

Datasheet for #sbcw27062 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

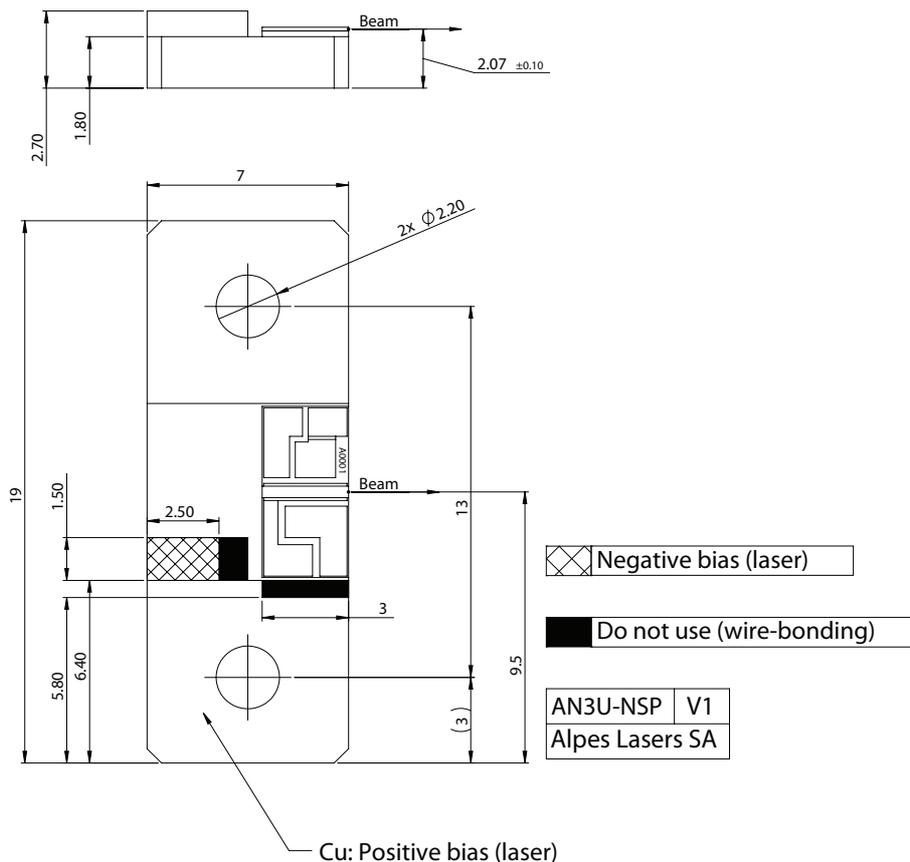


Figure 1: Mechanical and electrical interface for #sbcw27062 DN

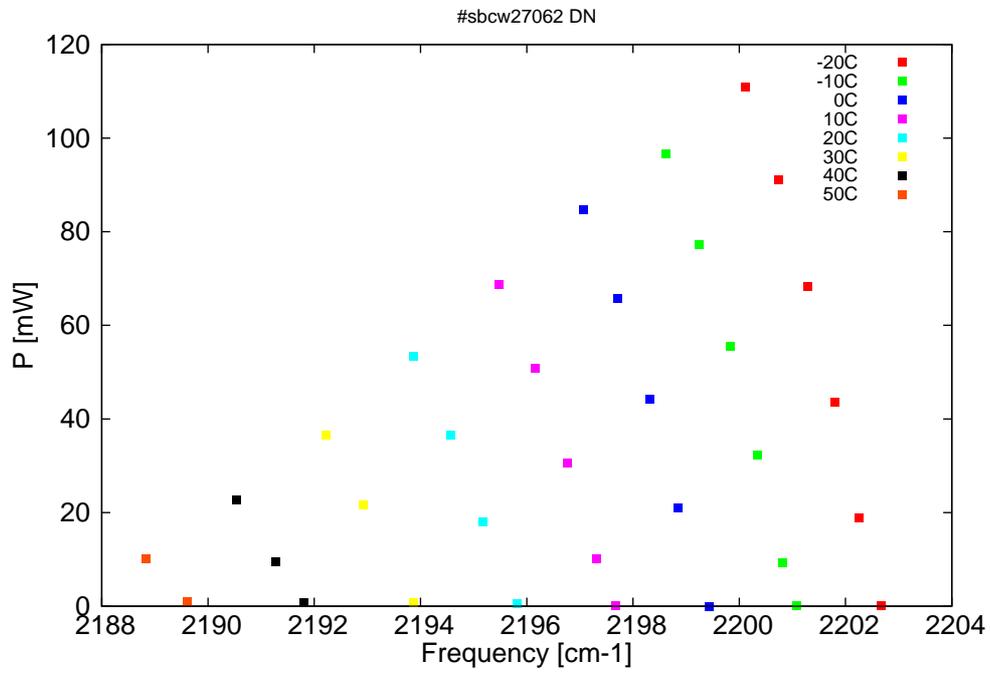


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

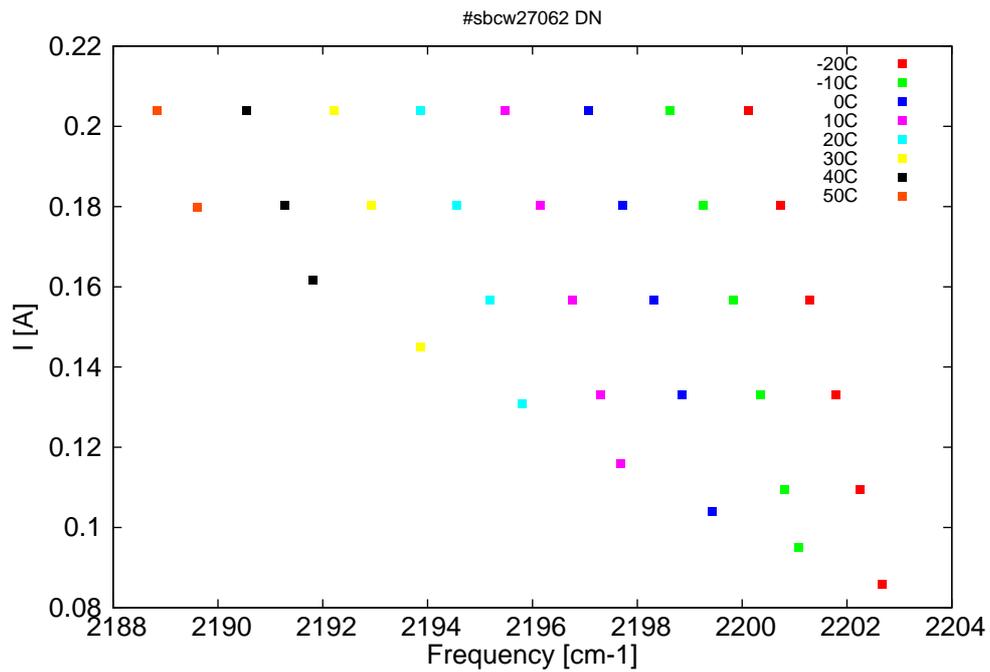


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4540	2202.7	0	-20	8.38	0.086
4540.8	2202.3	18.9	-20	8.63	0.11
4541.7	2201.8	43.6	-20	8.89	0.133
4542.8	2201.3	68.2	-20	9.14	0.157
4543.9	2200.7	91.1	-20	9.39	0.18
4545.2	2200.1	111	-20	9.65	0.204
4543.2	2201.1	0	-10	8.46	0.095
4543.8	2200.8	9.2	-10	8.6	0.11
4544.7	2200.3	32.2	-10	8.86	0.133
4545.8	2199.8	55.4	-10	9.11	0.157
4547	2199.2	77.3	-10	9.37	0.18
4548.3	2198.6	96.6	-10	9.64	0.204
4546.6	2199.4	0	0	8.53	0.104
4547.8	2198.8	21.1	0	8.83	0.133
4548.9	2198.3	44.2	0	9.09	0.157
