

Datasheet for #sbcw27610 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.

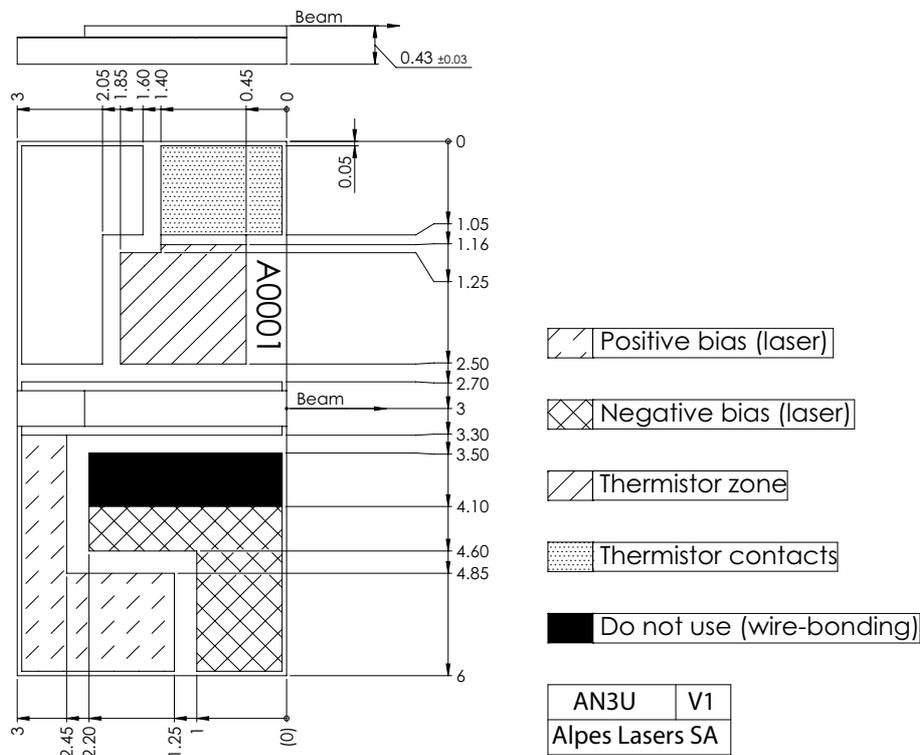


Figure 1: Mechanical and electrical interface for #sbcw27610 DN (please note that AlN submount numbering is A0X47)

