

Datasheet for #sbcw27121 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 #sbcw27121 DN (please note that AlN submount numbering is A0WUX)

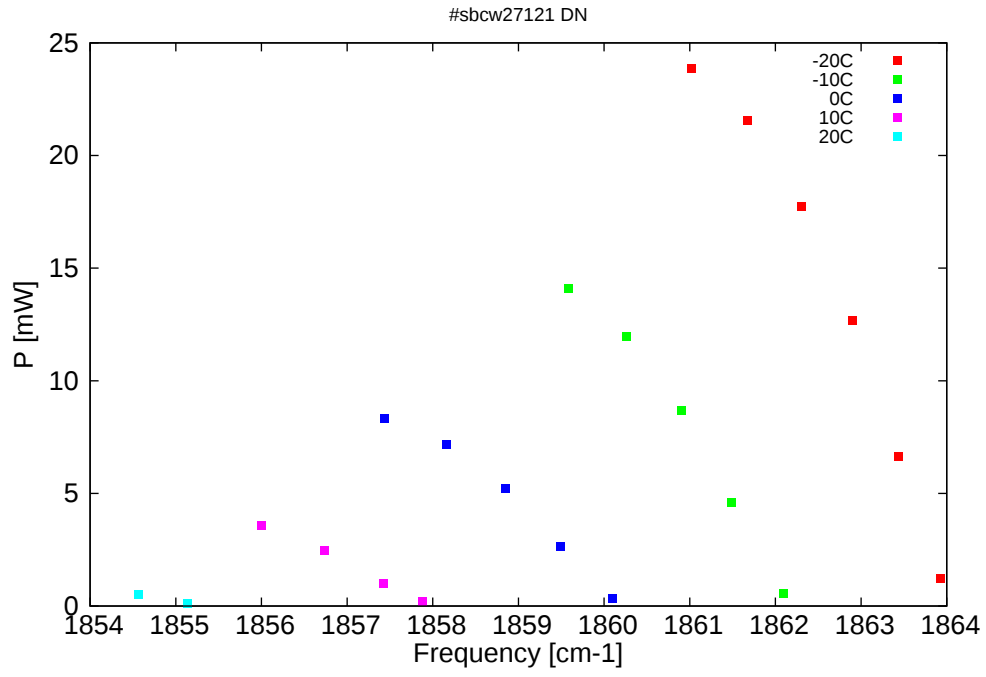


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

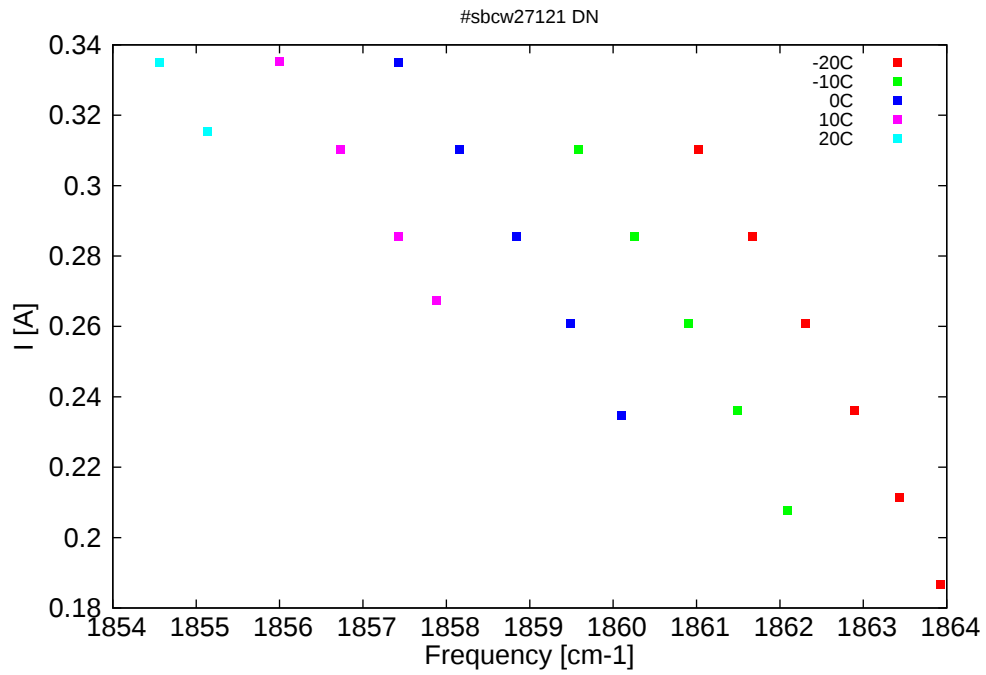


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5365	1863.9	1.2	-20	9.18	0.187
5366.4	1863.4	6.6	-20	9.42	0.211
5368	1862.9	12.7	-20	9.67	0.236
5369.7	1862.3	17.7	-20	9.93	0.261
5371.5	1861.7	21.6	-20	10.18	0.286
5373.4	1861	23.9	-20	10.43	0.31
5370.3	1862.1	0.5	-10	9.31	0.208
5372.1	1861.5	4.6	-10	9.58	0.236
5373.7	1860.9	8.7	-10	9.83	0.261
5375.6	1860.3	12	-10	10.07	0.286
5377.6	1859.6	14.1	-10	10.32	0.31
