

Datasheet for #sbcw9186 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

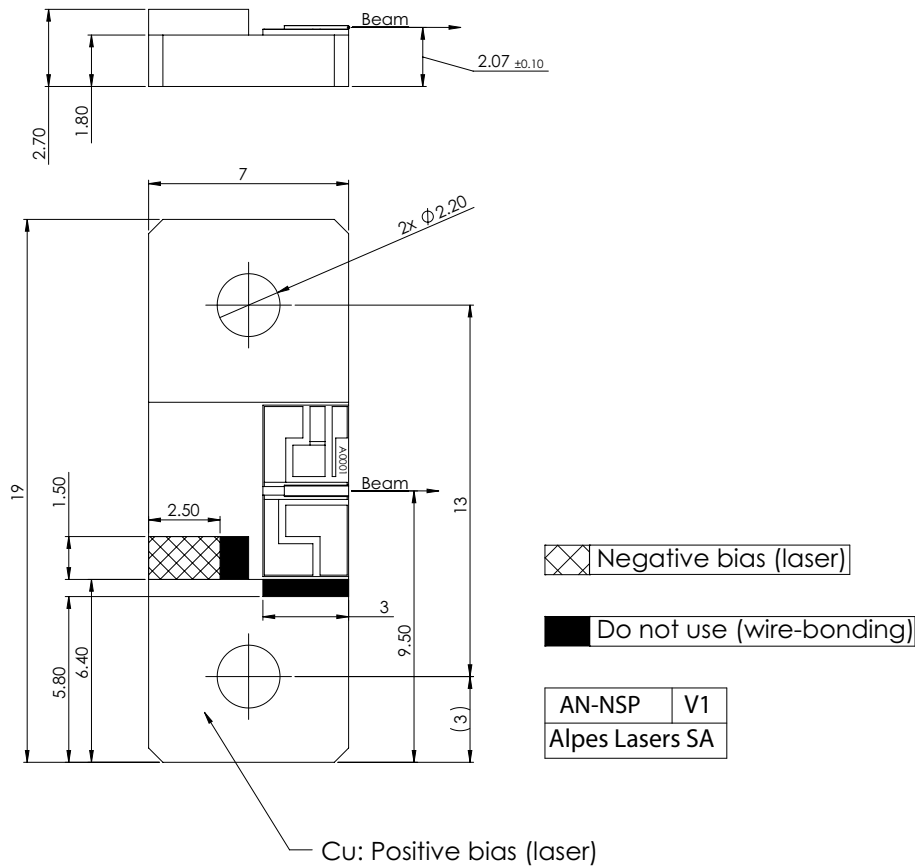


Figure 1: Mechanical and electrical interface for #sbcw9186 DN

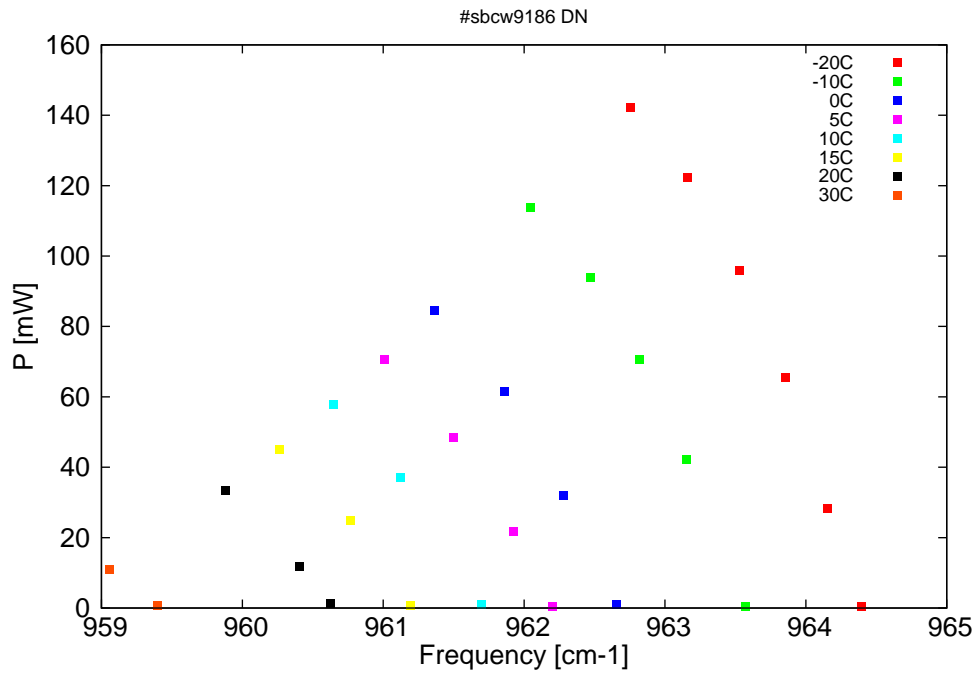


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

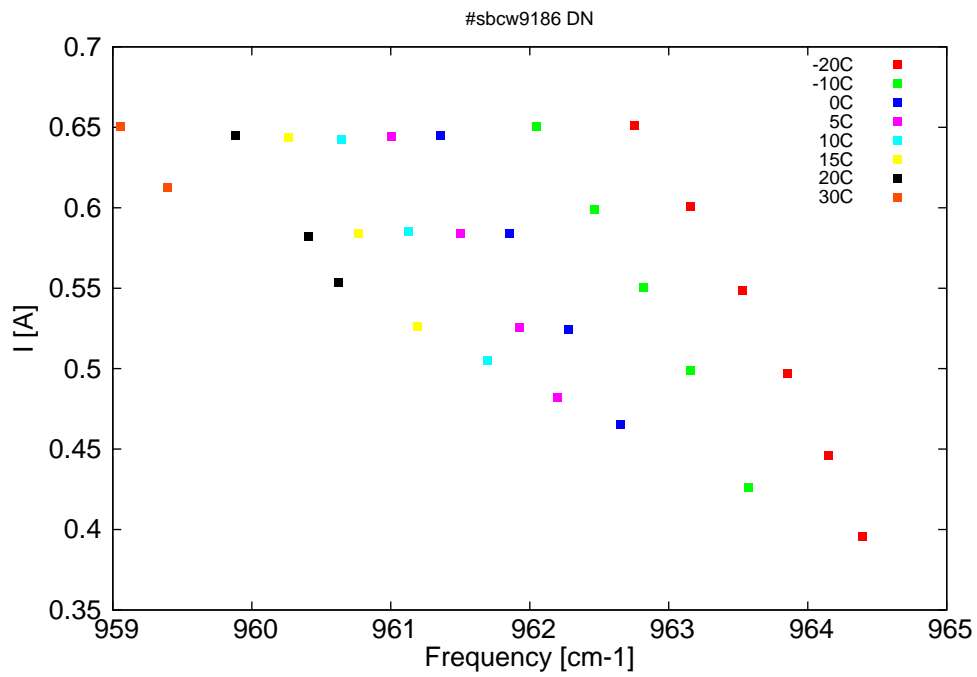


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10369.2	964.4	0.5	-20	8.25	0.396
10371.8	964.2	28.3	-20	8.5	0.446
10375	963.9	65.3	-20	8.77	0.497
10378.5	963.5	95.9	-20	9.06	0.549
10382.5	963.2	122.3	-20	9.38	0.601
10386.8	962.8	142.2	-20	9.71	0.651
10378.1	963.6	0.4	-10	8.37	0.426
10382.5	963.2	42.3	-10	8.76	0.499
10386.1	962.8	70.7	-10	9.05	0.55
10390	962.5	94	-10	9.35	0.599
10394.5	962	113.8	-10	9.69	0.651
10388	962.7	1.1	0	8.55	0.465
10392	962.3	32	0	8.89	0.525
