

**Datasheet for #sbcw20755 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**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.

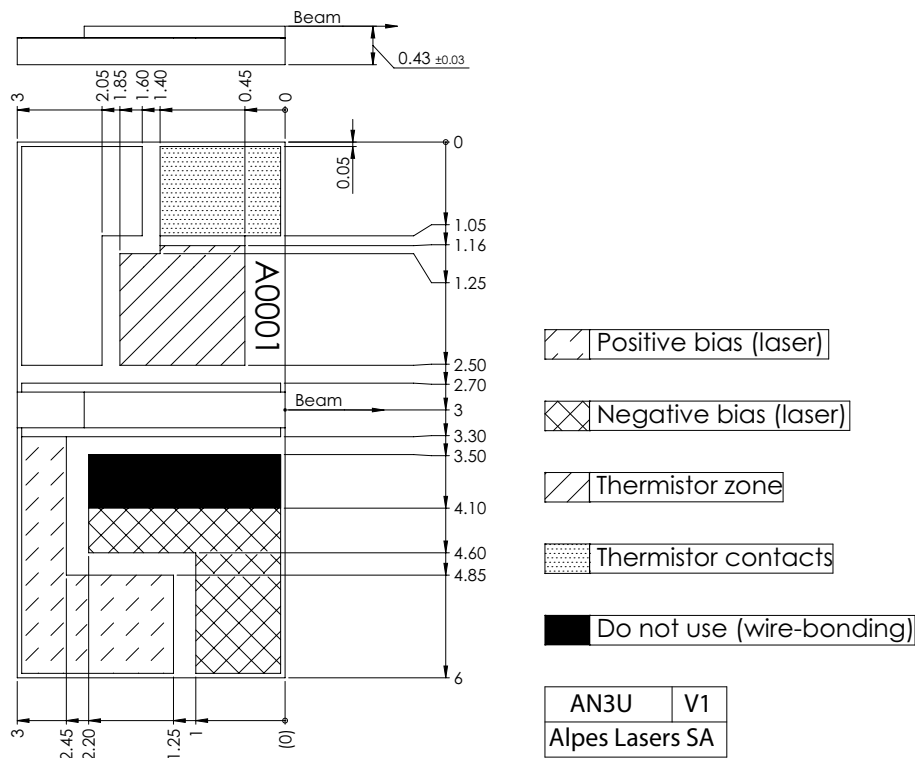


Figure 1: Mechanical and electrical interface for #sbcw20755 DN (please note that AlN submount numbering is A0T1Y)

