

Datasheet for #sbcw24319 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

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 #sbcw24319 DN (please note that AlN submount numbering is A1107)

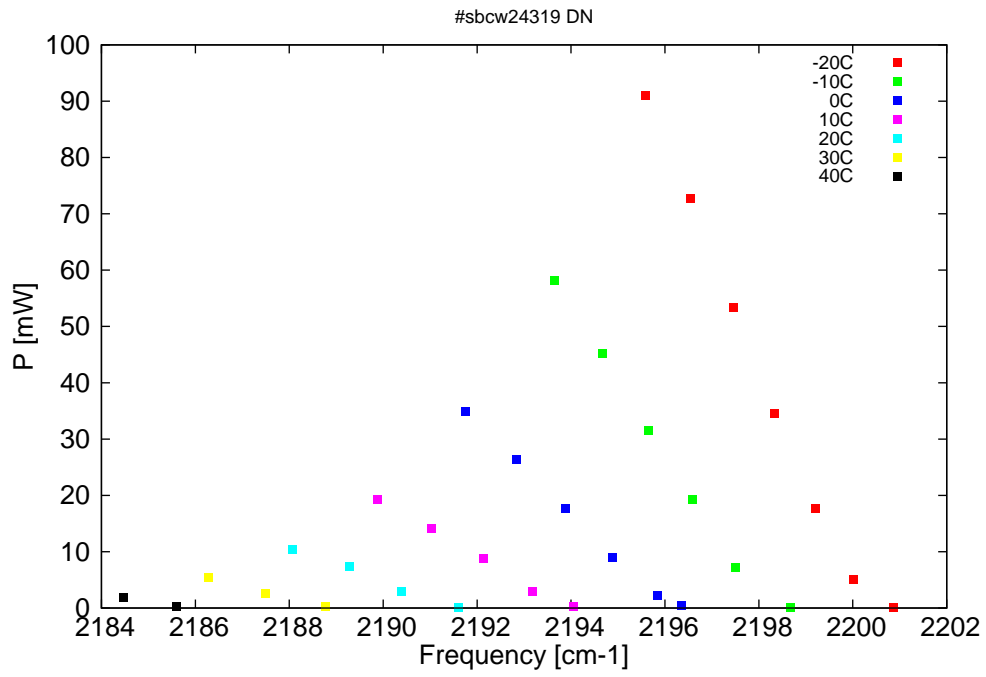


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

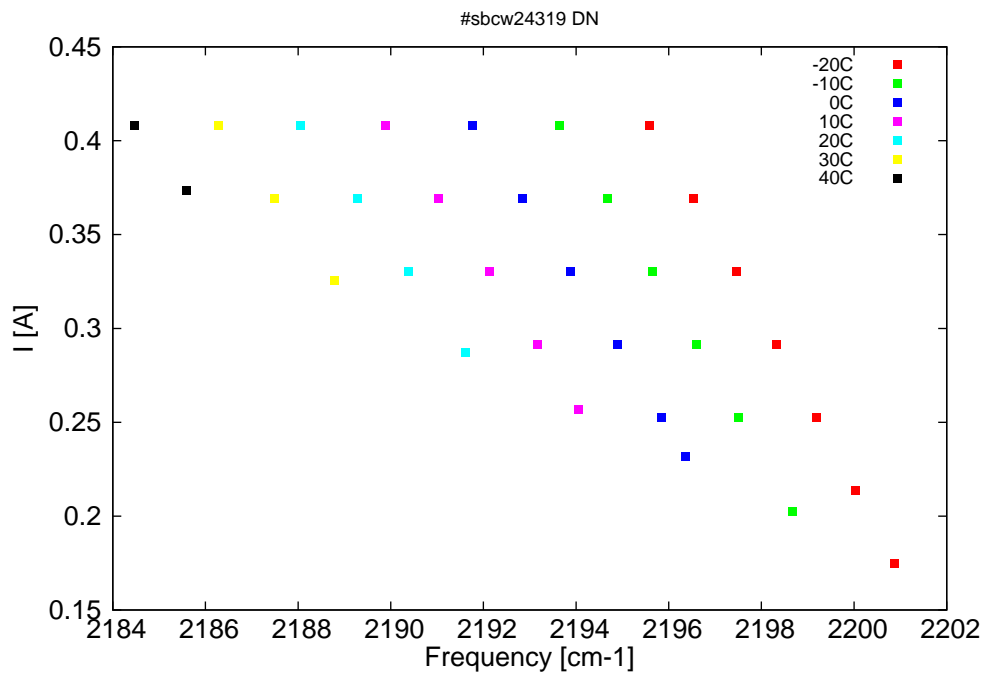


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4543.7	2200.9	0.2	-20	8.13	0.175
4545.4	2200	5.1	-20	8.34	0.214
4547.1	2199.2	17.6	-20	8.54	0.253
4548.9	2198.3	34.5	-20	8.72	0.292
4550.7	2197.5	53.3	-20	8.9	0.33
4552.6	2196.5	72.7	-20	9.09	0.369
4554.6	2195.6	91	-20	9.28	0.408
4548.2	2198.7	0.2	-10	8.23	0.202
4550.6	2197.5	7.3	-10	8.49	0.253
4552.5	2196.6	19.3	-10	8.69	0.292
4554.5	2195.6	31.5	-10	8.87	0.33
4556.5	2194.7	45.3	-10	9.06	0.369
4558.6	2193.6	58.2	-10	9.25	0.408
