

Datasheet for #sbcw27065 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 #sbcw27065 DN (please note that AlN submount numbering is A0XX7)

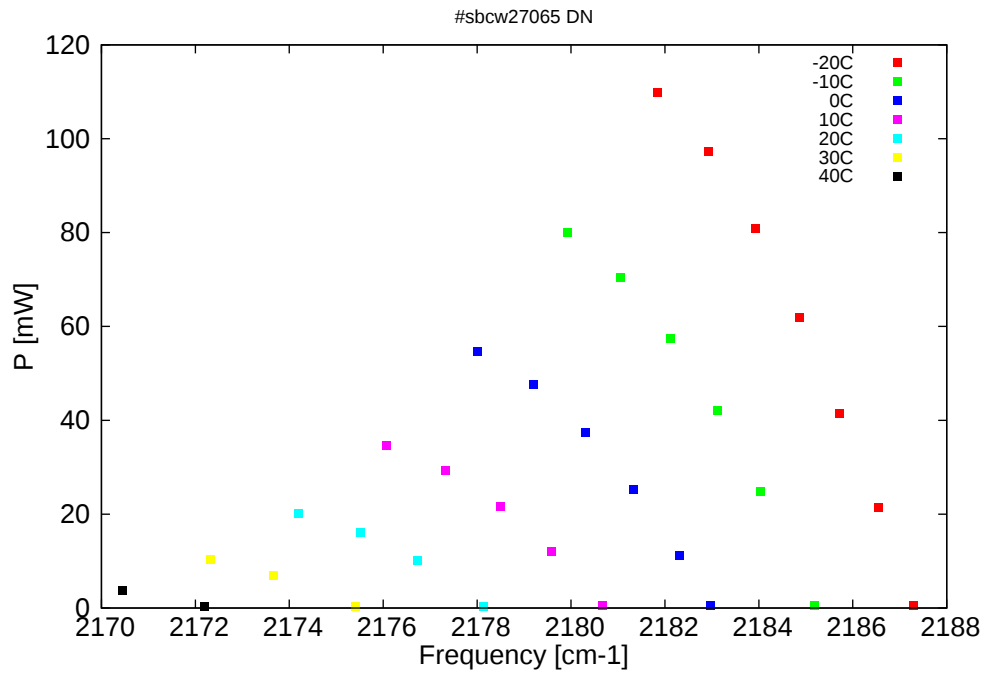


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

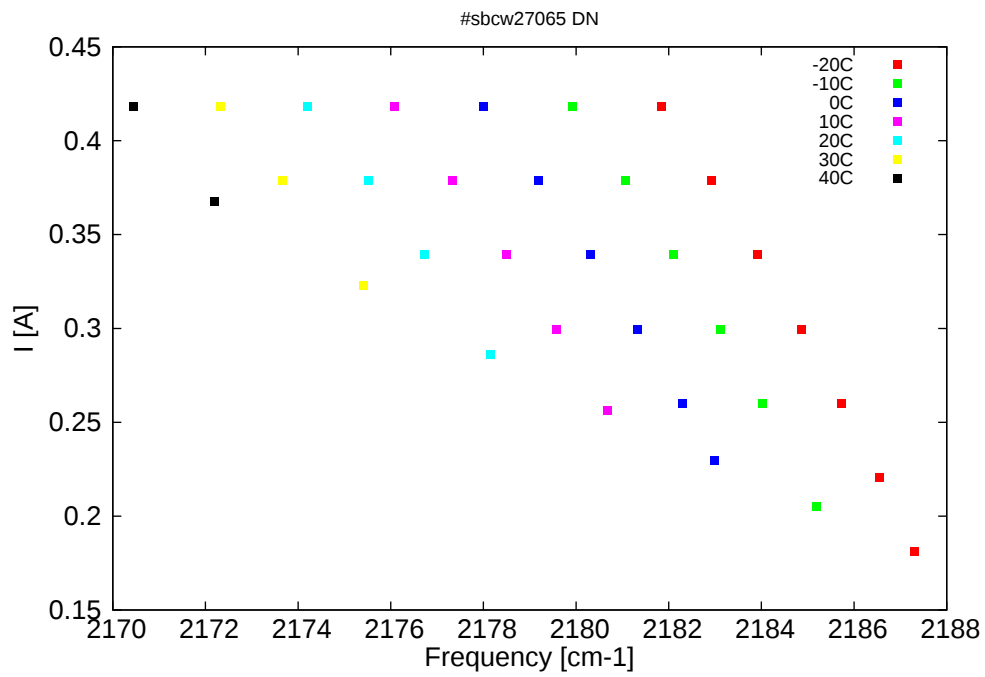


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4571.9	2187.3	0.6	-20	8.1	0.181
4573.4	2186.6	21.3	-20	8.3	0.221
4575.1	2185.7	41.5	-20	8.48	0.26
4576.9	2184.9	61.8	-20	8.66	0.3
4578.9	2183.9	81	-20	8.83	0.339
4581	2182.9	97.4	-20	9.01	0.379
4583.3	2181.8	109.9	-20	9.18	0.418
4576.3	2185.2	0.5	-10	8.17	0.205
4578.7	2184	24.8	-10	8.43	0.26
4580.6	2183.1	42.1	-10	8.61	0.3
4582.7	2182.1	57.4	-10	8.8	0.339
4584.9	2181.1	70.5	-10	8.97	0.379
4587.3	2179.9	80.1	-10	9.16	0.418
4580.9	2183	0.5	0	8.25	0.23
