

Datasheet for #sbcw27025 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 #sbcw27025 DN (please note that AlN submount numbering is A0VRN)

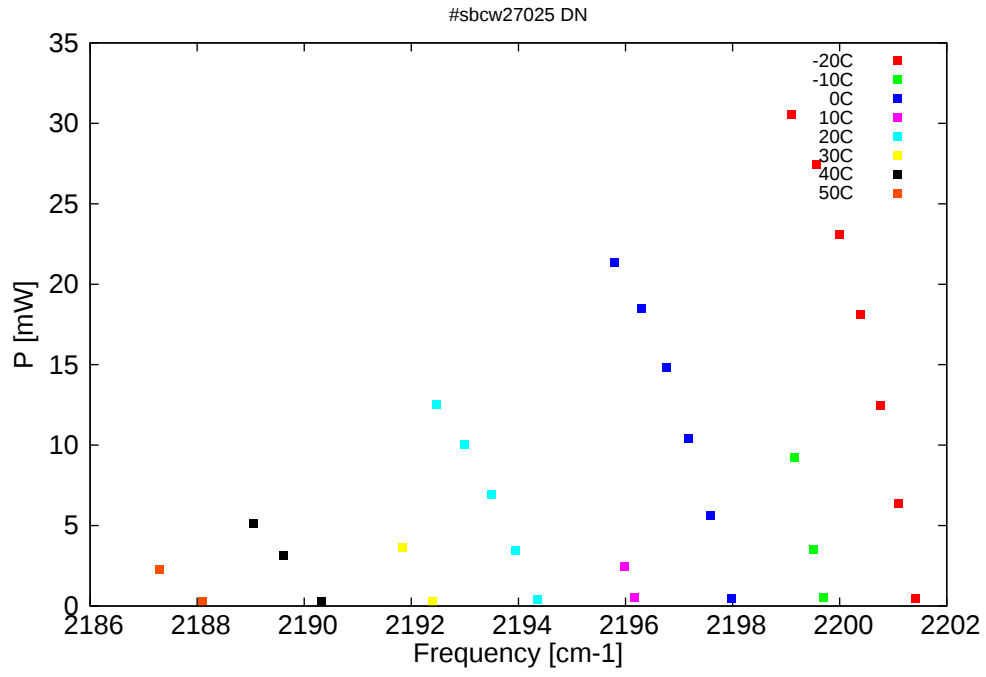


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

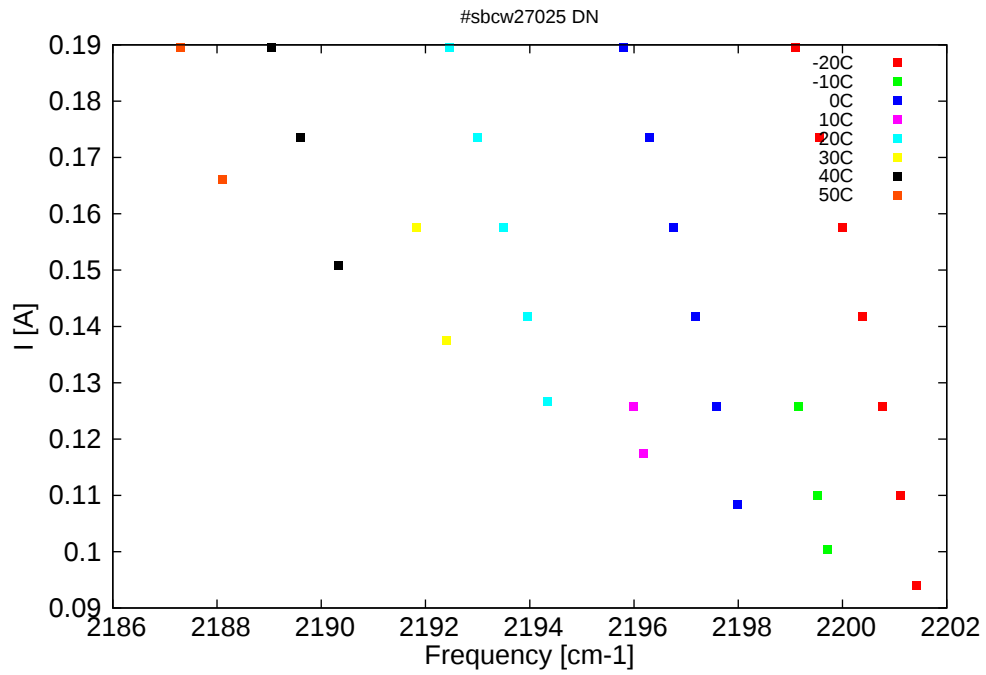


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4542.5	2201.4	0.5	-20	8.78	0.094
4543.2	2201.1	6.4	-20	8.97	0.11
4543.9	2200.8	12.4	-20	9.17	0.126
4544.7	2200.4	18.1	-20	9.38	0.142
4545.5	2200	23.1	-20	9.58	0.158
4546.4	2199.6	27.5	-20	9.79	0.174
4547.3	2199.1	30.6	-20	10	0.19
4546.1	2199.7	0.5	-10	8.82	0.1
4546.4	2199.5	3.5	-10	8.93	0.11
4547.2	2199.2	9.2	-10	9.13	0.126
4549.6	2198	0.5	0	8.88	0.108
4550.5	2197.6	5.6	0	9.09	0.126
4551.3	2197.2	10.4	0	9.3	0.142