4553	2196.4	0.4	0	8.3	0.232
4554.1	2195.8	2.3	0	8.4	0.253
4556	2194.9	8.9	0	8.59	0.292
4558.1	2193.9	17.6	0	8.77	0.33
4560.3	2192.8	26.3	0	8.95	0.369
4562.5	2191.8	34.9	0	9.13	0.408
4557.8	2194.1	0.2	10	8.33	0.257
4559.6	2193.2	2.9	10	8.51	0.292
4561.8	2192.1	8.7	10	8.69	0.33
4564	2191	14.1	10	8.87	0.369
4566.4	2189.9	19.3	10	9.05	0.408
4562.9	2191.6	0.1	20	8.44	0.287
4565.4	2190.4	3	20	8.66	0.33
4567.7	2189.3	7.3	20	8.84	0.369
4570.3	2188.1	10.5	20	9.03	0.408
4568.8	2188.8	0.2	30	8.6	0.326
4571.4	2187.5	2.5	30	8.82	0.369
4574	2186.3	5.5	30	9.01	0.408
4575.4	2185.6	0.3	40	8.82	0.374
4577.8	2184.5	1.8	40	8.99	0.408

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

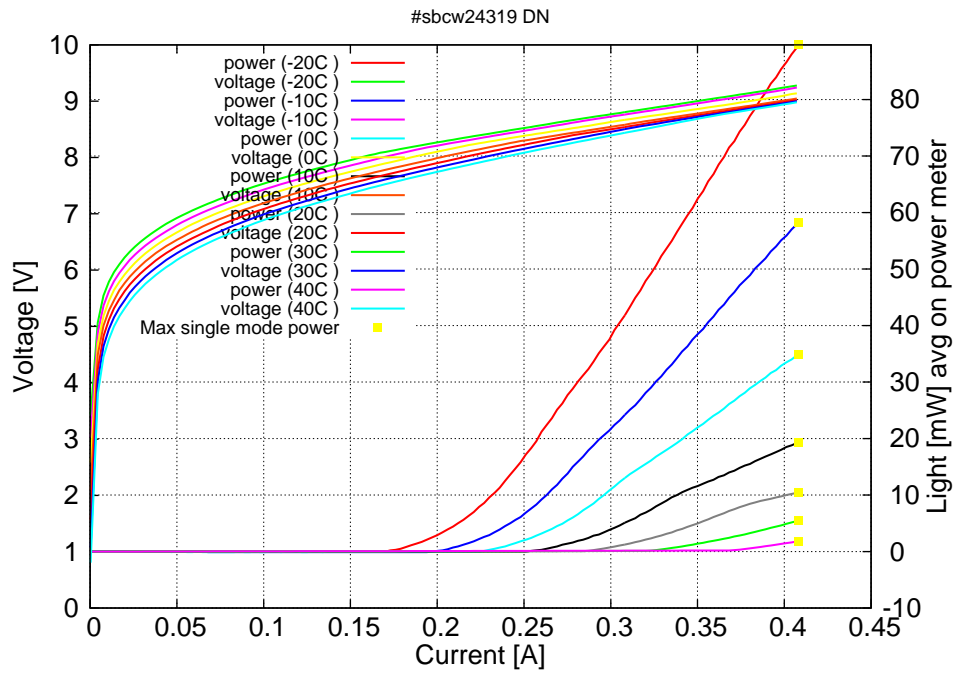


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.41A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