4550.2	2197.7	65.7	0	9.35	0.18
4551.5	2197.1	84.8	0	9.62	0.204
4550.3	2197.7	0	10	8.64	0.116
4551	2197.3	10	10	8.8	0.133
4552.2	2196.8	30.6	10	9.06	0.157
4553.4	2196.2	50.8	10	9.33	0.18
4554.8	2195.5	68.8	10	9.6	0.204
4554.1	2195.8	0.6	20	8.77	0.131
4555.4	2195.2	18.1	20	9.04	0.157
4556.7	2194.6	36.5	20	9.31	0.18
4558.2	2193.9	53.5	20	9.58	0.204
4558.1	2193.9	0.7	30	8.91	0.145
4560.1	2192.9	21.6	30	9.29	0.18
4561.6	2192.2	36.6	30	9.56	0.204
4562.4	2191.8	0.8	40	9.08	0.162
4563.6	2191.3	9.4	40	9.27	0.18
4565.1	2190.5	22.7	40	9.54	0.204
4567	2189.6	0.9	50	9.28	0.18
4568.6	2188.8	10.1	50	9.53	0.204

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

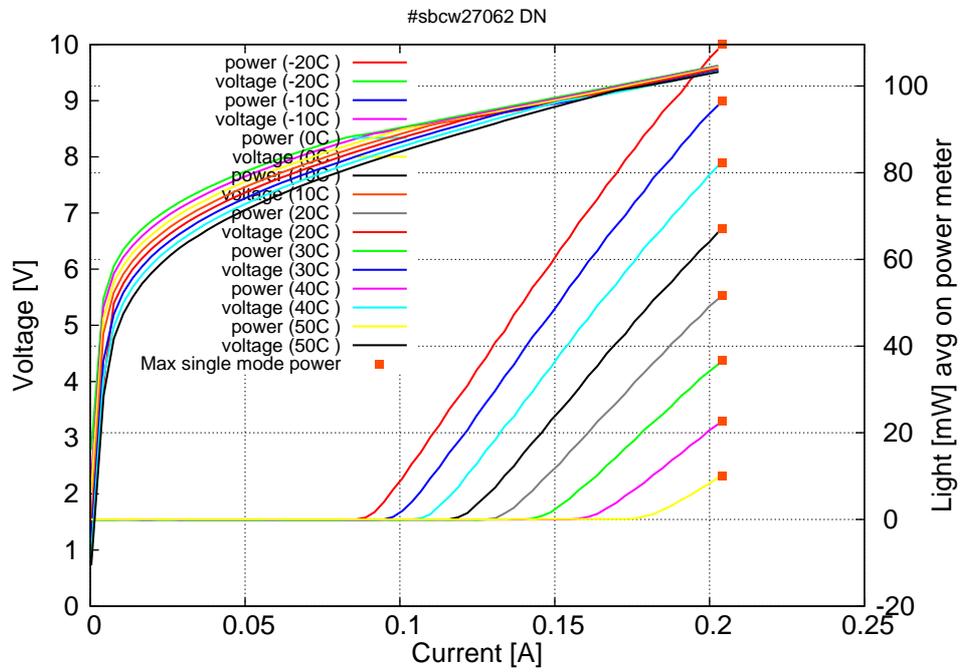


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.4V$ (2-wires measurements). Maximum operation current: 0.205A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

