

Datasheet for #sbcw27024 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.

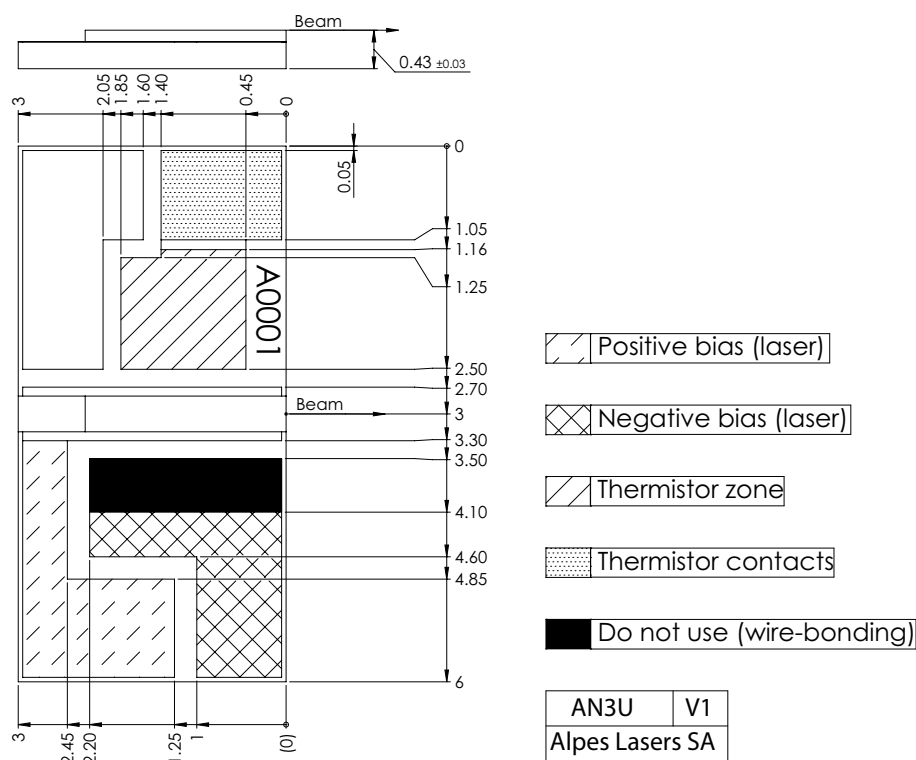


Figure 1: Mechanical and electrical interface for #sbcw27024 DN (please note that AlN submount numbering is A0W9H)

