

Datasheet for #sbcw20710 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.

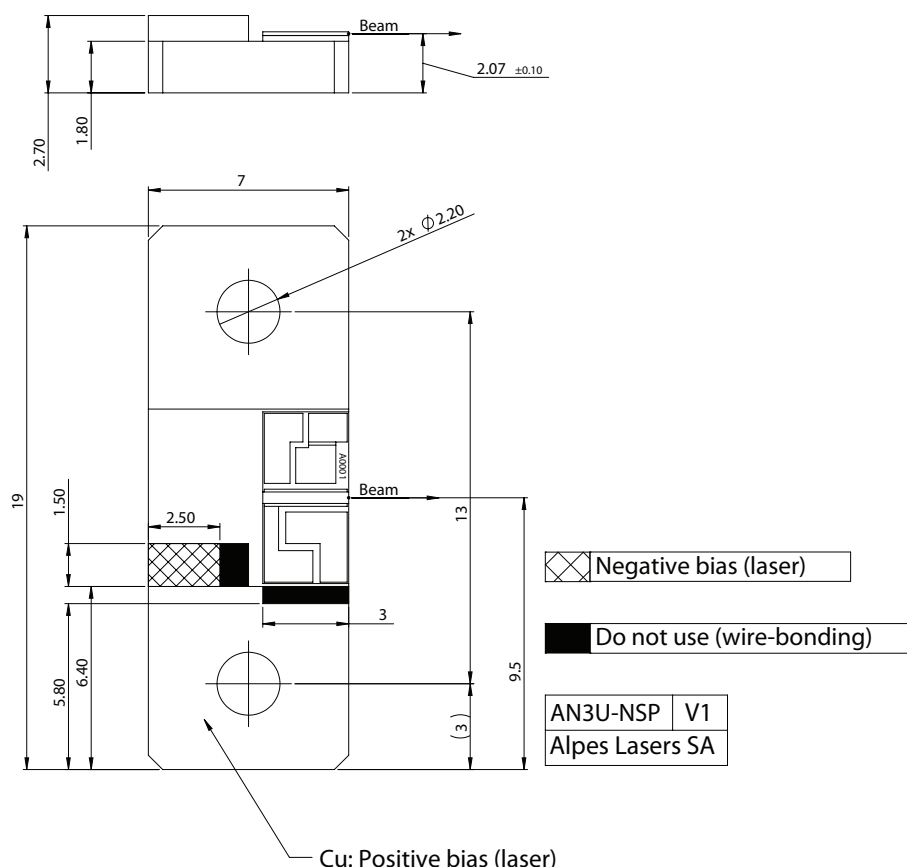


Figure 1: Mechanical and electrical interface for #sbcw20710 DN

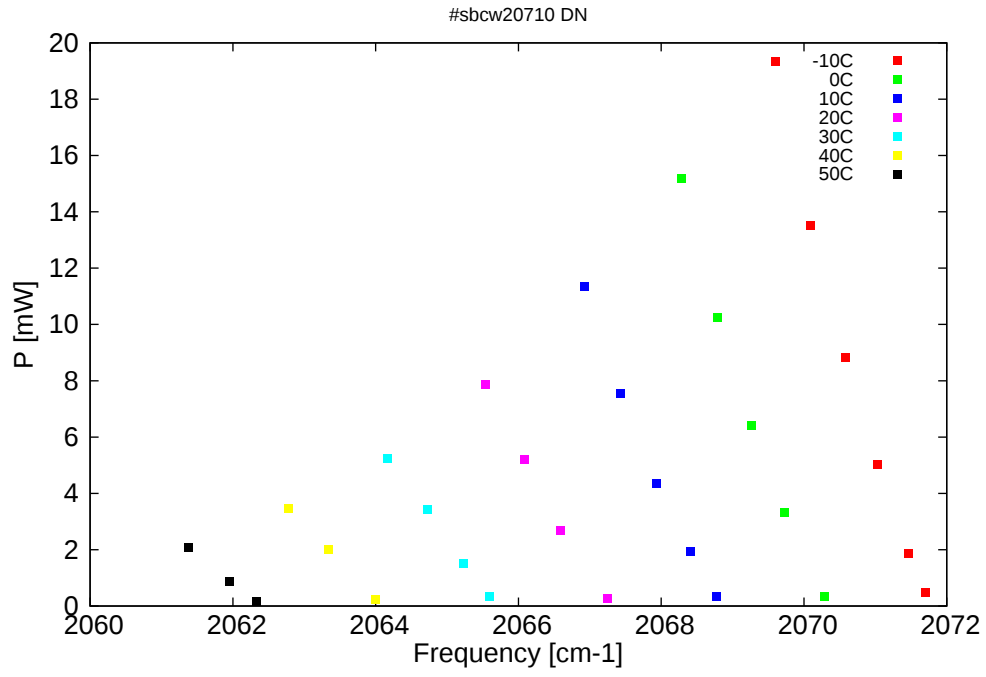


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

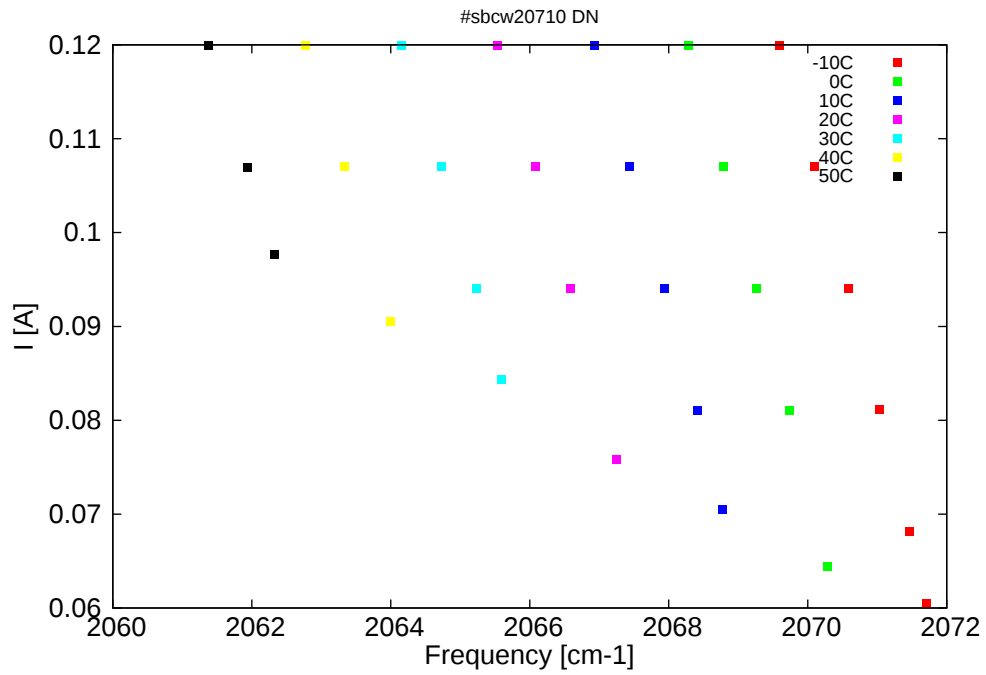


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4826.9	2071.7	0.5	-10	11.69	0.061
4827.5	2071.5	1.9	-10	11.91	0.068
4828.5	2071	5	-10	12.27	0.081
4829.5	2070.6	8.8	-10	12.62	0.094
4830.7	2070.1	13.5	-10	12.98	0.107
4831.9	2069.6	19.3	-10	13.34	0.12
4830.2	2070.3	0.3	0	11.69	0.064
4831.5	2069.7	3.3	0	12.15	0.081
4832.6	2069.3	6.4	0	12.5	0.094
4833.7	2068.8	10.2	0	12.85	0.107
4834.9	2068.3	15.2	0	13.2	0.12
4833.8	2068.8	0.3	10	11.76	0.071
4834.6	2068.4	1.9	10	12.05	0.081
