

**Datasheet for #sbcw27905 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.

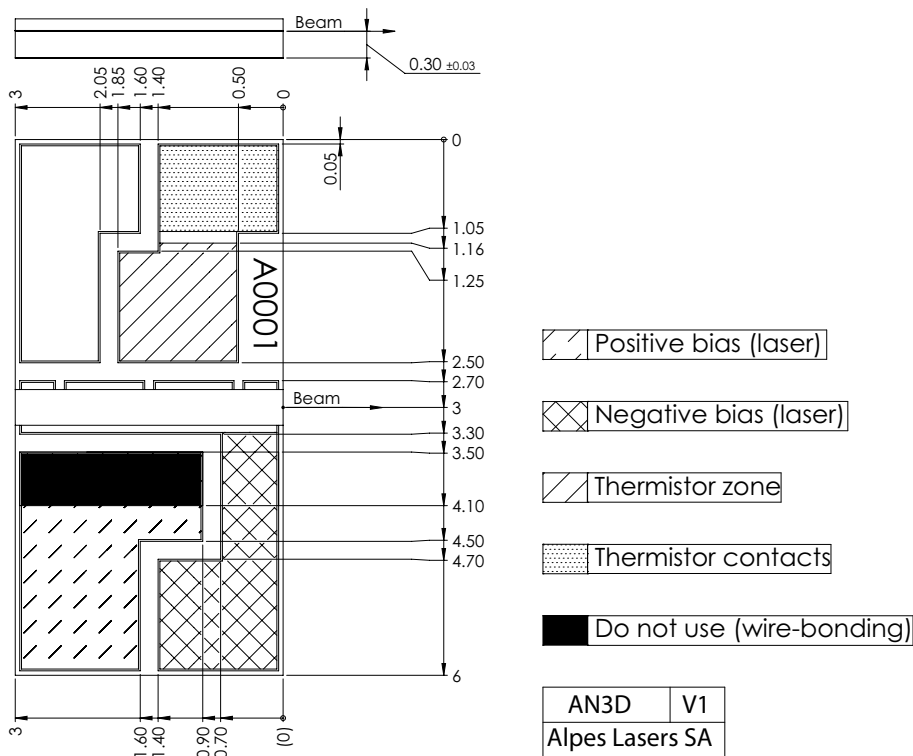


Figure 1: Mechanical and electrical interface for #sbcw27905 DN (please note that AlN submount numbering is P3165)