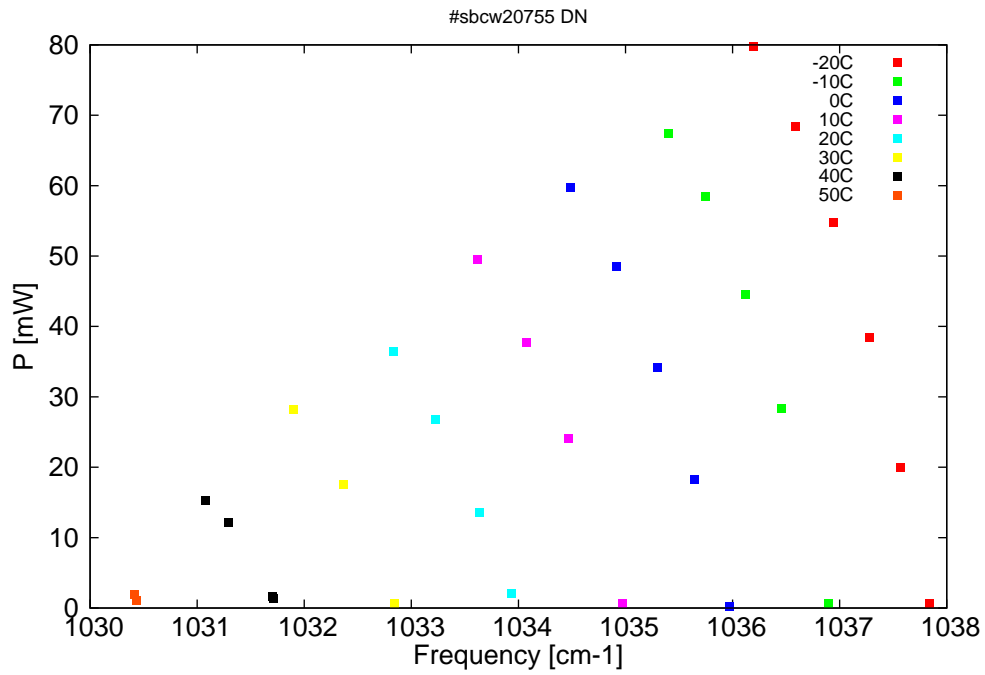


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

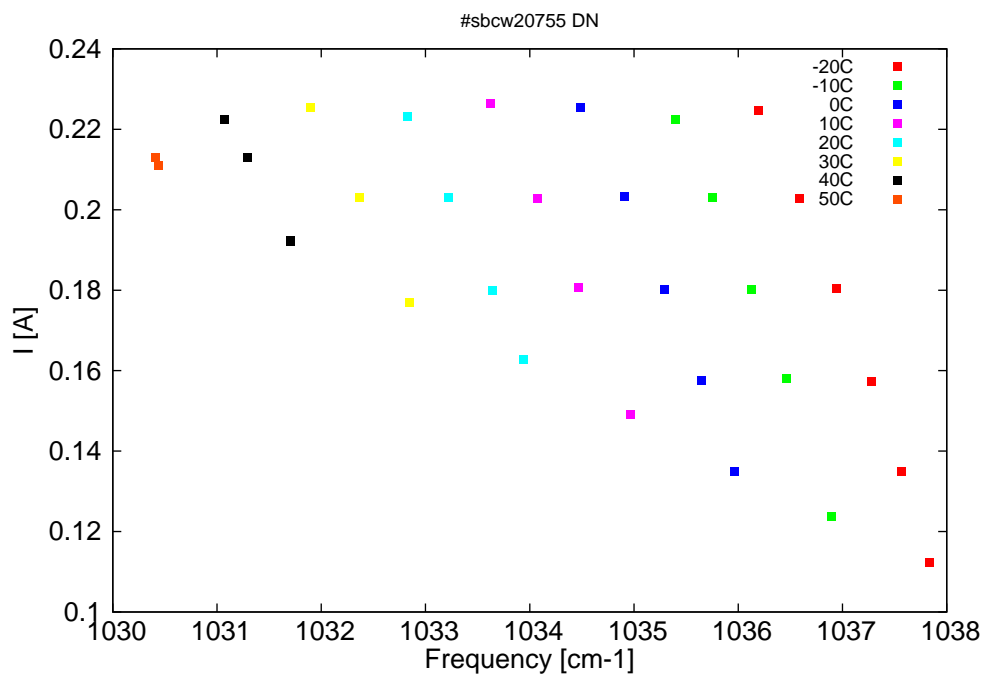


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9635.4	1037.8	0.6	-20	8.88	0.112
9637.9	1037.6	19.9	-20	9.24	0.135
9640.6	1037.3	38.5	-20	9.59	0.157
9643.7	1036.9	54.8	-20	9.96	0.18
9647	1036.6	68.4	-20	10.32	0.203
9650.7	1036.2	79.8	-20	10.7	0.225
9644.2	1036.9	0.7	-10	8.99	0.124
9648.2	1036.5	28.4	-10	9.51	0.158
9651.3	1036.1	44.5	-10	9.87	0.18
9654.8	1035.7	58.5	-10	10.24	0.203
9658.1	1035.4	67.4	-10	10.56	0.222
9652.8	1036	0.2	0	9.09	0.135
9655.8	1035.6	18.2	0	9.45	0.158
9659.1	1035.3	34.2	0	9.81	0.18
9662.6	1034.9	48.6	0	10.17	0.203
9666.7	1034.5	59.8	0	10.55	0.225
9662.1	1035	0.7	10	9.25	0.149
9666.8	1034.5	24	10	9.75	0.181
9670.5	1034.1	37.8	10	10.11	0.203
9674.7	1033.6	49.6	10	10.49	0.226
9671.8	1033.9	2	20	9.4	0.163
9674.5	1033.6	13.5	20	9.69	0.18
9678.5	1033.2	26.8	20	10.05	0.203
9682.1	1032.8	36.4	20	10.37	0.223
9682	1032.8	0.7	30	9.57	0.177
9686.5	1032.4	17.5	30	9.98	0.203
9690.9	1031.9	28.2	30	10.35	0.225
9692.7	1031.7	1.4	40	9.76	0.192
9692.7	1031.7	1.6	40	9.76	0.192
9696.5	1031.3	12.1	40	10.09	0.213
9698.6	1031.1	15.3	40	10.25	0.222
9704.6	1030.4	1.1	50	10.01	0.211
9704.9	1030.4	2	50	10.04	0.213

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

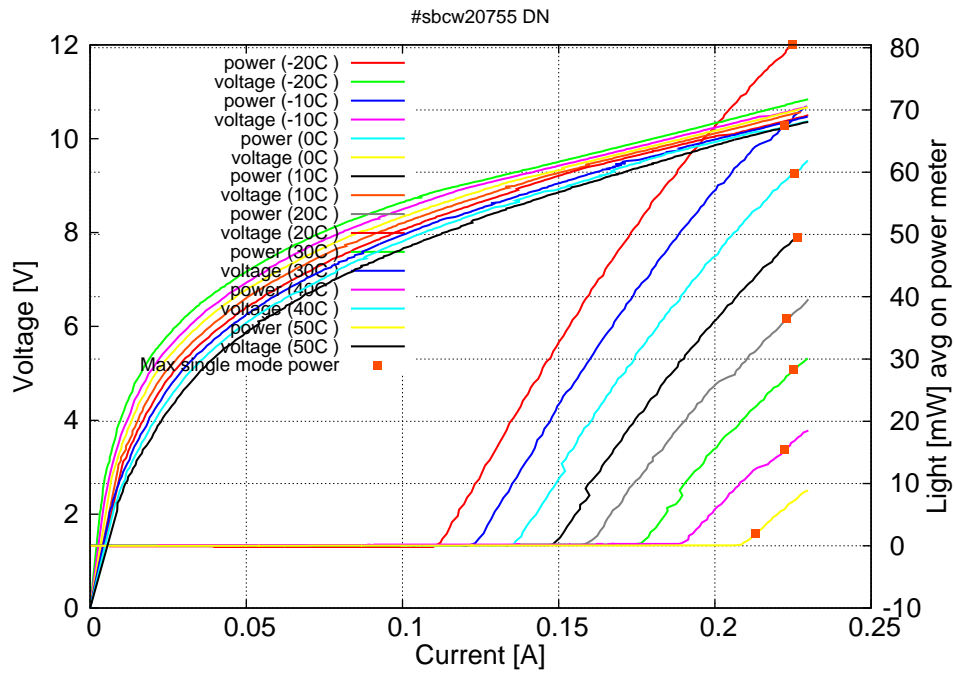


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=8.85V$  (2-wires measurements). Maximum operation current: 0.230A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

