

Datasheet for #sbcw27650 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 #sbcw27650 DN (please note that AlN submount numbering is A0UZZ)

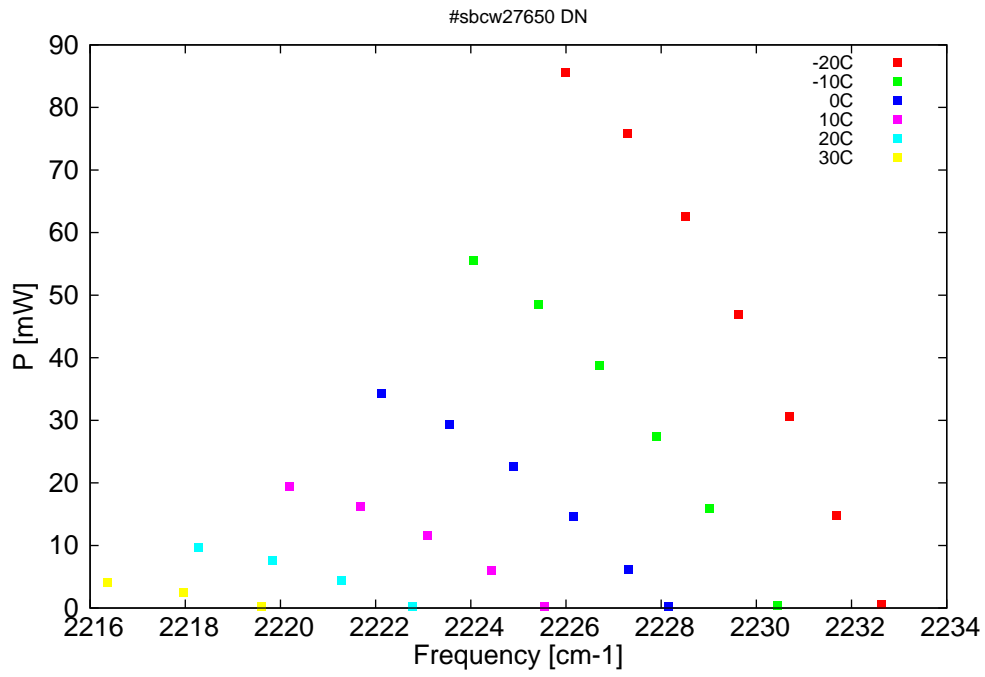


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

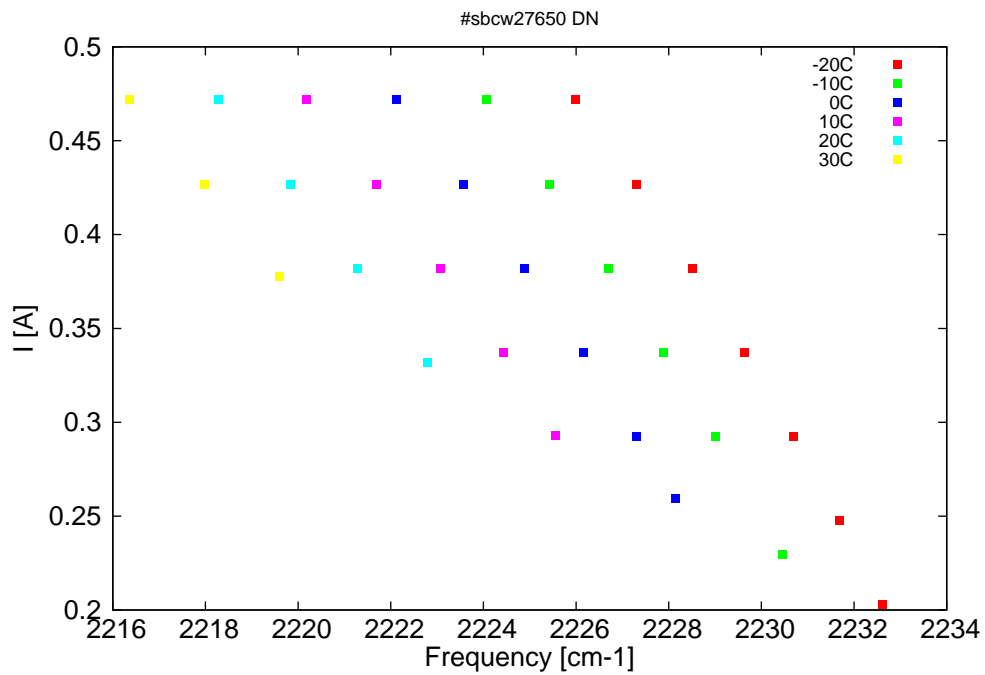


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4479	2232.6	0.5	-20	8.12	0.203
4480.9	2231.7	14.7	-20	8.32	0.248
4482.9	2230.7	30.5	-20	8.51	0.292
4485	2229.6	46.8	-20	8.7	0.337
4487.3	2228.5	62.6	-20	8.88	0.382
4489.7	2227.3	75.8	-20	9.06	0.427
4492.4	2226	85.6	-20	9.25	0.472
4483.4	2230.5	0.3	-10	8.2	0.23
4486.3	2229	15.9	-10	8.47	0.292
4488.5	2227.9	27.4	-10	8.66	0.337
4490.9	2226.7	38.8	-10	8.85	0.382
4493.5	2225.4	48.6	-10	9.03	0.427
4496.3	2224.1	55.6	-10	9.23	0.472
