

Datasheet for #sbcw27639 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.

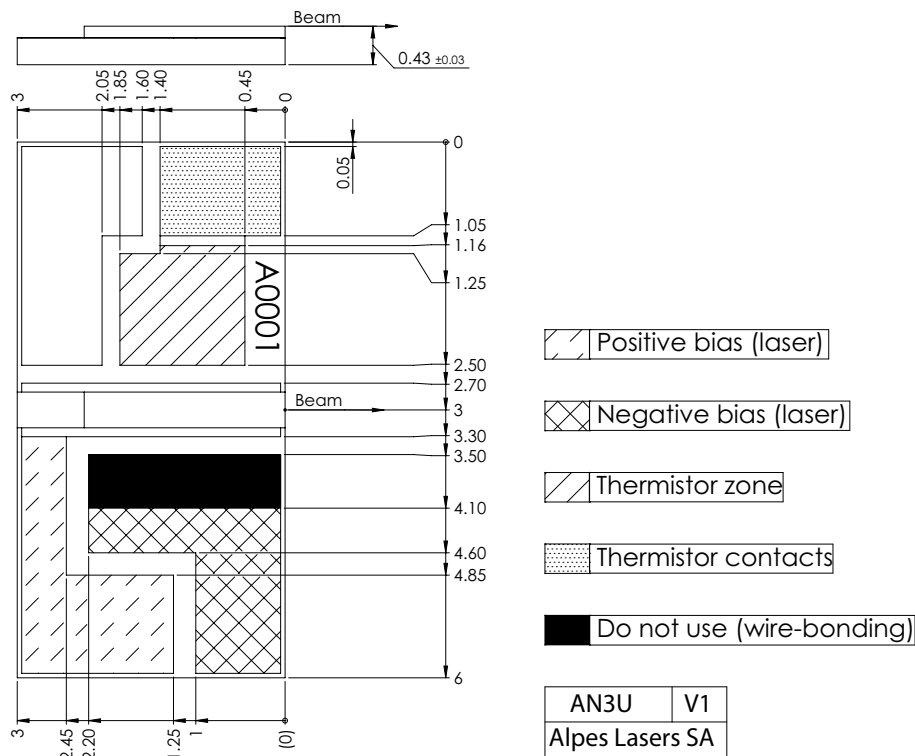


Figure 1: Mechanical and electrical interface for #sbcw27639 DN (please note that AlN submount numbering is A0Y6A)