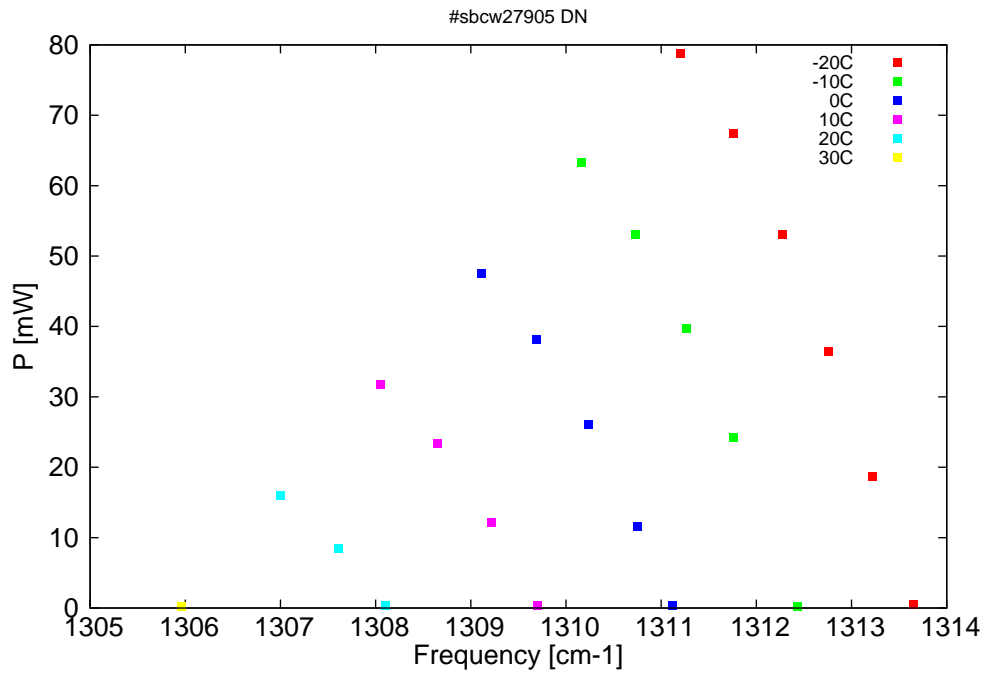


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

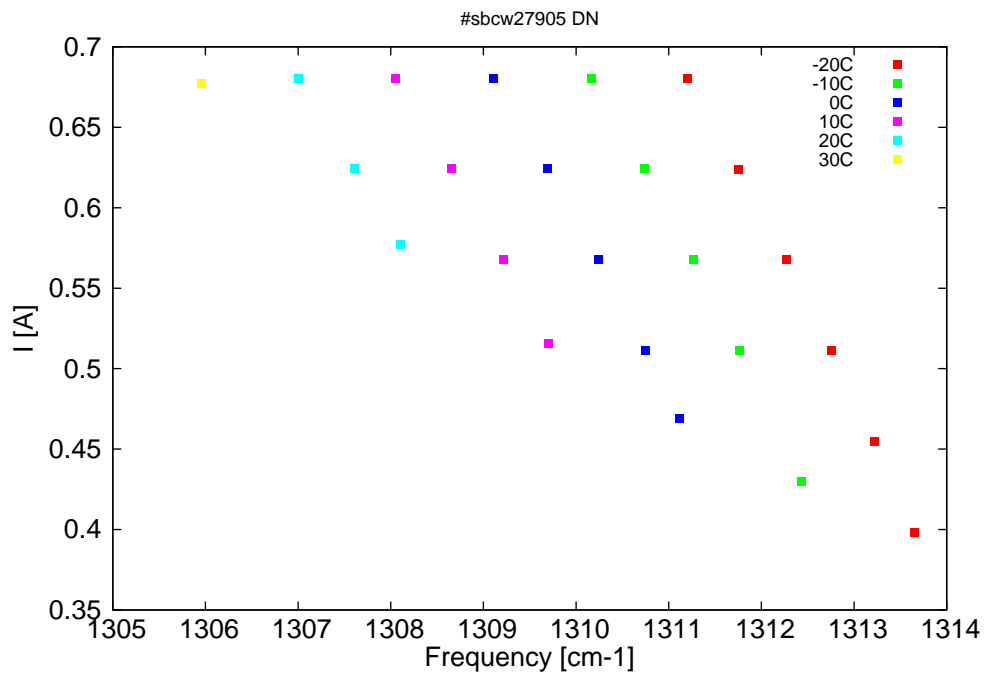


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7612.4	1313.6	0.5	-20	8.45	0.398
7614.9	1313.2	18.7	-20	8.66	0.455
7617.5	1312.8	36.4	-20	8.86	0.511
7620.4	1312.3	53.1	-20	9.06	0.568
7623.4	1311.8	67.4	-20	9.27	0.624
7626.6	1311.2	78.8	-20	9.48	0.681
7619.4	1312.4	0.3	-10	8.49	0.43
7623.3	1311.8	24.3	-10	8.79	0.511
7626.2	1311.3	39.7	-10	8.99	0.568
7629.3	1310.7	53	-10	9.21	0.624
7632.6	1310.2	63.3	-10	9.42	0.681
7627.1	1311.1	0.4	0	8.57	0.469
7629.2	1310.8	11.6	0	8.73	0.511
7632.2	1310.2	26	0	8.94	0.568
7635.4	1309.7	38.1	0	9.15	0.624
7638.8	1309.1	47.5	0	9.37	0.681
7635.3	1309.7	0.3	10	8.69	0.516
7638.2	1309.2	12.1	10	8.89	0.568
7641.5	1308.7	23.4	10	9.1	0.624
7645	1308	31.7	10	9.32	0.681
7644.7	1308.1	0.4	20	8.87	0.577
7647.5	1307.6	8.4	20	9.05	0.624
7651.1	1307	16	20	9.28	0.681
7657.2	1306	0.3	30	9.21	0.677

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

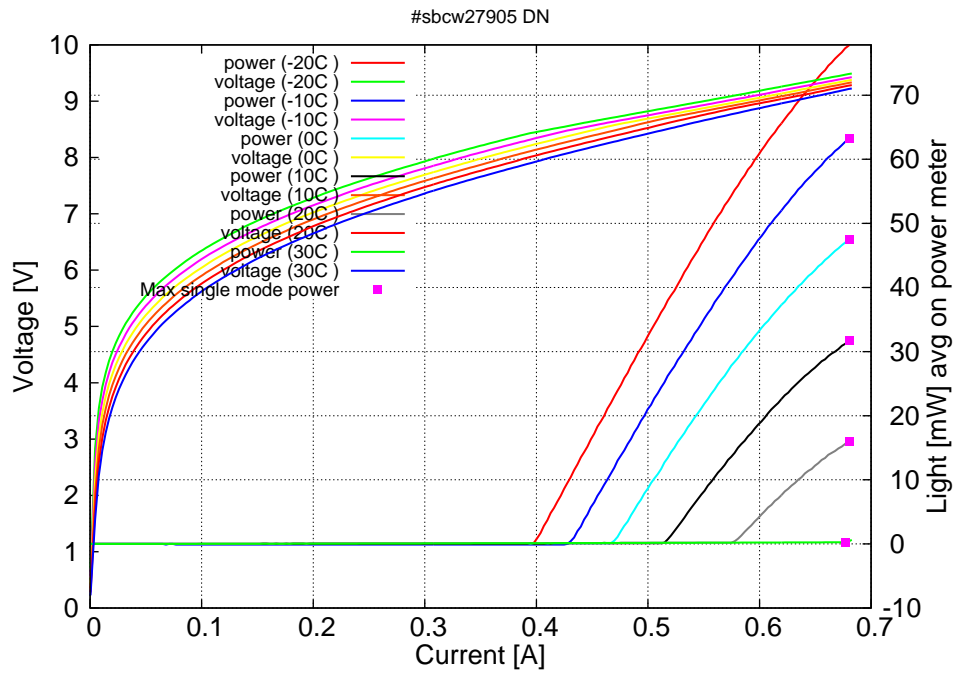


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.39A$  /  $V_{th}=8.4V$  (2-wires measurements). Maximum operation current: 0.685A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

