

Datasheet for #sbcw19586 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 #sbcw19586 DN

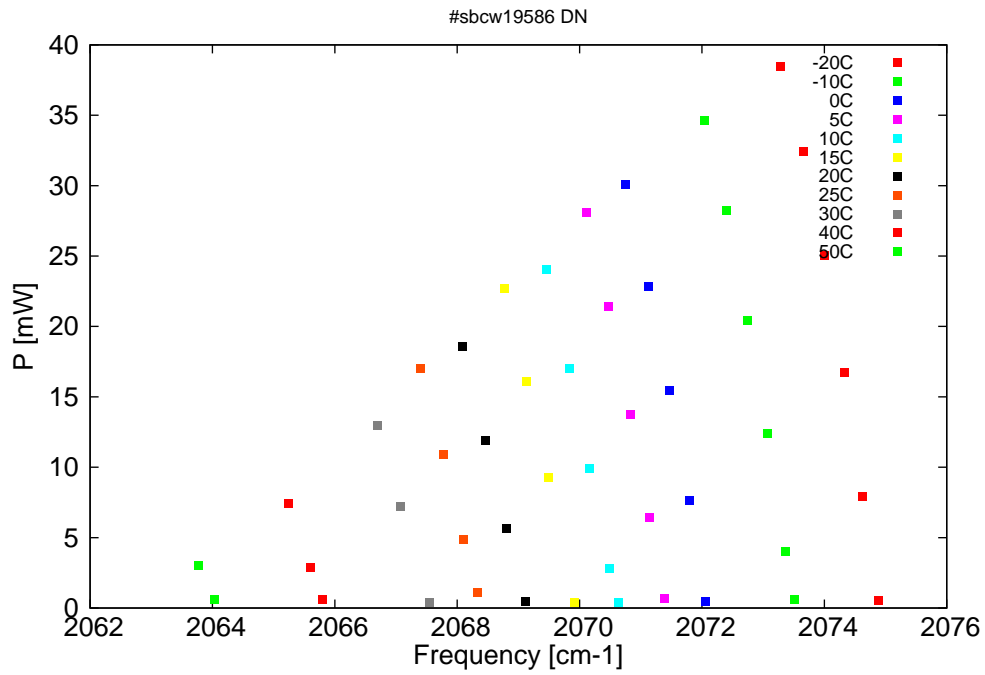


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

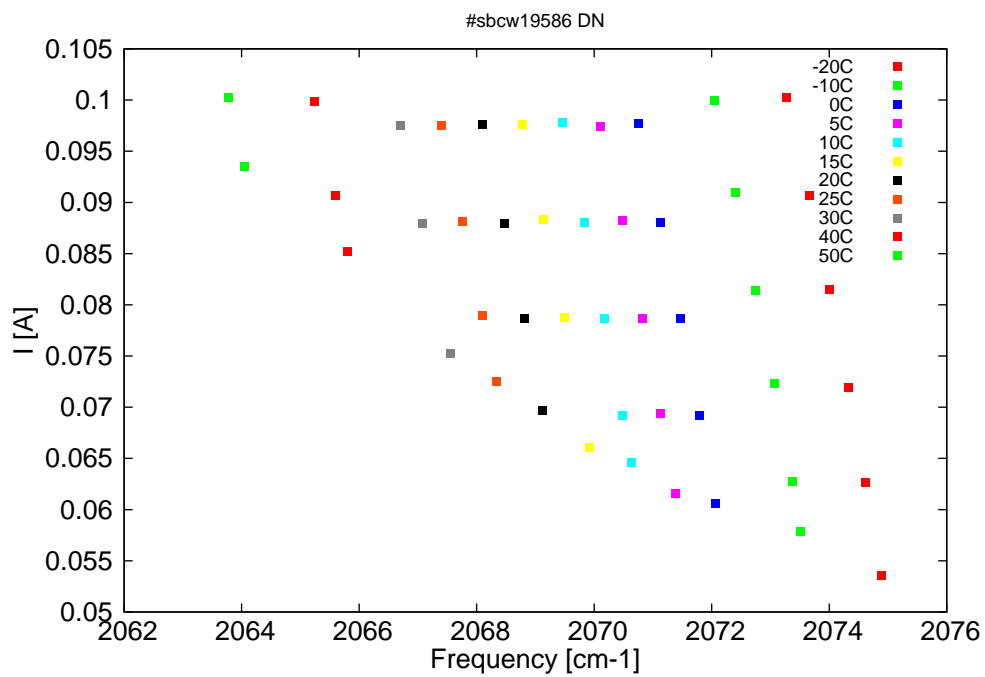


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4819.5	2074.9	0.5	-20	12.02	0.054
4820.2	2074.6	7.9	-20	12.36	0.063
4820.8	2074.3	16.7	-20	12.72	0.072
4821.6	2074	25.1	-20	13.09	0.081
4822.4	2073.7	32.4	-20	13.48	0.091
4823.3	2073.3	38.4	-20	13.91	0.1
4822.7	2073.5	0.6	-10	12.02	0.058
4823.1	2073.4	4	-10	12.19	0.063
4823.8	2073.1	12.4	-10	12.54	0.072
4824.5	2072.7	20.4	-10	12.88	0.081
4825.3	2072.4	28.2	-10	13.24	0.091
4826.2	2072	34.6	-10	13.62	0.1
4826.1	2072.1	0.5	0	12.01	0.061
4826.7	2071.8	7.7	0	12.3	0.069
4827.5	2071.5	15.4	0	12.64	0.079
4828.3	2071.1	22.8	0	12.98	0.088
4829.2	2070.8	30.1	0	13.35	0.098
4827.7	2071.4	0.7	5	11.99	0.062
4828.3	2071.1	6.4	5	12.25	0.069
4829	2070.8	13.8	5	12.56	0.079
4829.8	2070.5	21.4	5	12.9	0.088
4830.6	2070.1	28.1	5	13.24	0.097
4829.4	2070.6	0.4	10	12.03	0.065
4829.8	2070.5	2.8	10	12.18	0.069
4830.5	2070.2	9.9	10	12.49	0.079
