

Datasheet for #sbcw27637 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 #sbcw27637 DN (please note that AlN submount numbering is A0V18)

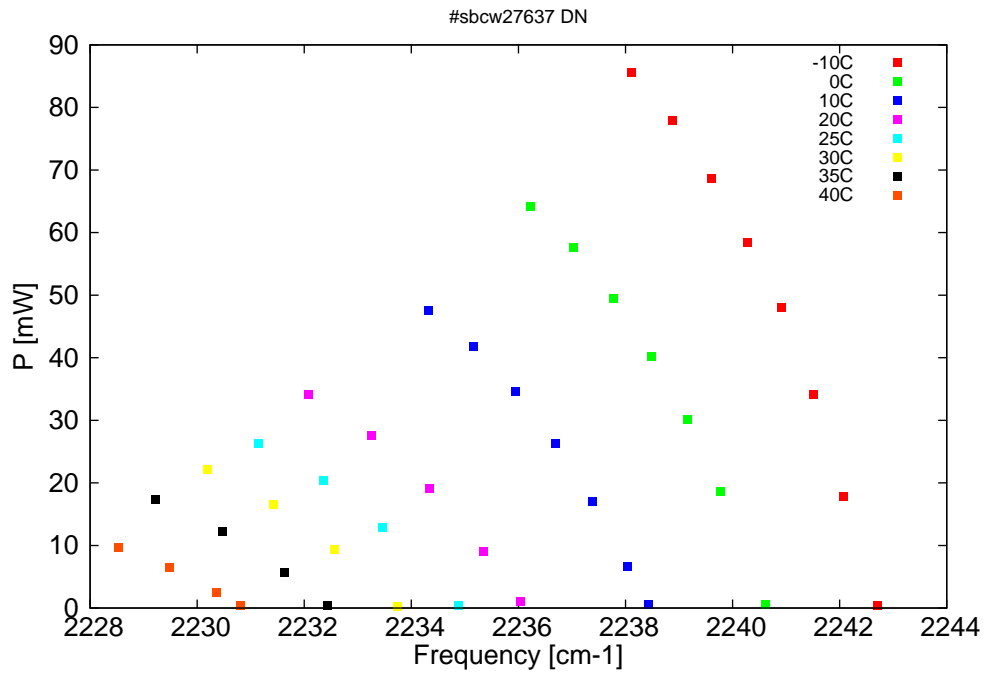


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

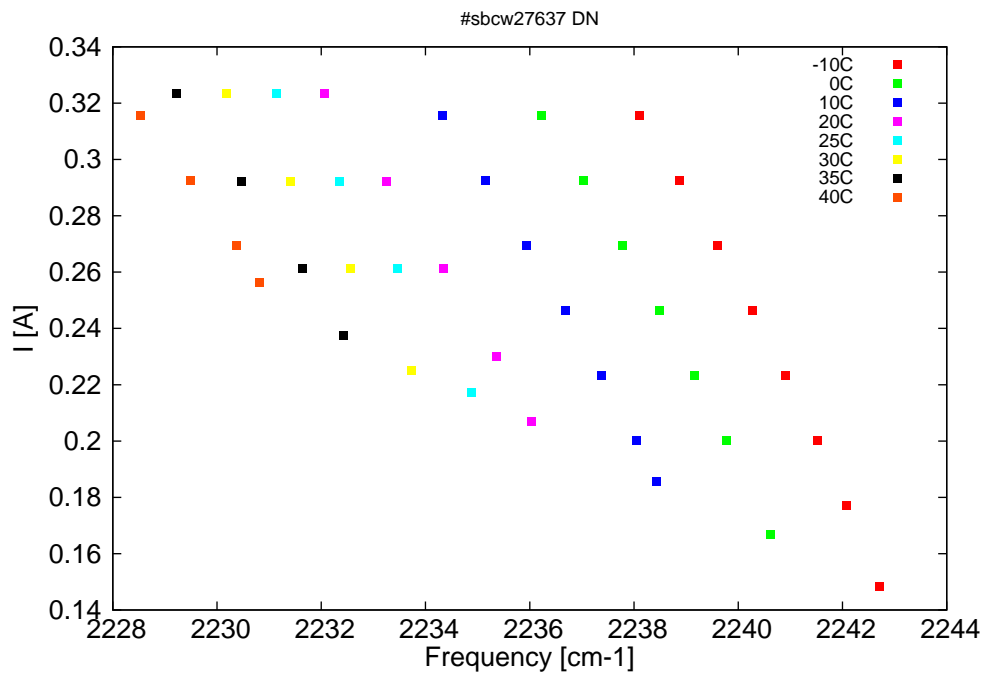


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4458.9	2242.7	0.5	-10	8.26	0.148
4460.2	2242.1	17.9	-10	8.45	0.177
4461.3	2241.5	34.1	-10	8.59	0.2
4462.5	2240.9	48.1	-10	8.74	0.223
4463.7	2240.3	58.5	-10	8.89	0.246
4465.1	2239.6	68.7	-10	9.03	0.269
4466.5	2238.9	77.9	-10	9.18	0.293
4468	2238.1	85.5	-10	9.33	0.316
4463.1	2240.6	0.5	0	8.35	0.167
4464.7	2239.8	18.7	0	8.56	0.2
4466	2239.2	30.1	0	8.71	0.223
4467.3	2238.5	40.2	0	8.86	0.246
4468.7	2237.8	49.5	0	9.01	0.269
4470.2	2237	57.6	0	9.16	0.293
4471.8	2236.2	64.2	0	9.32	0.316
4467.4	2238.4	0.6	10	8.45	0.186
4468.2	2238	6.7	10	8.54	0.2
4469.5	2237.4	17	10	8.69	0.223
4470.9	2236.7	26.3	10	8.84	0.246
4472.4	2235.9	34.6	10	8.99	0.269
