

**Datasheet for #sbcw27788 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.

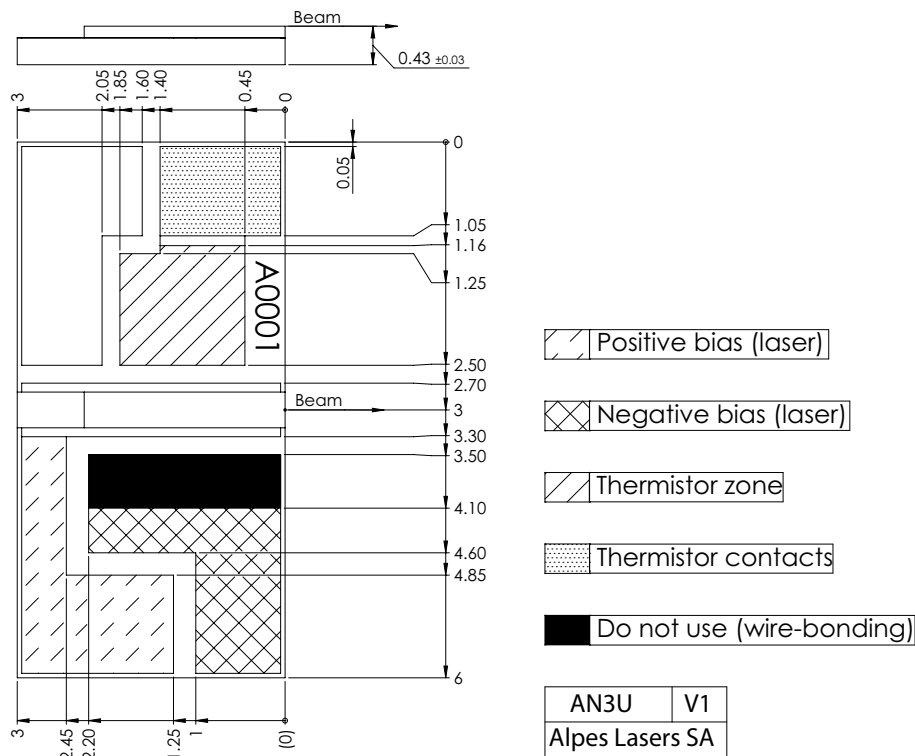


Figure 1: Mechanical and electrical interface for #sbcw27788 DN (please note that AlN submount numbering is A0VM2)