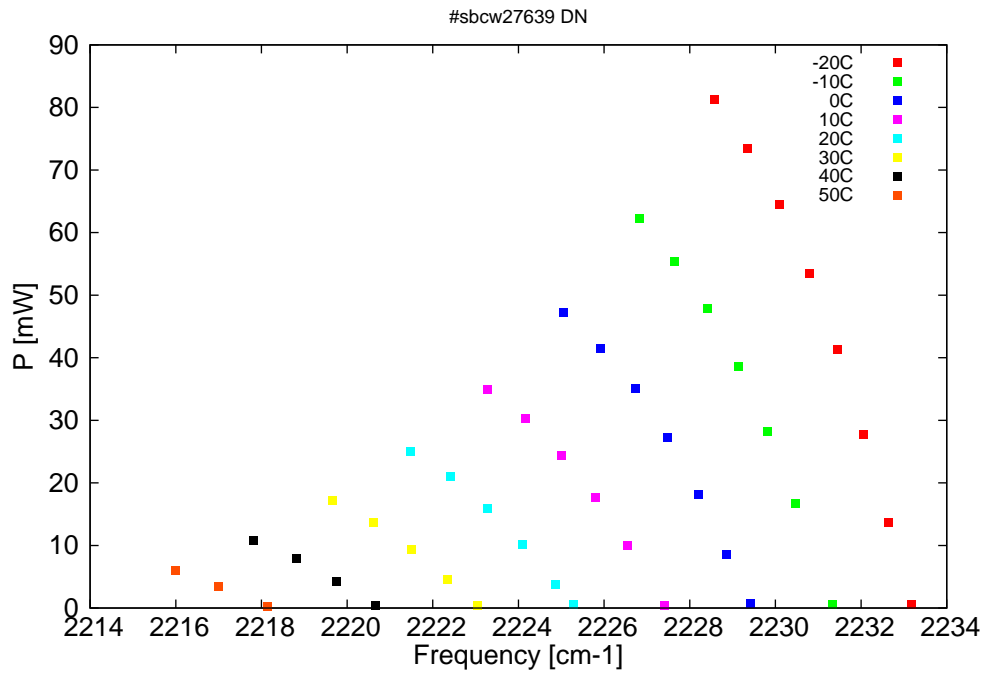


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

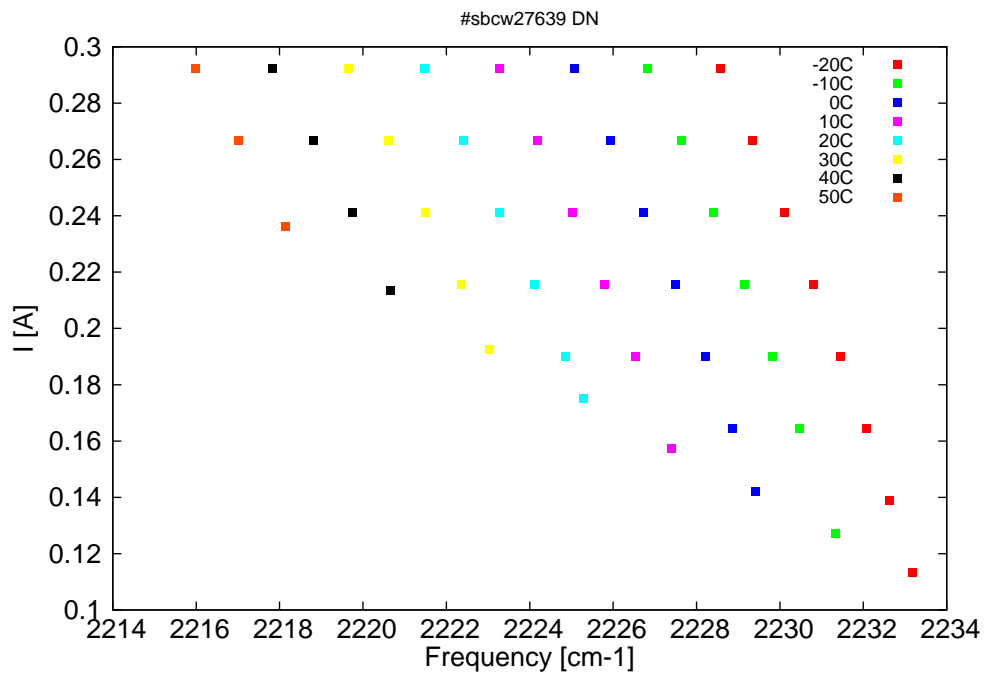


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4477.9	2233.2	0.5	-20	8.15	0.113
4479	2232.6	13.7	-20	8.34	0.139
4480.2	2232.1	27.8	-20	8.52	0.164
4481.4	2231.5	41.3	-20	8.71	0.19
4482.7	2230.8	53.5	-20	8.88	0.216
4484.1	2230.1	64.5	-20	9.06	0.241
4485.6	2229.4	73.5	-20	9.24	0.267
4487.2	2228.6	81.2	-20	9.42	0.292
4481.6	2231.3	0.6	-10	8.21	0.127
4483.4	2230.5	16.7	-10	8.49	0.164
4484.7	2229.8	28.2	-10	8.67	0.19
4486	2229.1	38.7	-10	8.85	0.216
4487.5	2228.4	47.9	-10	9.03	0.241
4489.1	2227.6	55.5	-10	9.21	0.267
4490.7	2226.8	62.2	-10	9.39	0.292
4485.5	2229.4	0.6	0	8.29	0.142
4486.6	2228.9	8.6	0	8.45	0.164
4487.9	2228.2	18.1	0	8.64	0.19
4489.4	2227.5	27.2	0	8.83	0.216
4490.9	2226.7	35	0	9.01	0.241
4492.5	2225.9	41.5	0	9.19	0.267
4494.3	2225.1	47.2	0	9.38	0.292