5376.1	1860.1	0.3	0	9.52	0.235
5377.8	1859.5	2.6	0	9.76	0.261
5379.7	1858.8	5.2	0	9.99	0.286
5381.7	1858.2	7.2	0	10.23	0.31
5383.8	1857.4	8.3	0	10.47	0.335
5382.5	1857.9	0.2	10	9.78	0.267
5383.8	1857.4	1	10	9.94	0.286
5385.8	1856.7	2.5	10	10.16	0.31
5387.9	1856	3.6	10	10.41	0.335
5390.4	1855.1	0.1	20	10.13	0.315
5392.1	1854.6	0.5	20	10.31	0.335

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

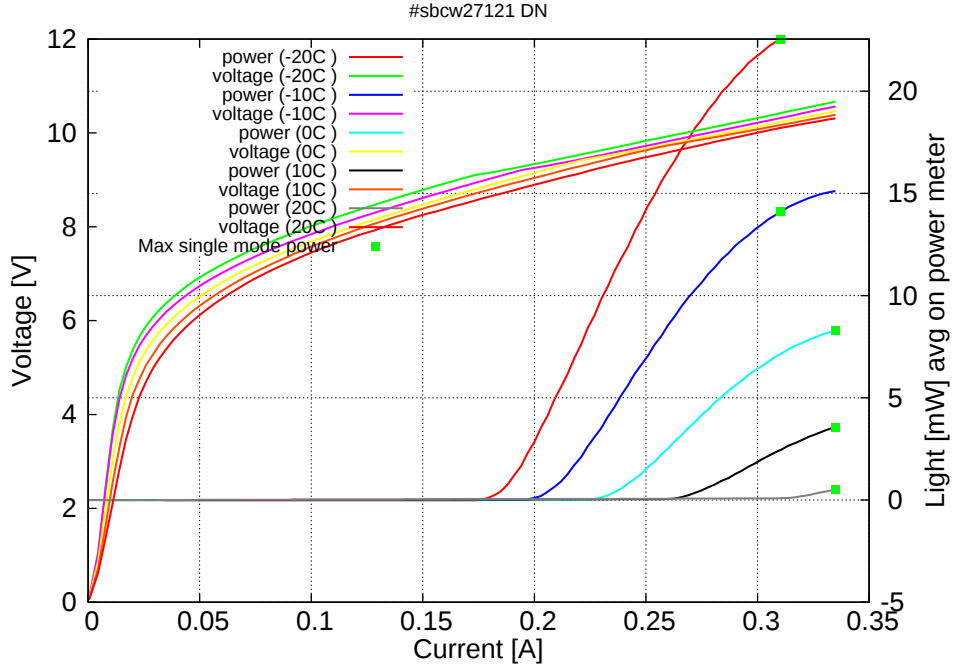


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=9.2V$ (2-wires measurements). Maximum operation current: 0.31A between -20C and -10C, 0.335A between 0C and 20C.

Figure 3: spectra at different temperatures for various DC currents

