

Datasheet for #sbcw27314 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 #sbcw27314 DN (please note that AlN submount numbering is A0U8P)

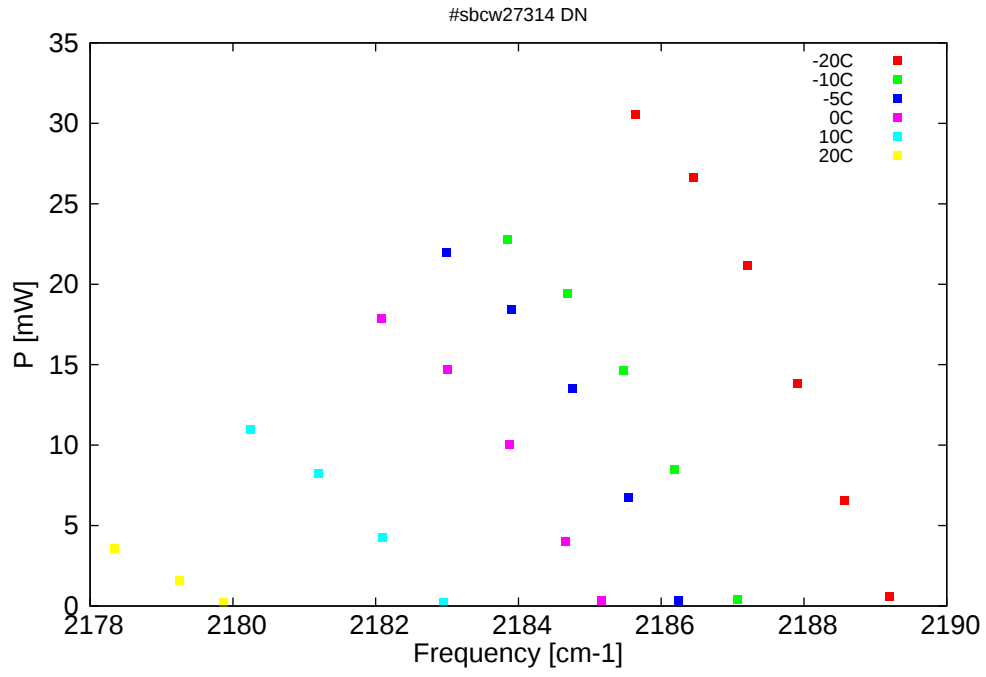


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

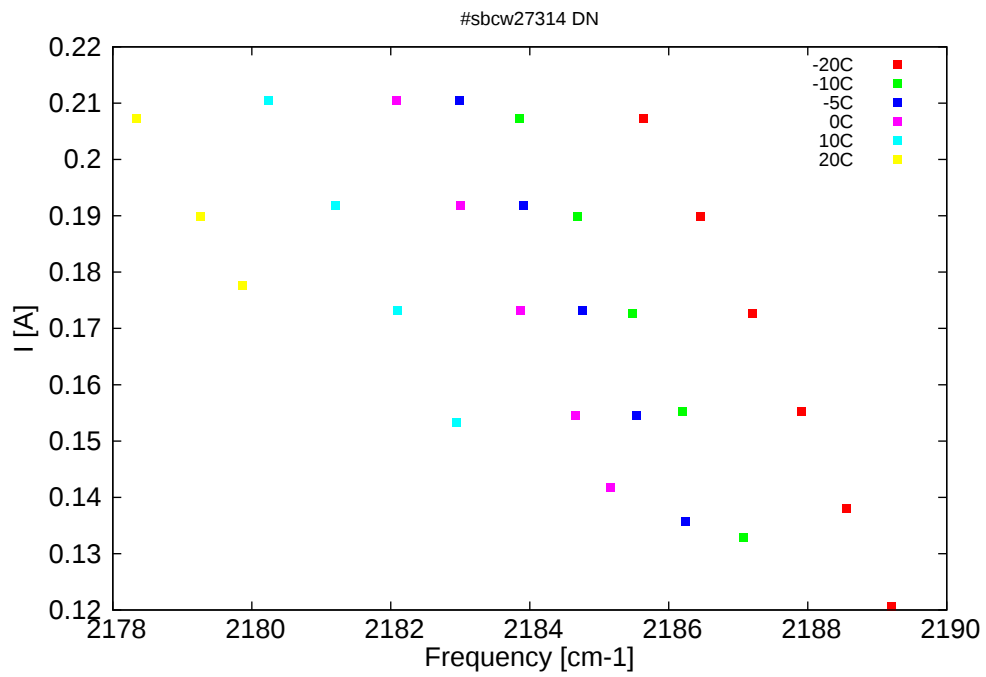


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4567.9	2189.2	0.6	-20	13.39	0.121
4569.2	2188.6	6.6	-20	13.58	0.138
4570.6	2187.9	13.8	-20	13.77	0.155
4572	2187.2	21.2	-20	13.95	0.173
4573.6	2186.5	26.6	-20	14.13	0.19
4575.3	2185.6	30.6	-20	14.32	0.207
4572.3	2187.1	0.4	-10	13.4	0.133
4574.2	2186.2	8.5	-10	13.62	0.155
4575.7	2185.5	14.7	-10	13.8	0.173
4577.3	2184.7	19.4	-10	13.98	0.19
4579.1	2183.8	22.8	-10	14.17	0.207
4574.1	2186.2	0.4	-5	13.36	0.136
4575.5	2185.5	6.8	-5	13.54	0.155