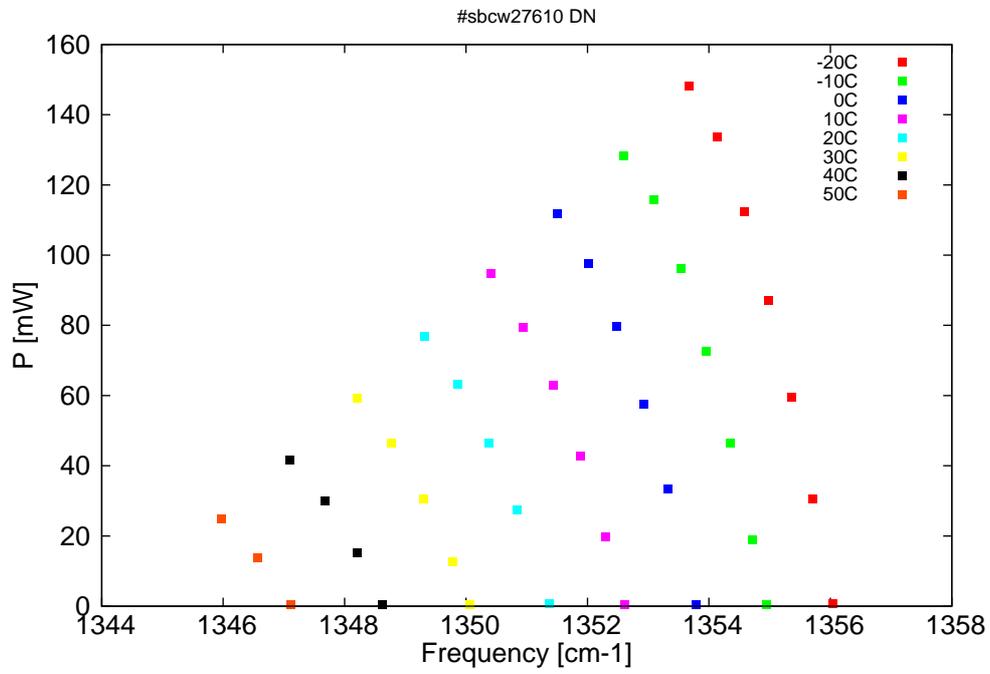


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

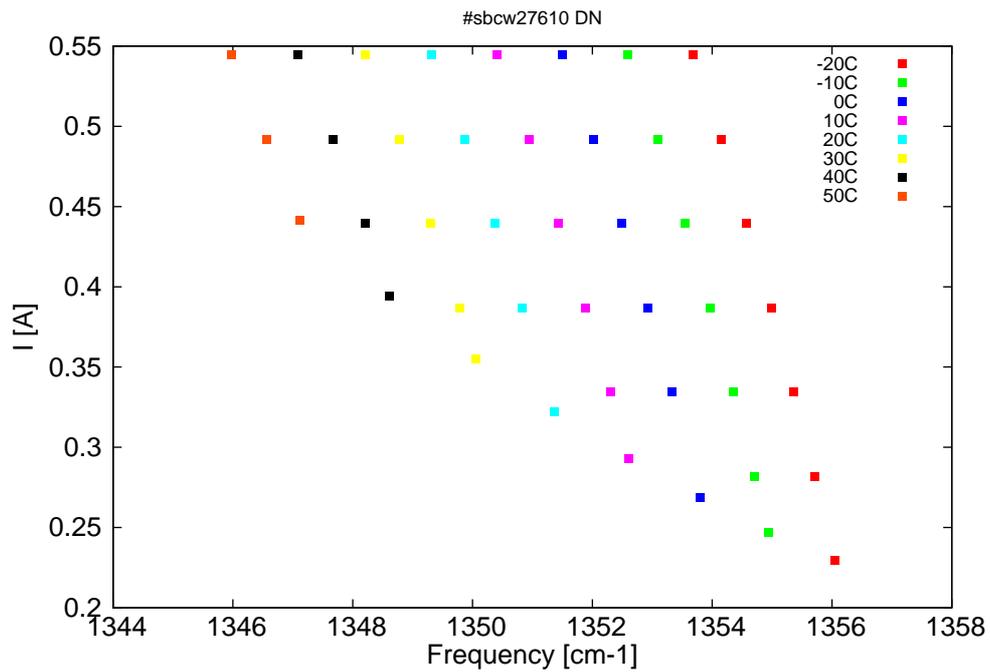


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7374.4	1356	0.7	-20	8.41	0.23
7376.2	1355.7	30.4	-20	8.7	0.282
7378.1	1355.4	59.4	-20	8.96	0.335
7380.2	1355	87	-20	9.22	0.387
7382.4	1354.6	112.4	-20	9.47	0.44
7384.7	1354.1	133.8	-20	9.72	0.492
7387.3	1353.7	148.2	-20	9.97	0.545
7380.4	1354.9	0.6	-10	8.4	0.247
7381.6	1354.7	18.9	-10	8.6	0.282
7383.6	1354.3	46.4	-10	8.87	0.335
7385.7	1354	72.7	-10	9.14	0.387
7388	1353.5	96.3	-10	9.4	0.44
7390.5	1353.1	115.7	-10	9.65	0.492
7393.2	1352.6	128.2	-10	9.91	0.545
7386.6	1353.8	0.4	0	8.43	0.268
7389.2	1353.3	33.3	0	8.79	0.335
7391.4	1352.9	57.6	0	9.06	0.387
7393.8	1352.5	79.6	0	9.33	0.44
7396.3	1352	97.5	0	9.58	0.492
7399.1	1351.5	111.8	0	9.85	0.545
7393.1	1352.6	0.5	10	8.5	0.293
7394.8	1352.3	19.7	10	8.73	0.335
7397.1	1351.9	42.6	10	9	0.387
