

Datasheet for #sbcw27642 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.

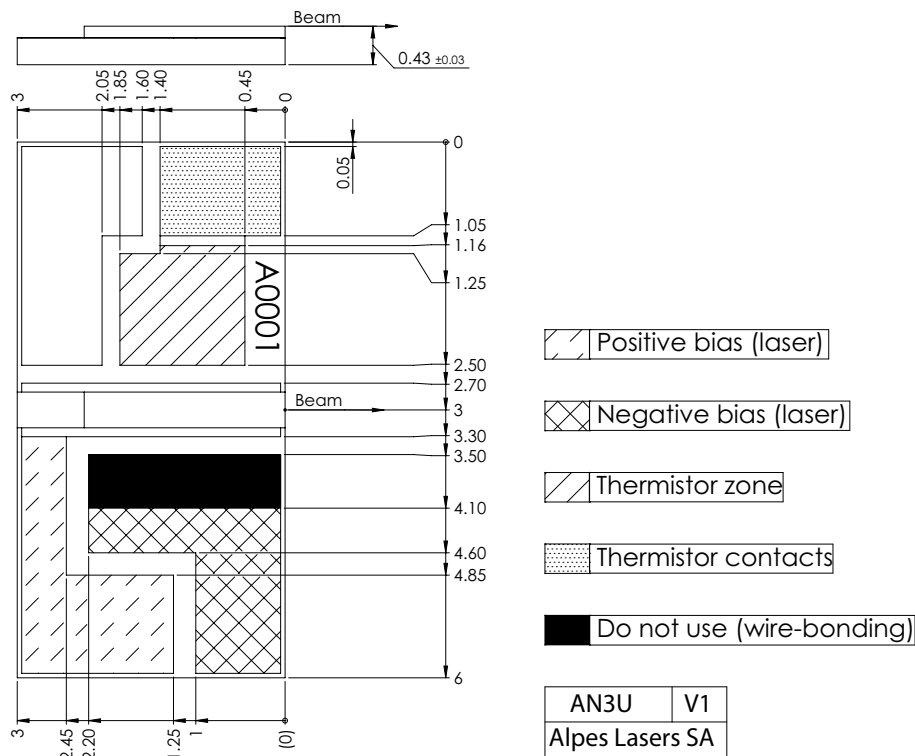


Figure 1: Mechanical and electrical interface for #sbcw27642 DN (please note that AlN submount numbering is A0Y2Z)