4488	2228.1	0.3	0	8.29	0.259
4489.7	2227.3	6.2	0	8.43	0.292
4492.1	2226.2	14.6	0	8.63	0.337
4494.6	2224.9	22.7	0	8.82	0.382
4497.3	2223.6	29.4	0	9.01	0.427
4500.2	2222.1	34.3	0	9.21	0.472
4493.3	2225.6	0.3	10	8.4	0.293
4495.5	2224.4	6	10	8.6	0.337
4498.3	2223.1	11.6	10	8.79	0.382
4501.1	2221.7	16.3	10	8.98	0.427
4504.1	2220.2	19.5	10	9.19	0.472
4498.9	2222.8	0.2	20	8.54	0.332
4501.9	2221.3	4.4	20	8.77	0.382
4504.8	2219.8	7.6	20	8.96	0.427
4508	2218.3	9.8	20	9.17	0.472
4505.3	2219.6	0.3	30	8.72	0.378
4508.6	2218	2.6	30	8.94	0.427
4511.9	2216.4	4.1	30	9.15	0.472

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

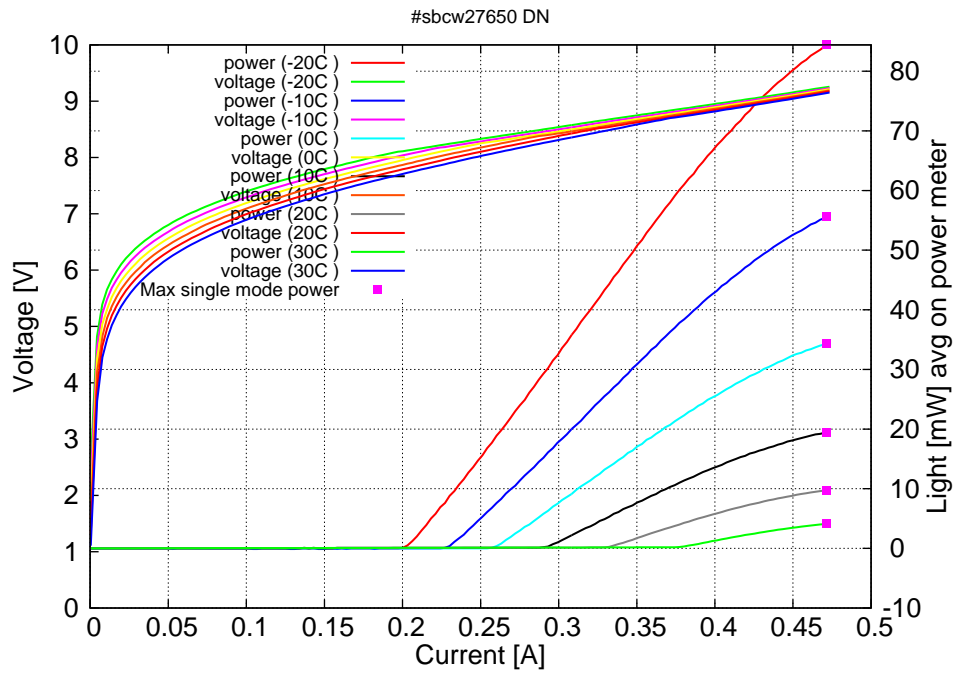


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.475A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