4552.2	2196.8	14.8	0	9.5	0.158
4553.1	2196.3	18.5	0	9.71	0.174
4554.1	2195.8	21.4	0	9.92	0.19
4553.4	2196.2	0.5	10	8.96	0.117
4553.8	2196	2.4	10	9.06	0.126
4557.2	2194.3	0.4	20	9.04	0.127
4558	2193.9	3.5	20	9.23	0.142
4558.9	2193.5	6.9	20	9.43	0.158
4560	2193	10.1	20	9.63	0.174
4561.1	2192.5	12.5	20	9.85	0.19
4561.2	2192.4	0.3	30	9.16	0.138
4562.4	2191.8	3.6	30	9.4	0.158
4565.5	2190.3	0.3	40	9.32	0.151
4567	2189.6	3.2	40	9.59	0.174
4568.2	2189	5.1	40	9.8	0.19
4570.2	2188.1	0.3	50	9.5	0.166
4571.8	2187.3	2.3	50	9.78	0.19

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

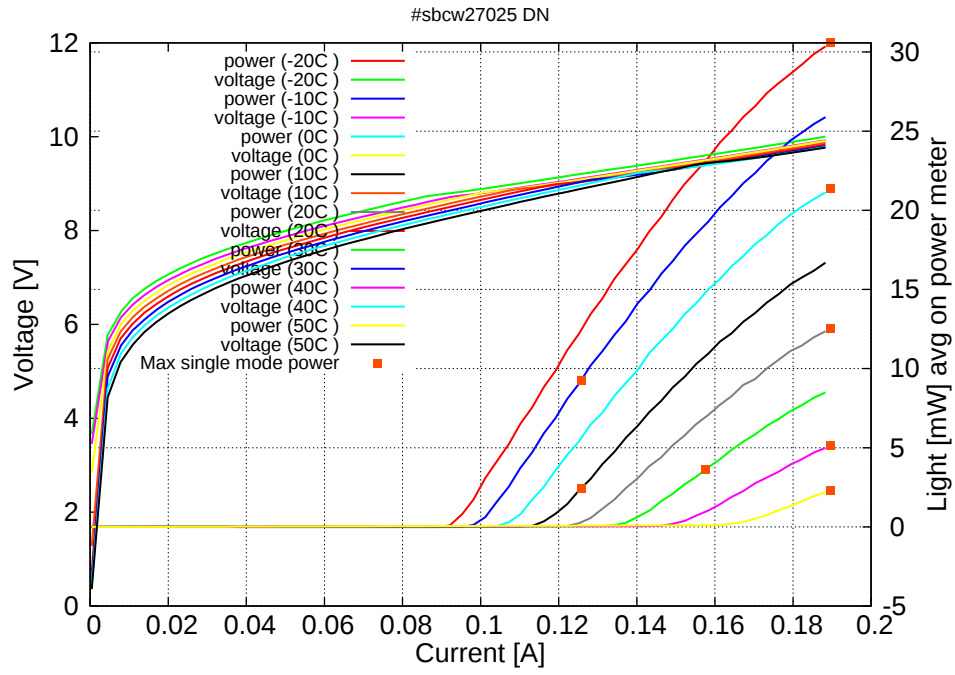


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.19A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