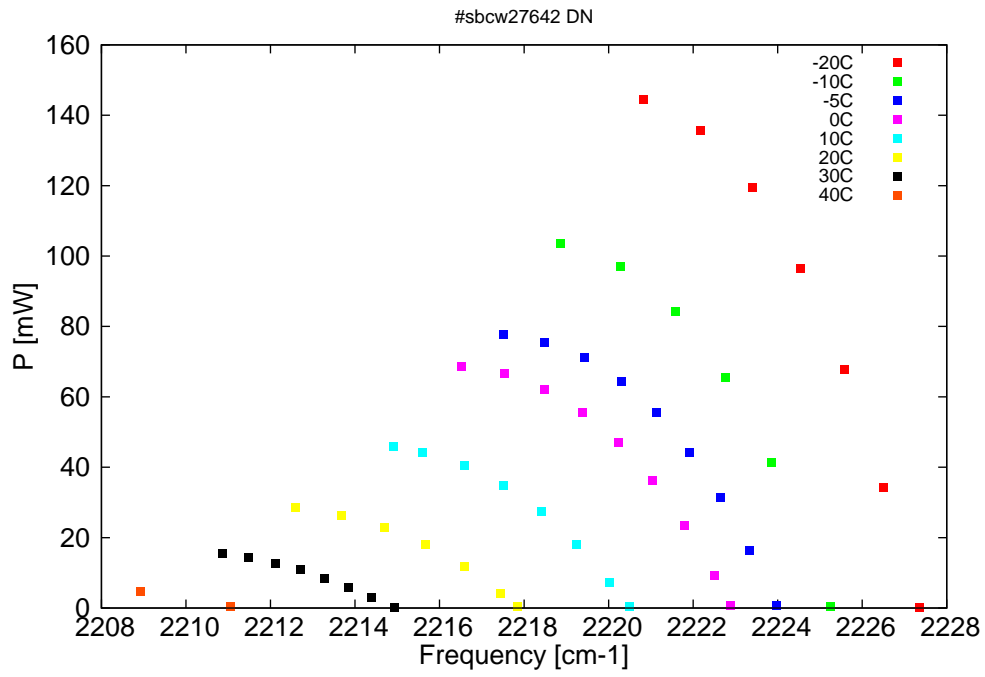


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

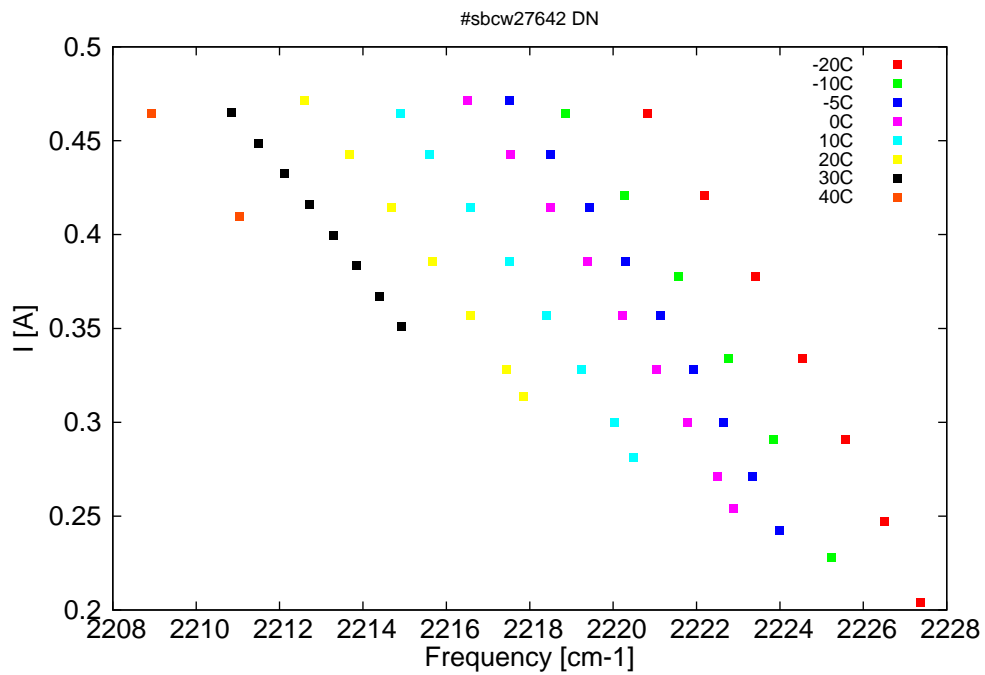


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4489.6	2227.4	0	-20	8.34	0.204
4491.3	2226.5	34.3	-20	8.55	0.247
4493.2	2225.6	67.9	-20	8.76	0.291
4495.3	2224.5	96.5	-20	8.96	0.334
4497.6	2223.4	119.5	-20	9.17	0.378
4500.1	2222.2	135.7	-20	9.38	0.421
4502.8	2220.8	144.4	-20	9.59	0.464
4493.9	2225.2	0.5	-10	8.41	0.228
4496.7	2223.8	41.4	-10	8.72	0.291
4498.9	2222.8	65.5	-10	8.93	0.334
4501.3	2221.6	84.2	-10	9.13	0.378
4503.9	2220.3	97.1	-10	9.35	0.421
4506.8	2218.9	103.7	-10	9.57	0.464
4496.4	2224	0.6	-5	8.47	0.243
4497.7	2223.3	16.3	-5	8.61	0.271
4499.1	2222.7	31.4	-5	8.75	0.3
4500.6	2221.9	44.3	-5	8.89	0.328
4502.2	2221.1	55.5	-5	9.02	0.357
4503.9	2220.3	64.4	-5	9.16	0.386
4505.7	2219.4	71.1	-5	9.31	0.414
4507.6	2218.5	75.5	-5	9.45	0.443
4509.6	2217.5	77.7	-5	9.6	0.471
4498.7	2222.9	0.7	0	8.51	0.254
4499.4	2222.5	9.2	0	8.59	0.271
4500.9	2221.8	23.5	0	8.73	0.3
4502.4	2221	36.3	0	8.87	0.328
4504	2220.2	47	0	9.01	0.357
4505.7	2219.4	55.6	0	9.15	0.386
4507.6	2218.5	62.2	0	9.29	0.414
