

## Datasheet for #sbcw20459 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.

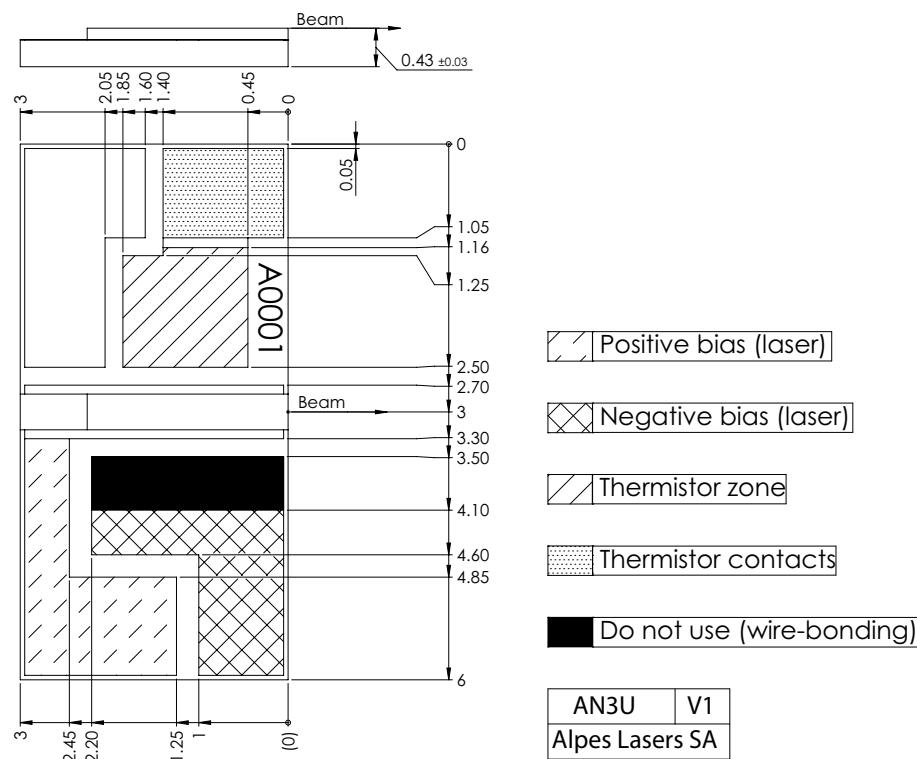


Figure 1: Mechanical and electrical interface for #sbcw20459 DN (please note that AlN submount numbering is A0RCX)