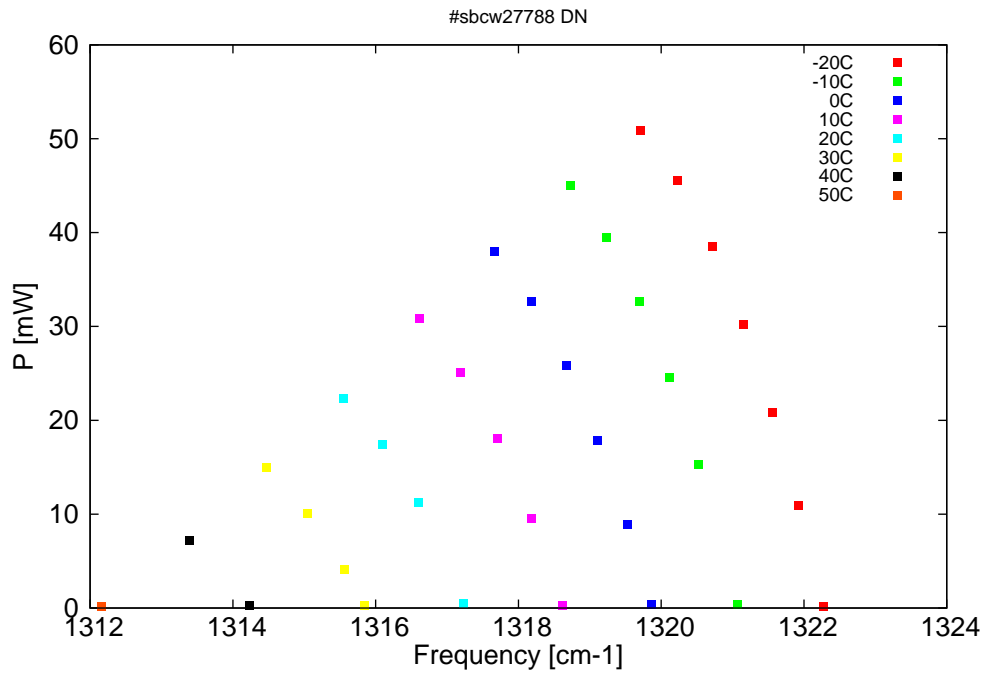


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

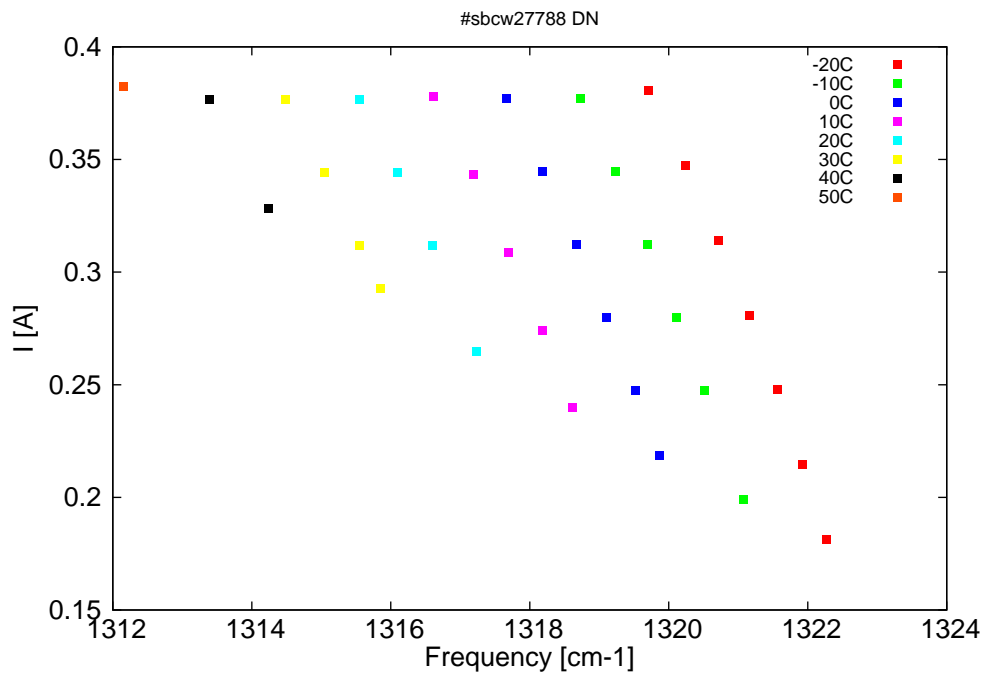


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7562.7	1322.3	0.2	-20	8.7	0.181
7564.7	1321.9	10.9	-20	9.02	0.214
7566.8	1321.6	20.8	-20	9.34	0.248
7569.1	1321.2	30.2	-20	9.65	0.281
7571.6	1320.7	38.5	-20	9.97	0.314
7574.4	1320.2	45.5	-20	10.29	0.348
7577.4	1319.7	50.9	-20	10.63	0.381
7569.6	1321.1	0.4	-10	8.78	0.199
7572.8	1320.5	15.3	-10	9.24	0.248
7575.1	1320.1	24.5	-10	9.54	0.28
7577.5	1319.7	32.6	-10	9.85	0.312
7580.2	1319.2	39.5	-10	10.16	0.345
7583.1	1318.7	45.1	-10	10.48	0.377
7576.5	1319.9	0.4	0	8.88	0.219
7578.5	1319.5	8.9	0	9.14	0.248
7580.9	1319.1	17.9	0	9.45	0.28
7583.4	1318.7	25.9	0	9.75	0.312
7586.2	1318.2	32.6	0	10.05	0.345
7589.2	1317.7	38	0	10.37	0.377
7583.7	1318.6	0.3	10	8.99	0.24
7586.2	1318.2	9.6	10	9.31	0.274
7589	1317.7	18	10	9.62	0.309
7591.9	1317.2	25.1	10	9.94	0.343
7595.2	1316.6	30.8	10	10.27	0.378
7591.6	1317.2	0.4	20	9.25	0.265
7595.3	1316.6	11.2	20	9.67	0.312
7598.3	1316.1	17.4	20	9.97	0.344
7601.4	1315.5	22.4	20	10.25	0.377
7599.7	1315.8	0.3	30	9.41	0.293
7601.3	1315.6	4.1	30	9.58	0.312
7604.3	1315	10.1	30	9.88	0.344
7607.6	1314.5	14.9	30	10.18	0.377
7609	1314.2	0.3	40	9.62	0.328
7613.8	1313.4	7.2	40	10.07	0.377
7621	1312.2	0.2	50	9.98	0.383

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

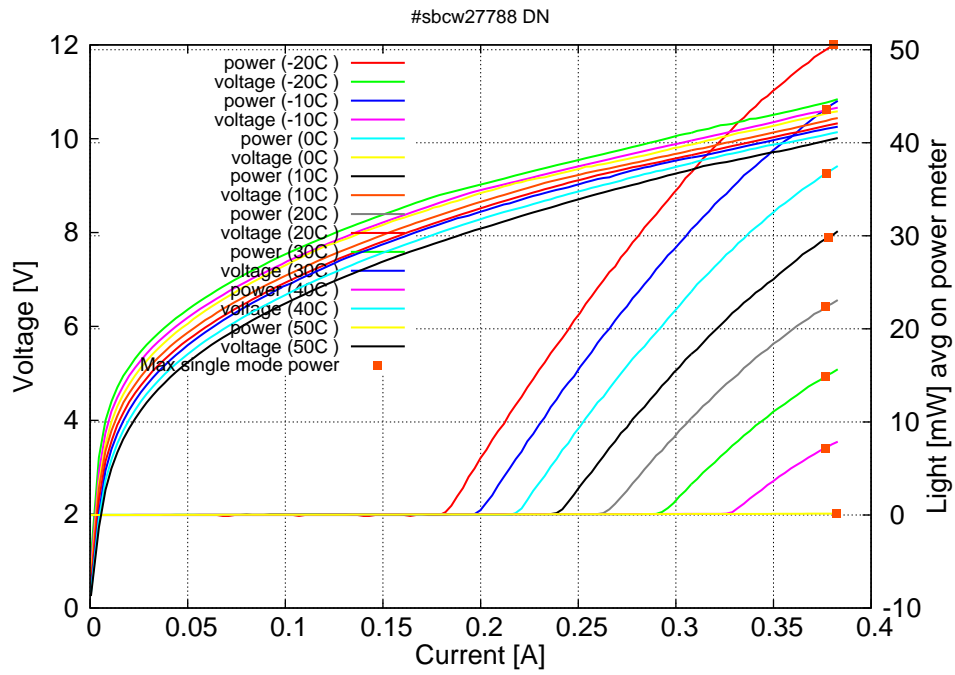


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.19A$  /  $V_{th}=8.7V$  (2-wires measurements). Maximum operation current: 0.385A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