4474	2235.2	41.8	10	9.15	0.293
4475.6	2234.3	47.6	10	9.31	0.316
4472.2	2236	1.1	20	8.59	0.207
4473.6	2235.4	9	20	8.74	0.23
4475.6	2234.3	19.1	20	8.95	0.261
4477.8	2233.3	27.6	20	9.17	0.292
4480.1	2232.1	34.1	20	9.39	0.323
4474.5	2234.9	0.4	25	8.64	0.217
4477.3	2233.5	12.9	25	8.93	0.261
4479.6	2232.4	20.3	25	9.15	0.292
4482	2231.1	26.2	25	9.38	0.323
4476.8	2233.7	0.3	30	8.68	0.225
4479.2	2232.6	9.4	30	8.93	0.261
4481.5	2231.4	16.6	30	9.14	0.292
4483.9	2230.2	22.2	30	9.37	0.323
4479.4	2232.4	0.4	35	8.76	0.238
4481	2231.6	5.6	35	8.92	0.261
4483.3	2230.5	12.2	35	9.14	0.292
4485.9	2229.2	17.3	35	9.37	0.323
4482.7	2230.8	0.3	40	8.88	0.256
4483.6	2230.4	2.4	40	8.97	0.269
4485.3	2229.5	6.5	40	9.13	0.293
4487.2	2228.5	9.7	40	9.31	0.316

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

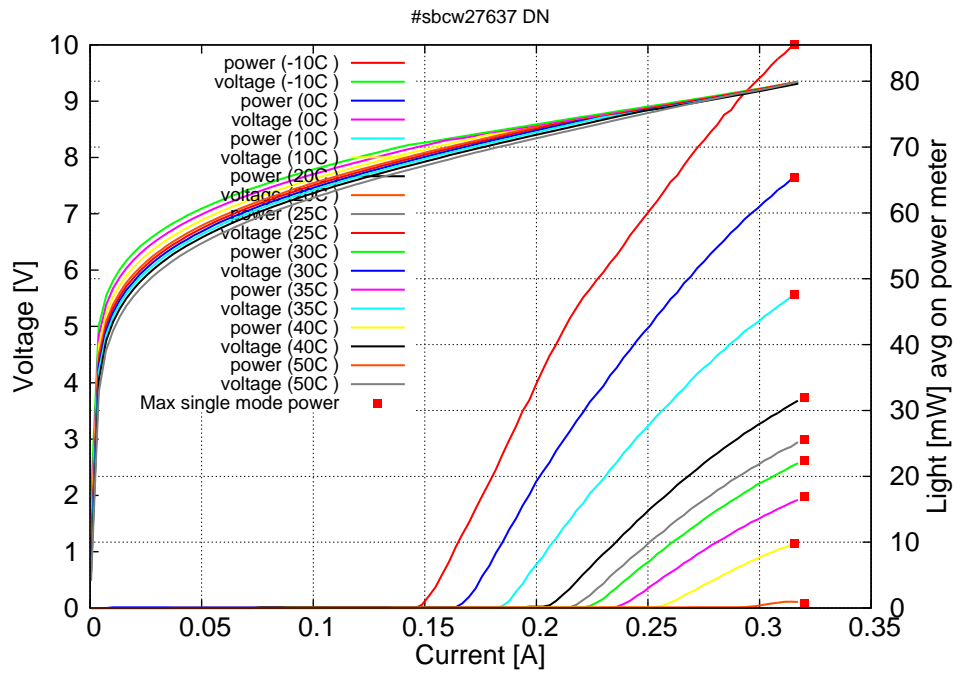


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.15A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.32A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