4577.2	2184.8	13.5	-5	13.73	0.173
4579	2183.9	18.4	-5	13.93	0.192
4580.9	2183	21.9	-5	14.13	0.211
4576.3	2185.2	0.3	0	13.36	0.142
4577.4	2184.7	4	0	13.48	0.155
4579	2183.9	10.1	0	13.67	0.173
4580.8	2183	14.7	0	13.87	0.192
4582.8	2182.1	17.9	0	14.07	0.211
4581	2182.9	0.2	10	13.37	0.153
4582.8	2182.1	4.3	10	13.55	0.173
4584.6	2181.2	8.2	10	13.75	0.192
4586.6	2180.2	11	10	13.95	0.211
4587.4	2179.9	0.2	20	13.52	0.178
4588.7	2179.3	1.6	20	13.64	0.19
4590.6	2178.3	3.6	20	13.82	0.207

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

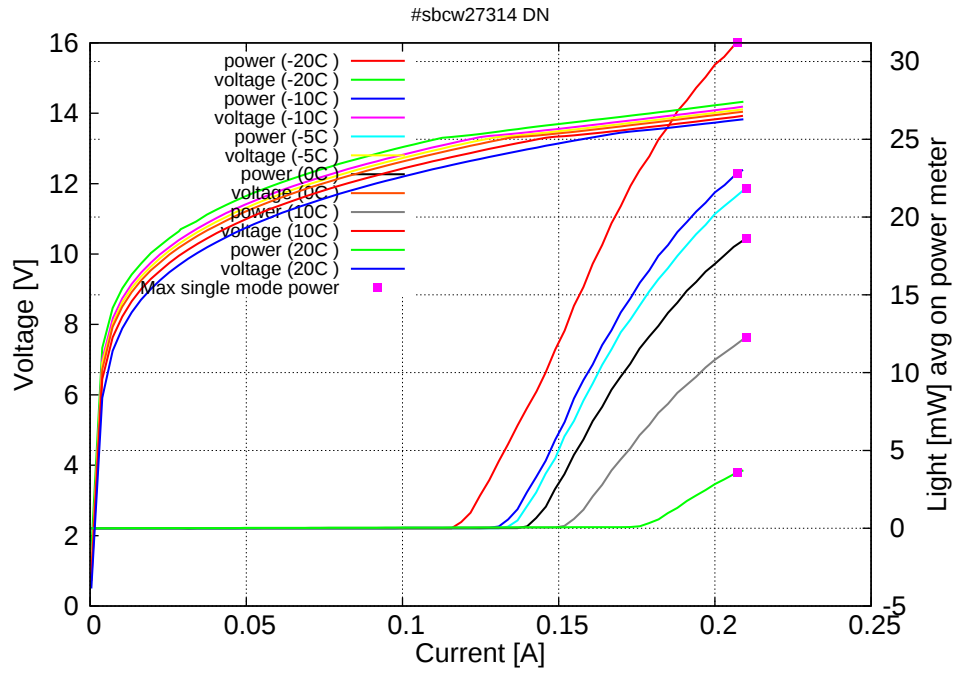


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=13.3V$ (2-wires measurements). Maximum operation current: 0.21A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