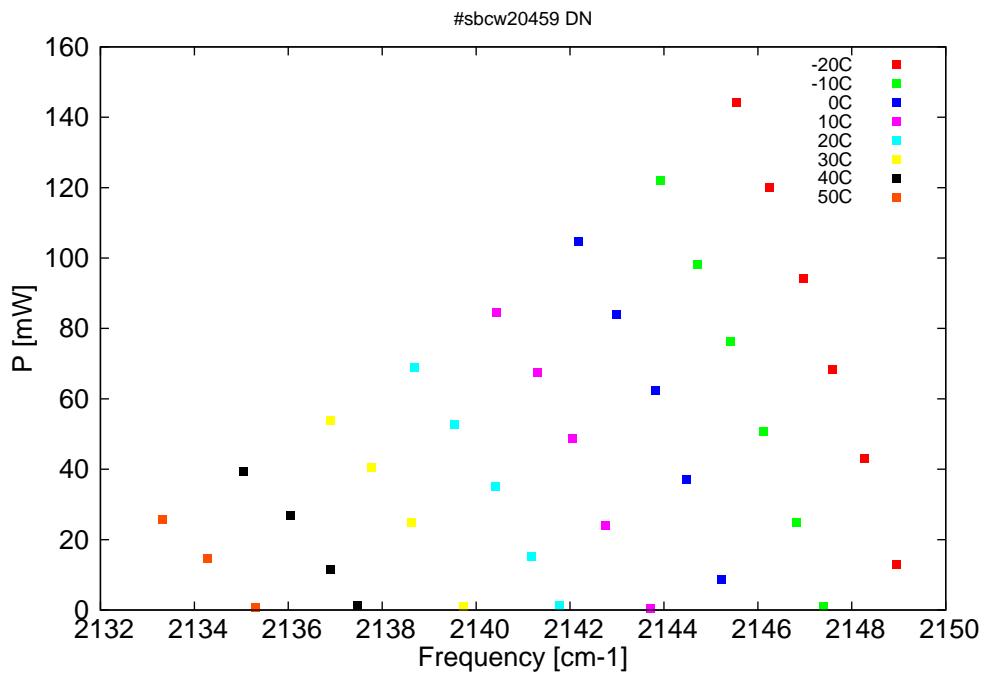


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

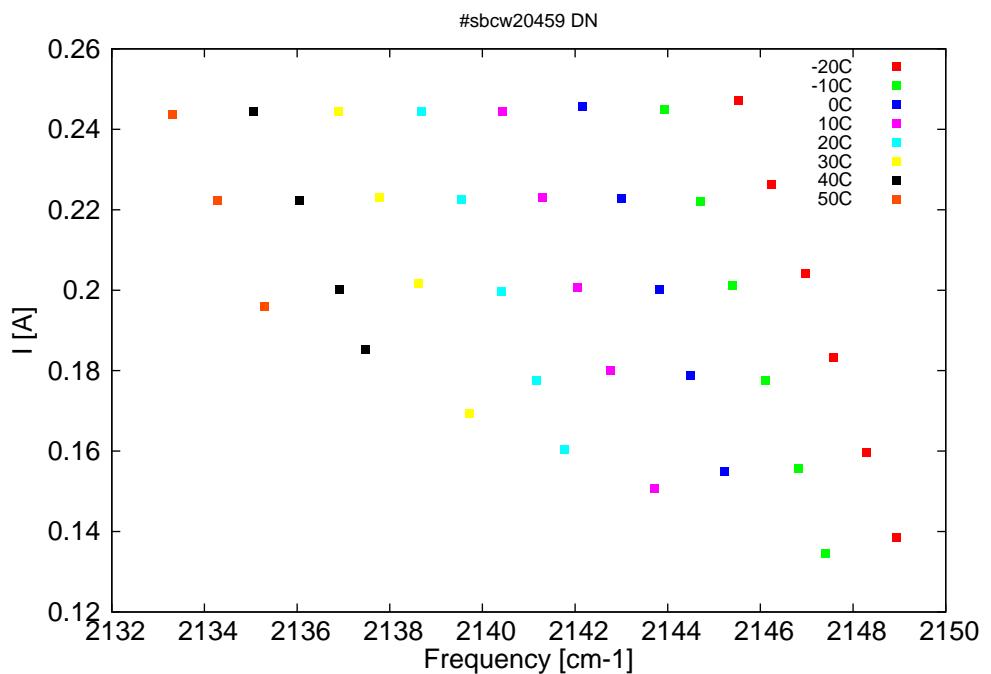


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm $^{-1}$ ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4653.5	2148.9	13	-20	11.31	0.139
4654.9	2148.3	43	-20	11.41	0.16
4656.4	2147.6	68.4	-20	11.54	0.183
4657.7	2147	94.2	-20	11.66	0.204
4659.3	2146.2	120	-20	11.82	0.226
4660.8	2145.5	144.2	-20	11.97	0.247
4656.8	2147.4	1.1	-10	11.24	0.135
4658	2146.8	24.9	-10	11.32	0.156
4659.6	2146.1	50.7	-10	11.44	0.178
4661.1	2145.4	76.3	-10	11.58	0.201
4662.6	2144.7	98.2	-10	11.72	0.222
4664.4	2143.9	122.1	-10	11.89	0.245
4661.5	2145.2	8.8	0	11.27	0.155
4663.1	2144.5	37.1	0	11.39	0.179
4664.6	2143.8	62.5	0	11.52	0.2
4666.4	2143	84	0	11.67	0.223
4668.2	2142.2	104.7	0	11.84	0.246
4664.8	2143.7	0.4	10	11.22	0.151
4666.9	2142.8	24	10	11.35	0.18