4582.3	2182.3	11.3	0	8.4	0.26
4584.4	2181.3	25.2	0	8.58	0.3
4586.5	2180.3	37.4	0	8.77	0.339
4588.8	2179.2	47.6	0	8.95	0.379
4591.4	2178	54.7	0	9.14	0.418
4585.7	2180.7	0.5	10	8.34	0.256
4588	2179.6	12	10	8.55	0.3
4590.3	2178.5	21.6	10	8.74	0.339
4592.8	2177.3	29.3	10	8.93	0.379
4595.4	2176.1	34.7	10	9.12	0.418
4591.1	2178.1	0.3	20	8.46	0.286
4594.1	2176.7	10.1	20	8.72	0.339
4596.6	2175.5	16	20	8.91	0.379
4599.4	2174.2	20.2	20	9.1	0.418
4596.8	2175.4	0.3	30	8.61	0.323
4600.5	2173.7	7	30	8.89	0.379
4603.4	2172.3	10.4	30	9.08	0.418
4603.6	2172.2	0.3	40	8.82	0.367
4607.3	2170.4	3.8	40	9.07	0.418

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

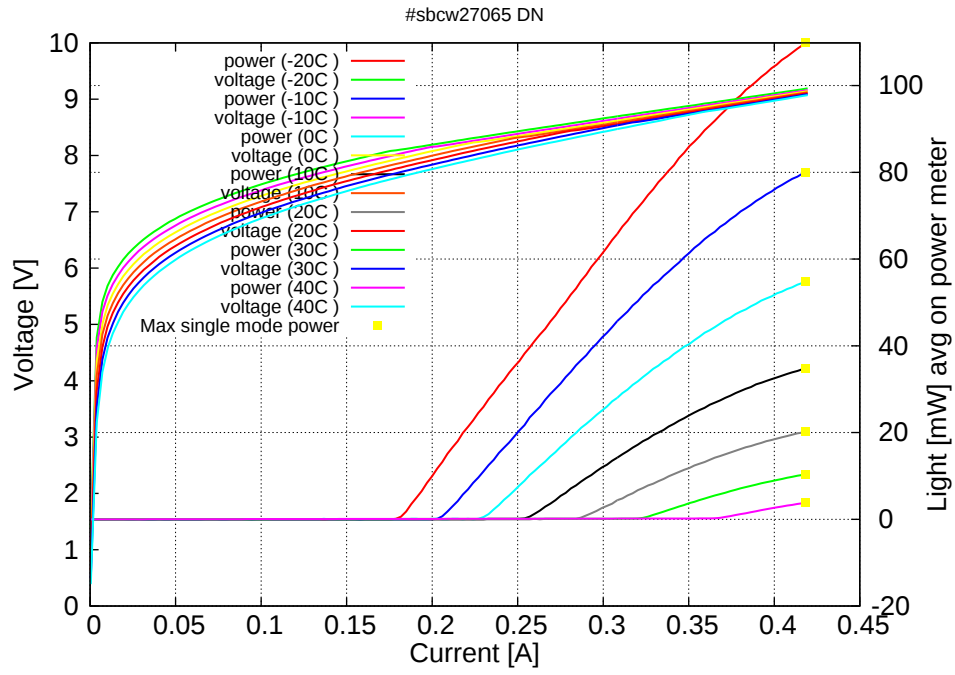


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.42A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