4509.5	2217.5	66.5	0	9.44	0.443
4511.6	2216.5	68.7	0	9.59	0.471
4503.5	2220.5	0.5	10	8.61	0.281
4504.5	2220	7.3	10	8.7	0.3
4506	2219.2	18.1	10	8.84	0.328
4507.7	2218.4	27.4	10	8.98	0.357
4509.5	2217.5	34.7	10	9.13	0.386
4511.4	2216.6	40.4	10	9.27	0.414
4513.5	2215.6	44.2	10	9.42	0.443
4514.9	2214.9	45.9	10	9.54	0.465
4508.9	2217.9	0.4	20	8.75	0.314
4509.7	2217.4	4.3	20	8.82	0.328
4511.4	2216.6	11.9	20	8.96	0.357
4513.3	2215.7	18.1	20	9.11	0.386
4515.3	2214.7	23	20	9.26	0.414
4517.4	2213.7	26.4	20	9.41	0.443
4519.6	2212.6	28.6	20	9.57	0.471
4514.8	2214.9	0.3	30	8.93	0.351
4515.9	2214.4	3	30	9.01	0.367
4517	2213.8	5.9	30	9.09	0.383

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4518.2	2213.3	8.5	30	9.17	0.4
4519.4	2212.7	10.8	30	9.26	0.416
4520.6	2212.1	12.7	30	9.35	0.432
4521.8	2211.5	14.3	30	9.44	0.449
4523.1	2210.9	15.6	30	9.53	0.465
4522.8	2211	0.3	40	9.21	0.41
4527.1	2208.9	4.7	40	9.52	0.465

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

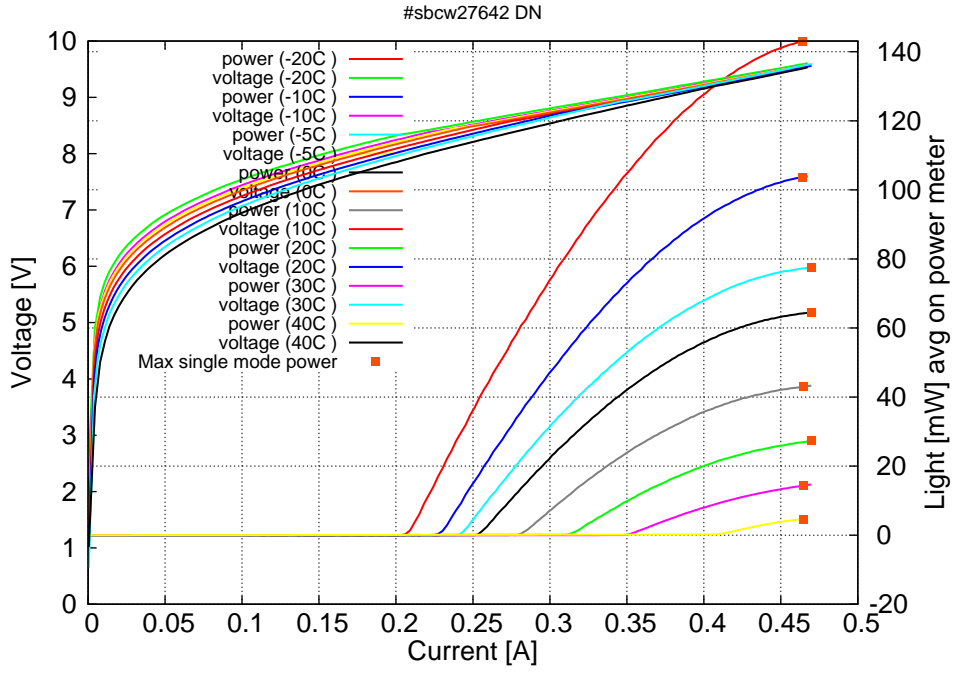


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.465A between -20C and -10C, 0.47A between -5C and 40C.