4668.4	2142.1	48.6	10	11.47	0.201
4670.1	2141.3	67.6	10	11.62	0.223
4671.9	2140.4	84.5	10	11.77	0.244
4669	2141.8	1.3	20	11.23	0.161
4670.3	2141.2	15.2	20	11.3	0.178
4672	2140.4	35.2	20	11.42	0.2
4673.9	2139.5	52.8	20	11.57	0.223
4675.8	2138.7	68.9	20	11.73	0.244
4673.5	2139.7	0.9	30	11.25	0.169
4675.9	2138.6	24.9	30	11.39	0.202
4677.7	2137.8	40.4	30	11.53	0.223
4679.7	2136.9	53.8	30	11.68	0.244
4678.4	2137.5	1.3	40	11.3	0.185
4679.7	2136.9	11.5	40	11.37	0.2
4681.5	2136	26.7	40	11.49	0.222
4683.7	2135.1	39.4	40	11.64	0.244
4683.2	2135.3	0.8	50	11.36	0.196
4685.4	2134.3	14.7	50	11.48	0.222
4687.5	2133.3	25.6	50	11.61	0.244

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

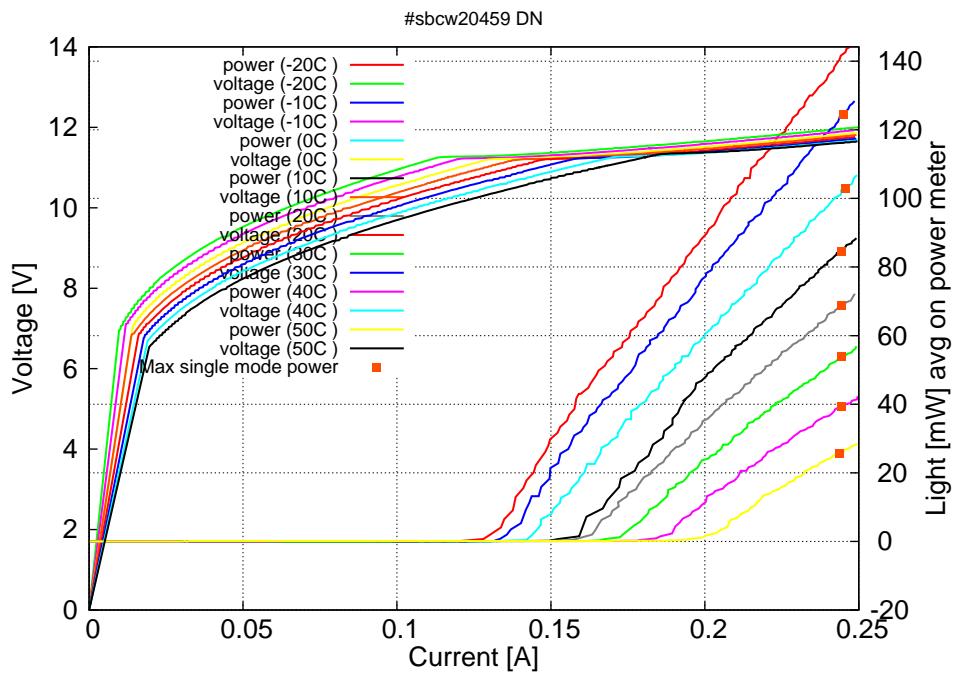


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.13A$  /  $V_{th}=11.3V$  (2-wires measurements). Maximum operation current: 0.25A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

