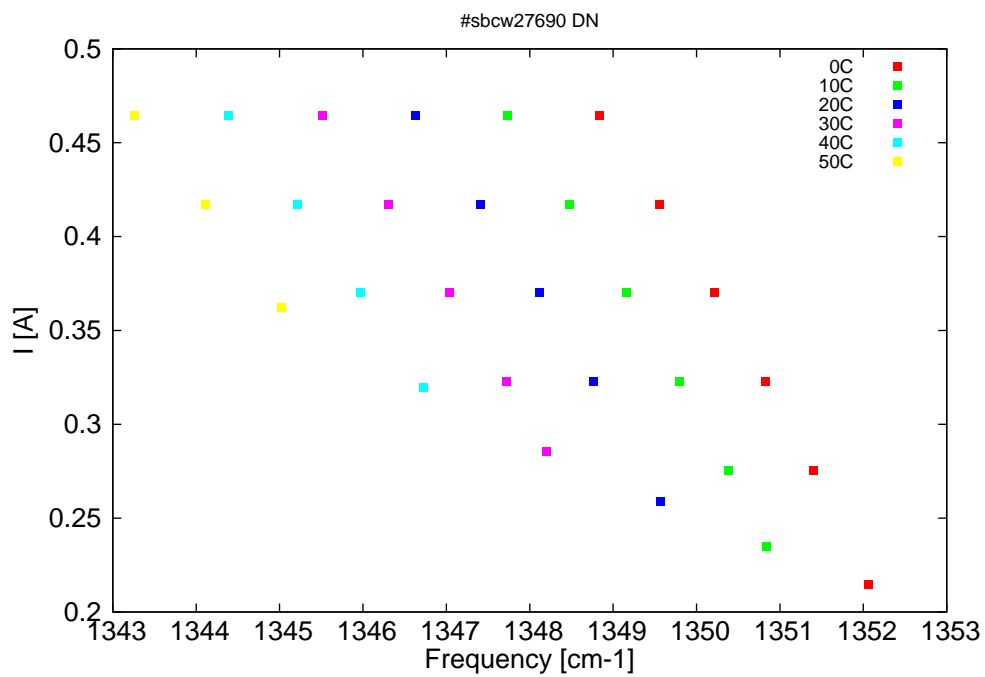


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7396.1	1352.1	0.3	0	8.35	0.215
7399.7	1351.4	14.7	0	8.72	0.276
7402.9	1350.8	25.6	0	9	0.323
7406.2	1350.2	35.6	0	9.27	0.37
7409.8	1349.6	43.3	0	9.55	0.417
7413.8	1348.8	48.3	0	9.84	0.465
7402.8	1350.8	0.4	10	8.4	0.235
7405.3	1350.4	9.2	10	8.65	0.276
7408.5	1349.8	19.6	10	8.94	0.323
7412	1349.2	28.6	10	9.21	0.37
7415.8	1348.5	35.7	10	9.5	0.417
7419.9	1347.7	40.4	10	9.79	0.465
7409.8	1349.6	0.4	20	8.48	0.259
7414.2	1348.8	13.4	20	8.88	0.323
7417.8	1348.1	21.7	20	9.16	0.37
7421.7	1347.4	28.3	20	9.45	0.417
7425.9	1346.6	32.7	20	9.74	0.465
7417.3	1348.2	0.4	30	8.57	0.286
7419.9	1347.7	7.1	30	8.81	0.323
7423.7	1347	14.8	30	9.1	0.37
7427.7	1346.3	20.9	30	9.39	0.417
7432.1	1345.5	25.1	30	9.69	0.465
7425.4	1346.7	0.3	40	8.72	0.319
7429.6	1346	8	40	9.03	0.37
7433.8	1345.2	13.7	40	9.33	0.417
7438.3	1344.4	17.6	40	9.63	0.465
7434.8	1345	0.4	50	8.92	0.362
7439.8	1344.1	6.6	50	9.27	0.417
7444.5	1343.3	10.2	50	9.57	0.465

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

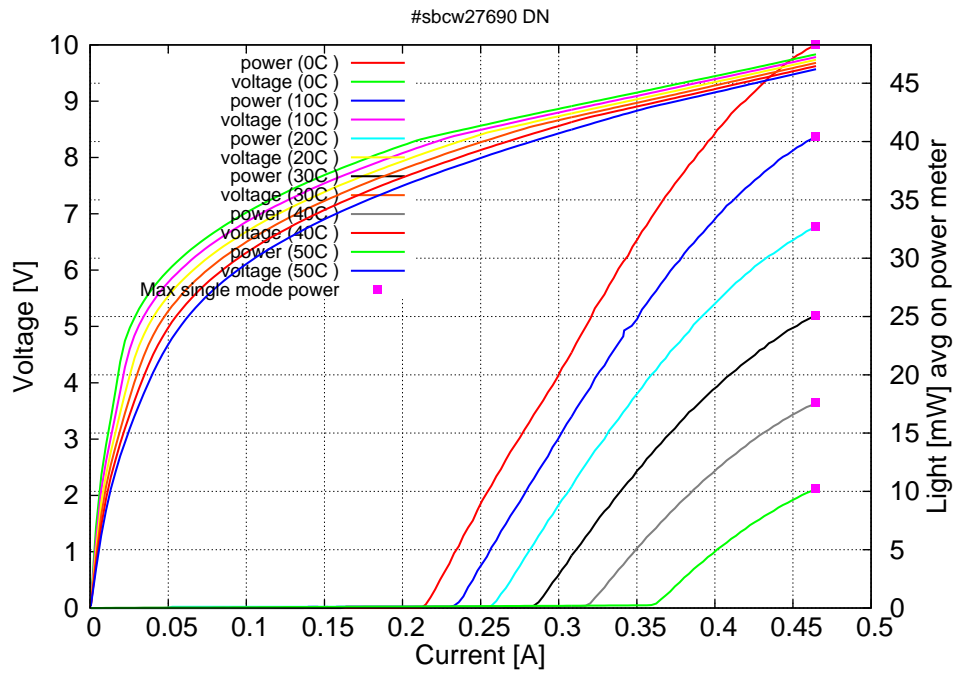


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.21A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.465A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