4835.7	2067.9	4.4	10	12.4	0.094
4836.9	2067.4	7.6	10	12.74	0.107
4838.1	2066.9	11.4	10	13.07	0.12
4837.3	2067.3	0.3	20	11.81	0.076
4838.9	2066.6	2.7	20	12.29	0.094
4840.1	2066.1	5.2	20	12.62	0.107
4841.3	2065.5	7.9	20	12.95	0.12
4841.2	2065.6	0.3	30	11.95	0.084
4842.1	2065.2	1.5	30	12.19	0.094
4843.3	2064.7	3.4	30	12.52	0.107
4844.6	2064.2	5.2	30	12.84	0.12
4845	2064	0.2	40	12.01	0.091
4846.5	2063.3	2	40	12.4	0.107
4847.8	2062.8	3.5	40	12.71	0.12
4848.9	2062.3	0.2	50	12.09	0.098
4849.8	2061.9	0.9	50	12.3	0.107
4851.1	2061.4	2.1	50	12.6	0.12

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

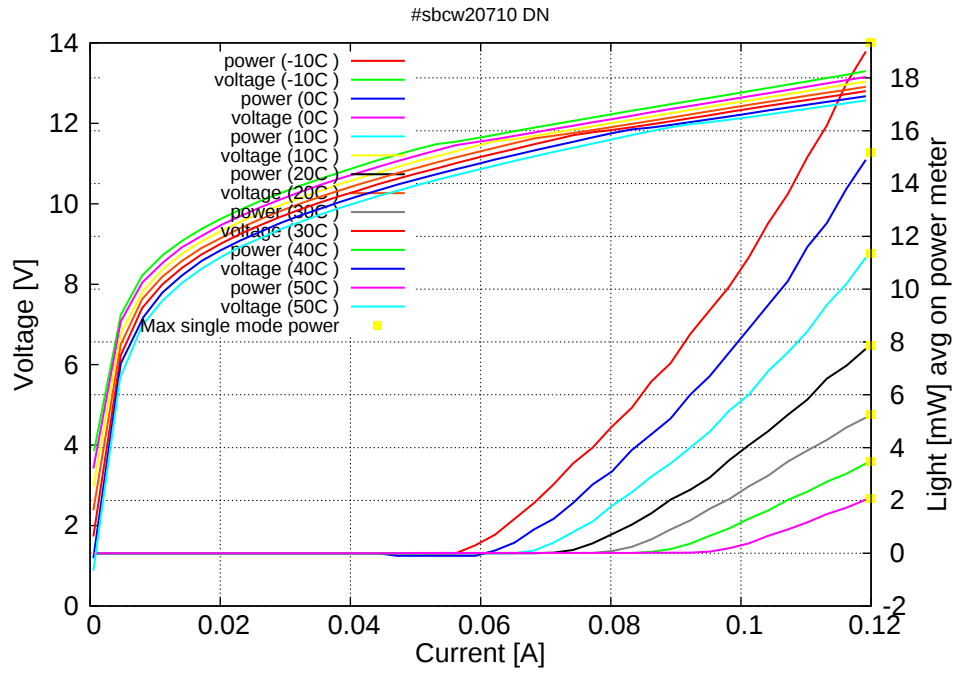


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.06A$ / $V_{th}=11.7V$ (2-wires measurements). Maximum operation current: 0.12A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