7399.6	1351.4	63	10	9.28	0.44
7402.2	1350.9	79.5	10	9.53	0.492
7405.1	1350.4	94.6	10	9.79	0.545
7399.9	1351.4	0.6	20	8.62	0.322
7402.8	1350.8	27.4	20	8.95	0.387
7405.4	1350.4	46.5	20	9.23	0.44
7408.1	1349.9	63.2	20	9.48	0.492
7411.1	1349.3	76.7	20	9.74	0.545
7407.1	1350.1	0.5	30	8.72	0.355
7408.6	1349.8	12.6	30	8.89	0.387
7411.3	1349.3	30.7	30	9.17	0.44
7414.1	1348.8	46.5	30	9.44	0.492
7417.2	1348.2	59.3	30	9.71	0.545
7415	1348.6	0.5	40	8.87	0.394
7417.2	1348.2	15.1	40	9.14	0.44
7420.2	1347.7	29.9	40	9.4	0.492
7423.4	1347.1	41.7	40	9.67	0.545
7423.3	1347.1	0.5	50	9.07	0.441
7426.3	1346.6	13.6	50	9.35	0.492
7429.6	1346	25	50	9.62	0.545

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

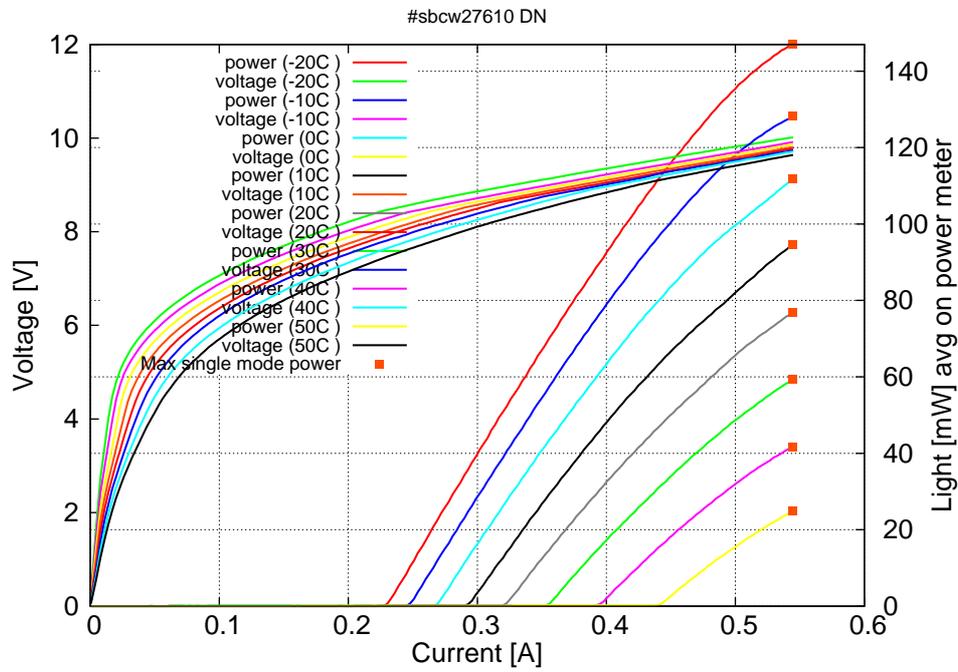


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.22A$ / $V_{th}=8.4V$ (2-wires measurements). Maximum operation current: 0.545A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

