

**Datasheet for #sbcw27656 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.

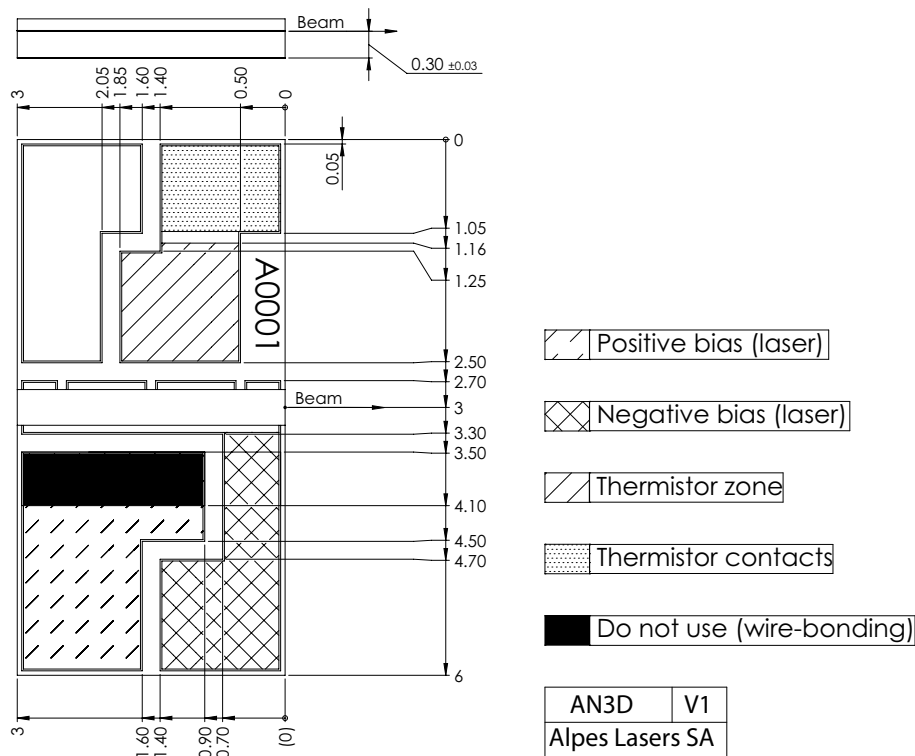


Figure 1: Mechanical and electrical interface for #sbcw27656 DN (please note that AlN submount numbering is P4499)