10396.6	961.9	61.5	0	9.25	0.584
10401.9	961.4	84.6	0	9.65	0.645
10392.8	962.2	0.4	5	8.63	0.482
10395.8	961.9	21.6	5	8.88	0.525
10400.4	961.5	48.6	5	9.24	0.584
10405.8	961	70.5	5	9.63	0.644
10398.3	961.7	0.9	10	8.75	0.505
10404.5	961.1	37.2	10	9.23	0.585
10409.7	960.6	57.7	10	9.62	0.643
10403.7	961.2	0.8	15	8.86	0.526
10408.3	960.8	24.8	15	9.22	0.584
10413.8	960.3	44.9	15	9.62	0.643
10409.9	960.6	1.4	20	9.03	0.553
10412.3	960.4	11.7	20	9.21	0.582
10417.9	959.9	33.3	20	9.62	0.645
10423.2	959.4	0.8	30	9.38	0.613
10426.9	959.1	10.9	30	9.65	0.651

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

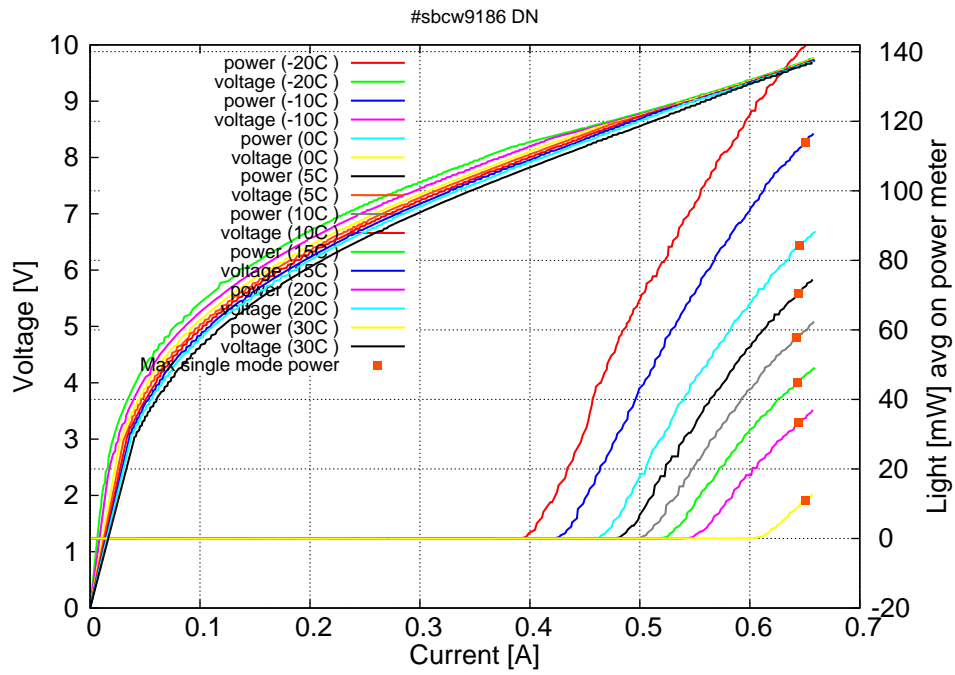


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.39A$ / $V_{th}=8.2V$ (2-wires measurements). Maximum operation current: 0.66A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