4831.3	2069.8	17	10	12.81	0.088
4832.2	2069.5	24.1	10	13.15	0.098
4831.1	2069.9	0.4	15	12.02	0.066
4832.1	2069.5	9.3	15	12.41	0.079
4832.9	2069.1	16.1	15	12.73	0.088
4833.8	2068.8	22.7	15	13.06	0.098
4833	2069.1	0.4	20	12.07	0.07
4833.7	2068.8	5.6	20	12.34	0.079
4834.5	2068.5	11.9	20	12.65	0.088
4835.4	2068.1	18.6	20	12.98	0.098
4834.8	2068.3	1.1	25	12.11	0.072
4835.3	2068.1	4.9	25	12.3	0.079
4836.1	2067.8	10.9	25	12.59	0.088
4837	2067.4	17	25	12.9	0.098
4836.7	2067.5	0.4	30	12.15	0.075
4837.7	2067.1	7.2	30	12.52	0.088
4838.6	2066.7	13	30	12.83	0.098
4840.8	2065.8	0.6	40	12.29	0.085
4841.2	2065.6	2.8	40	12.43	0.091
4842.1	2065.2	7.4	40	12.7	0.1
4844.9	2064	0.6	50	12.44	0.094
4845.5	2063.8	3	50	12.61	0.1

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$\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{LASER}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

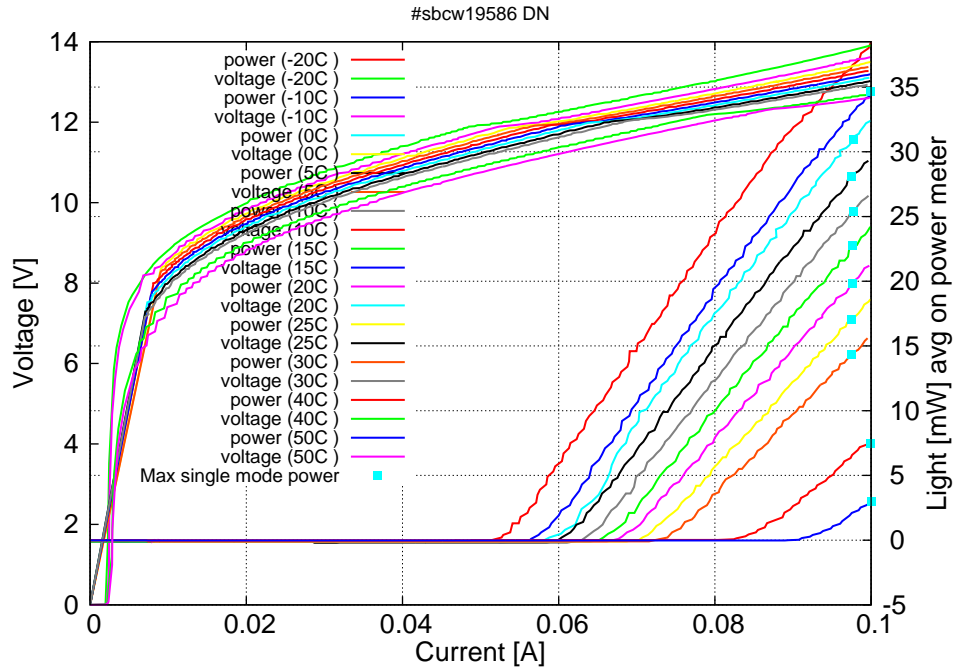


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05\text{A}$ / $V_{th}=12.0\text{V}$ (2-wires measurements). Maximum operation current: 0.10A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