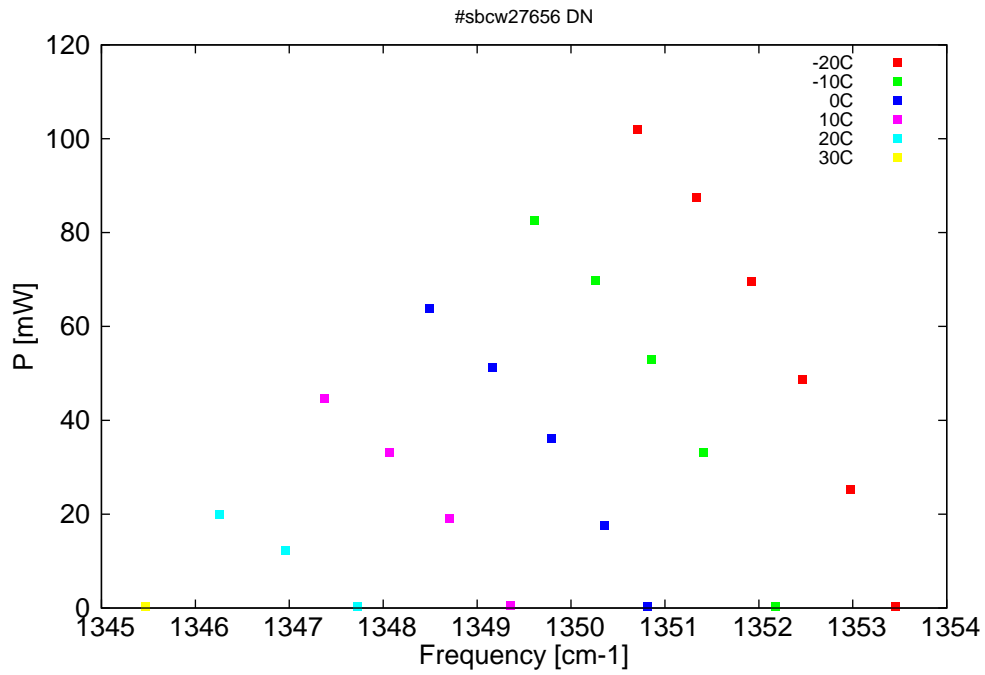


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

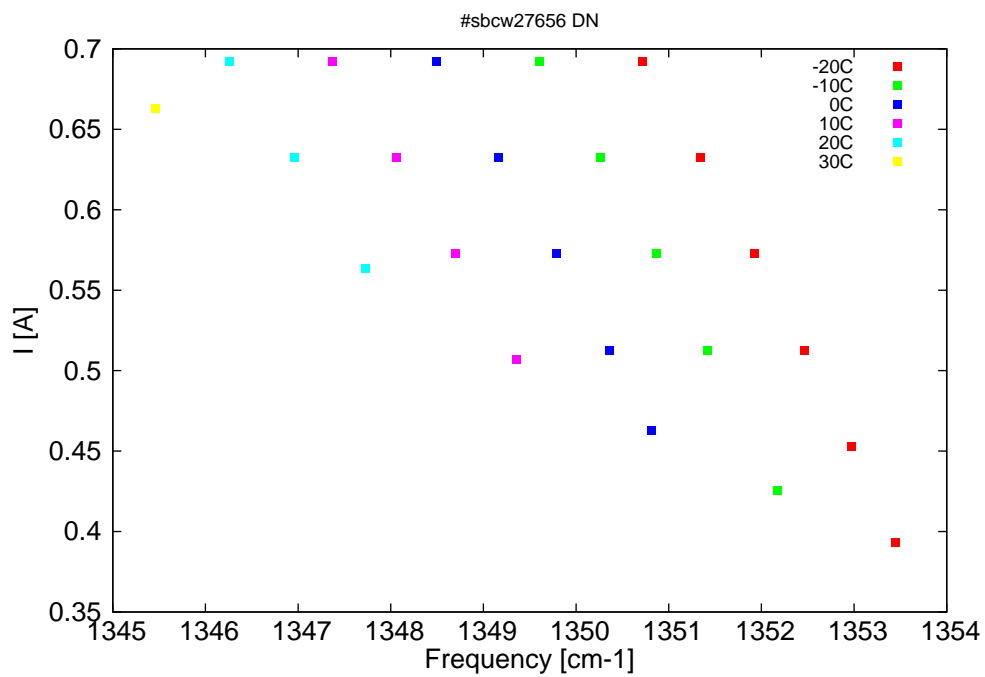


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7388.5	1353.5	0.4	-20	8.74	0.393
7391.1	1353	25.2	-20	8.97	0.453
7393.9	1352.5	48.7	-20	9.21	0.513
7396.9	1351.9	69.7	-20	9.45	0.573
7400.1	1351.3	87.5	-20	9.68	0.632
7403.5	1350.7	101.9	-20	9.93	0.692
7395.5	1352.2	0.4	-10	8.81	0.426
7399.6	1351.4	33.2	-10	9.15	0.513
7402.7	1350.9	52.9	-10	9.4	0.573
7406	1350.3	69.7	-10	9.64	0.632
7409.5	1349.6	82.6	-10	9.89	0.692
7402.9	1350.8	0.4	0	8.9	0.463
7405.4	1350.4	17.5	0	9.11	0.513
7408.6	1349.8	36.1	0	9.35	0.573
7412	1349.2	51.2	0	9.6	0.632
7415.7	1348.5	63.8	0	9.85	0.692
7410.9	1349.4	0.5	10	9.04	0.507
7414.5	1348.7	19.1	10	9.31	0.573
7418	1348.1	33.1	10	9.56	0.632
7421.9	1347.4	44.6	10	9.82	0.692
7419.9	1347.7	0.3	20	9.24	0.564
7424.1	1347	12.3	20	9.53	0.632
7428	1346.3	19.9	20	9.79	0.692
7432.4	1345.5	0.4	30	9.63	0.663

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

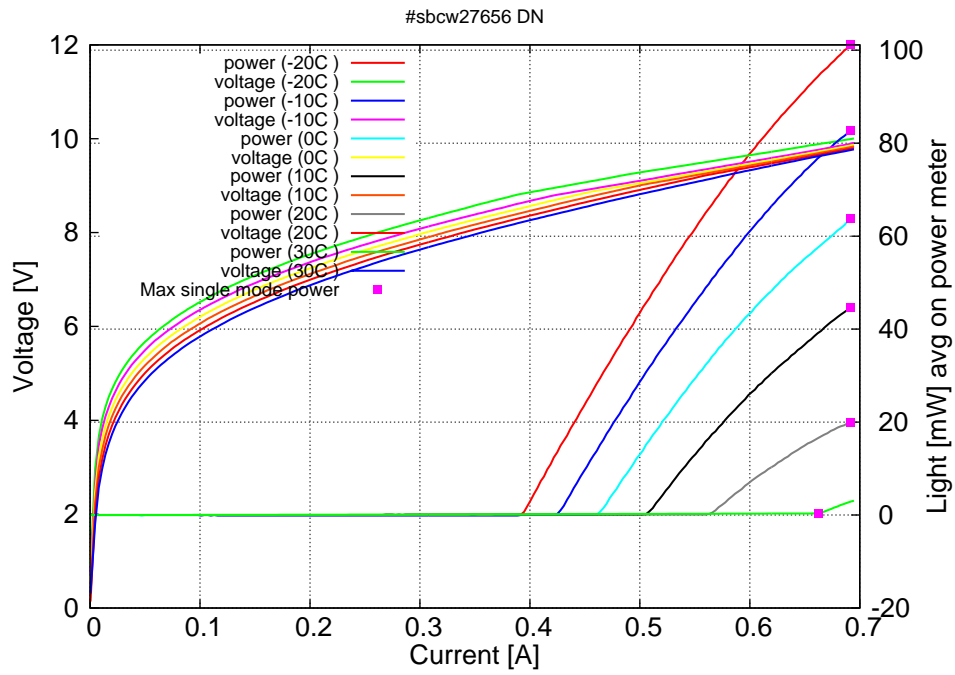


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.39A$  /  $V_{th}=8.7V$  (2-wires measurements). Maximum operation current: 0.695A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