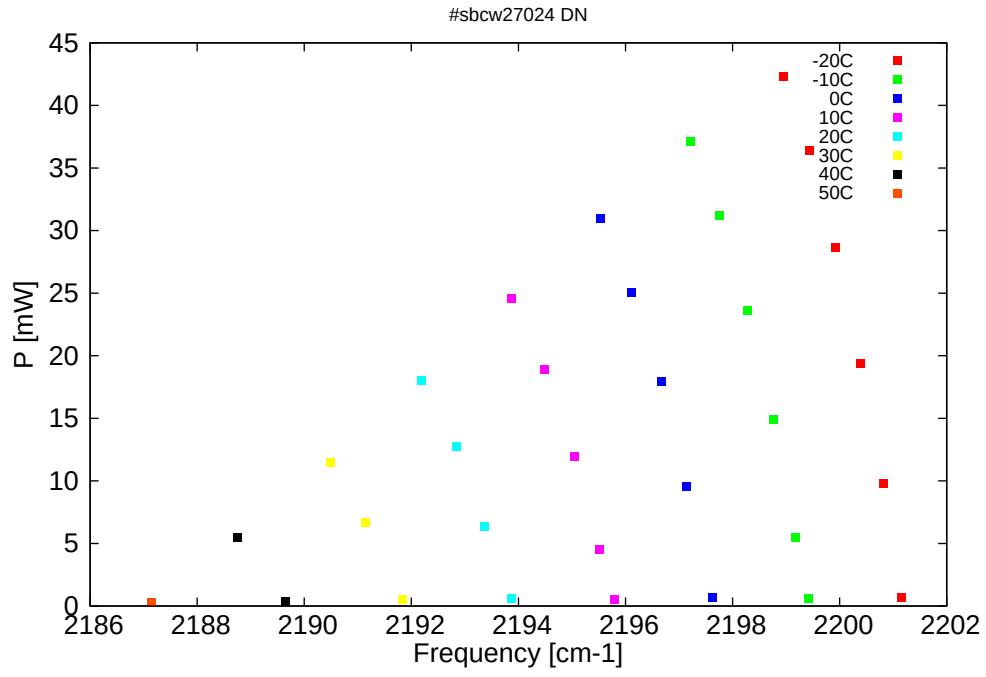


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

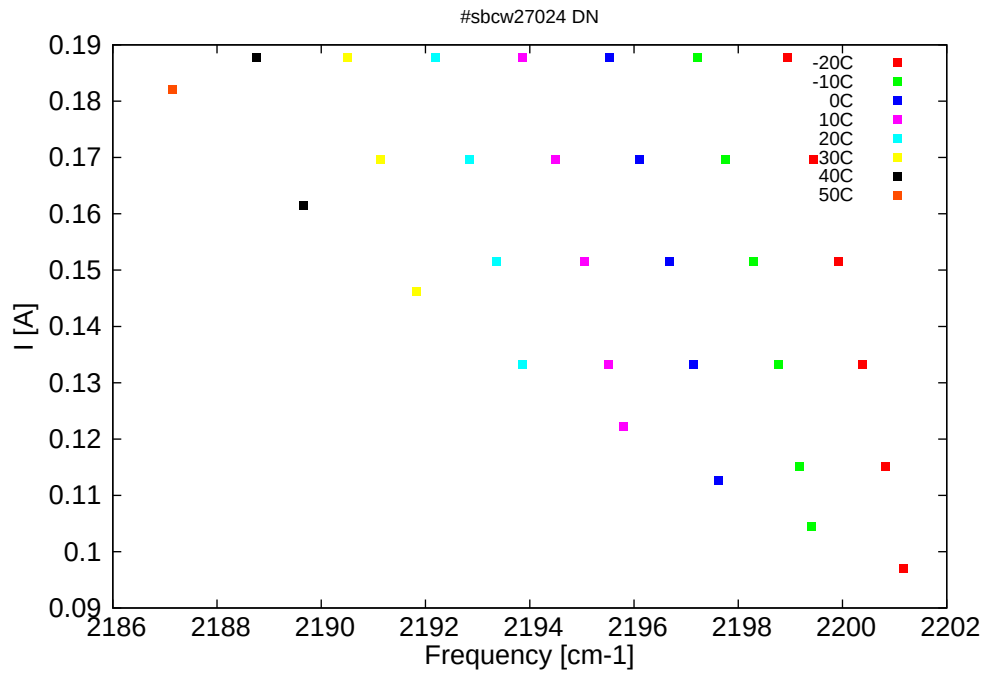


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4543.1	2201.2	0.7	-20	8.79	0.097
4543.8	2200.8	9.8	-20	9.01	0.115
4544.6	2200.4	19.4	-20	9.23	0.133
4545.6	2199.9	28.7	-20	9.45	0.152
4546.6	2199.4	36.4	-20	9.68	0.17
4547.6	2198.9	42.3	-20	9.92	0.188
4546.7	2199.4	0.6	-10	8.85	0.104
4547.2	2199.2	5.5	-10	8.97	0.115
4548	2198.8	14.9	-10	9.19	0.133
4549	2198.3	23.6	-10	9.42	0.152
4550.1	2197.8	31.2	-10	9.65	0.17
4551.2	2197.2	37.1	-10	9.89	0.188
4550.4	2197.6	0.7	0	8.91	0.113
4551.4	2197.1	9.6	0	9.16	0.133
4552.3	2196.7	18	0	9.38	0.152
4553.5	2196.1	25	0	9.62	0.17
4554.7	2195.5	31	0	9.86	0.188
4554.2	2195.8	0.5	10	9	0.122
4554.7	2195.5	4.5	10	9.13	0.133
4555.7	2195	12	10	9.36	0.152
4556.9	2194.5	18.9	10	9.59	0.17
4558.2	2193.9	24.6	10	9.83	0.188
4558.2	2193.9	0.6	20	9.12	0.133
4559.2	2193.4	6.4	20	9.33	0.152
4560.3	2192.8	12.7	20	9.56	0.17
4561.7	2192.2	18	20	9.8	0.188
4562.4	2191.8	0.5	30	9.27	0.146
4563.8	2191.1	6.7	30	9.54	0.17
4565.2	2190.5	11.5	30	9.78	0.188
4566.9	2189.7	0.4	40	9.45	0.162
4568.8	2188.8	5.5	40	9.77	0.188
4572.2	2187.2	0.3	50	9.73	0.182

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

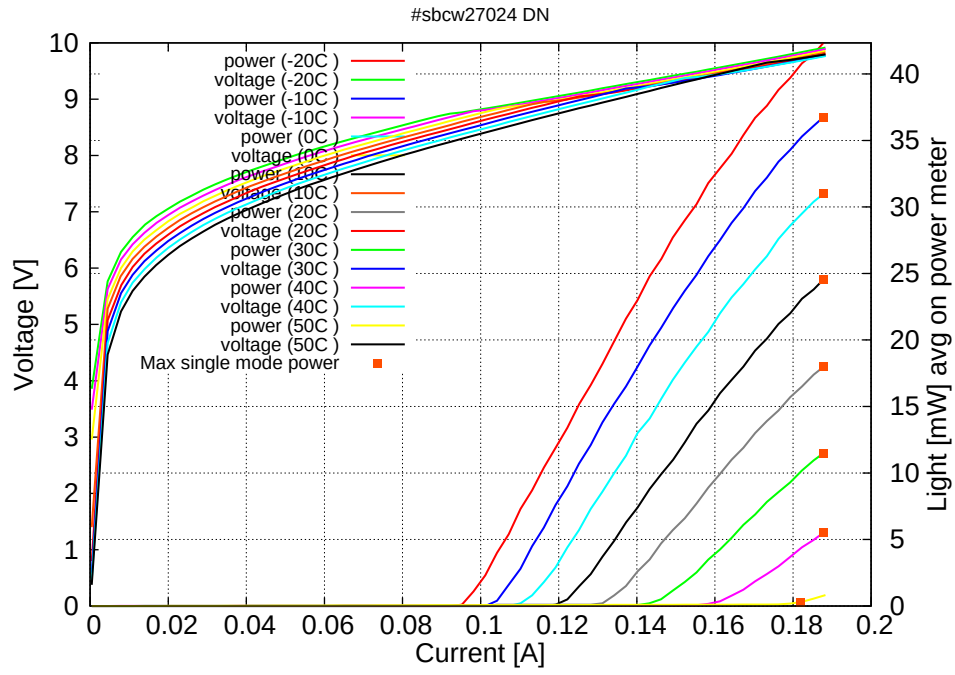


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.19A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