4489.5	2227.4	0.4	10	8.38	0.158
4491.3	2226.5	10.1	10	8.62	0.19
4492.8	2225.8	17.7	10	8.8	0.216
4494.4	2225	24.4	10	8.99	0.241
4496	2224.2	30.3	10	9.17	0.267
4497.9	2223.3	35	10	9.36	0.292
4493.8	2225.3	0.5	20	8.48	0.175
4494.6	2224.9	3.8	20	8.59	0.19
4496.2	2224.1	10.2	20	8.78	0.216
4497.8	2223.3	16	20	8.97	0.241
4499.6	2222.4	21	20	9.16	0.267
4501.5	2221.5	25	20	9.35	0.292
4498.3	2223	0.5	30	8.6	0.193
4499.7	2222.4	4.6	30	8.76	0.216
4501.4	2221.5	9.3	30	8.95	0.241
4503.3	2220.6	13.7	30	9.14	0.267
4505.2	2219.6	17.2	30	9.34	0.292
4503.2	2220.7	0.3	40	8.74	0.213
4505	2219.7	4.2	40	8.94	0.241
4506.9	2218.8	7.9	40	9.13	0.267
4508.9	2217.8	10.8	40	9.34	0.292
4508.3	2218.1	0.3	50	8.9	0.236
4510.6	2217	3.5	50	9.12	0.267
4512.7	2216	6	50	9.33	0.292

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

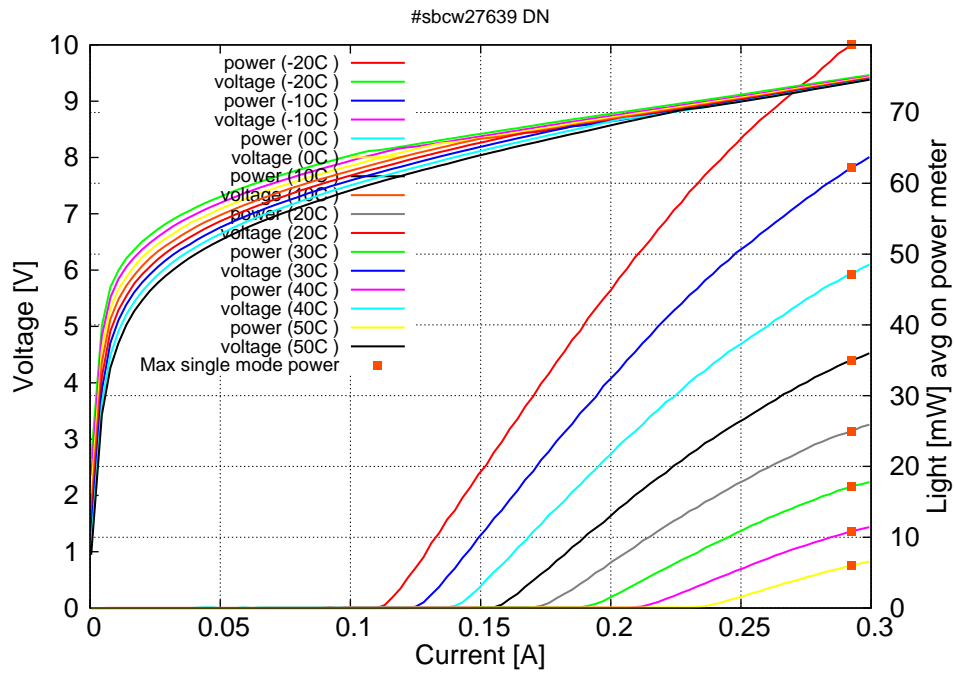


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.295A for all temperatures.

