

Datasheet for #sbcw26139 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.

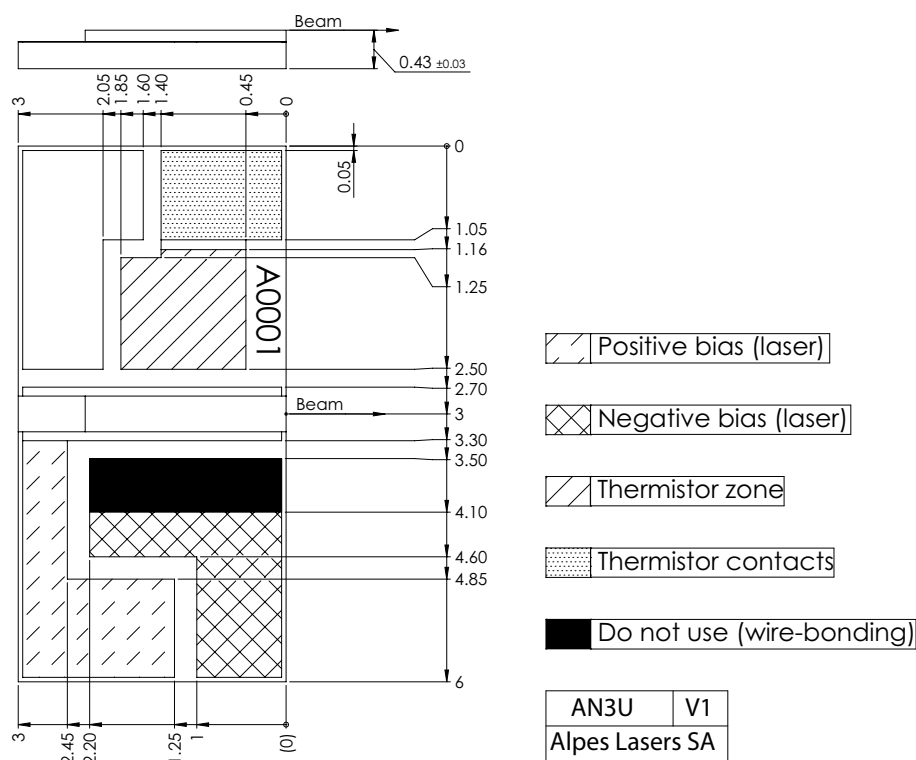


Figure 1: Mechanical and electrical interface for #sbcw26139 DN (please note that AlN submount numbering is A0V94)

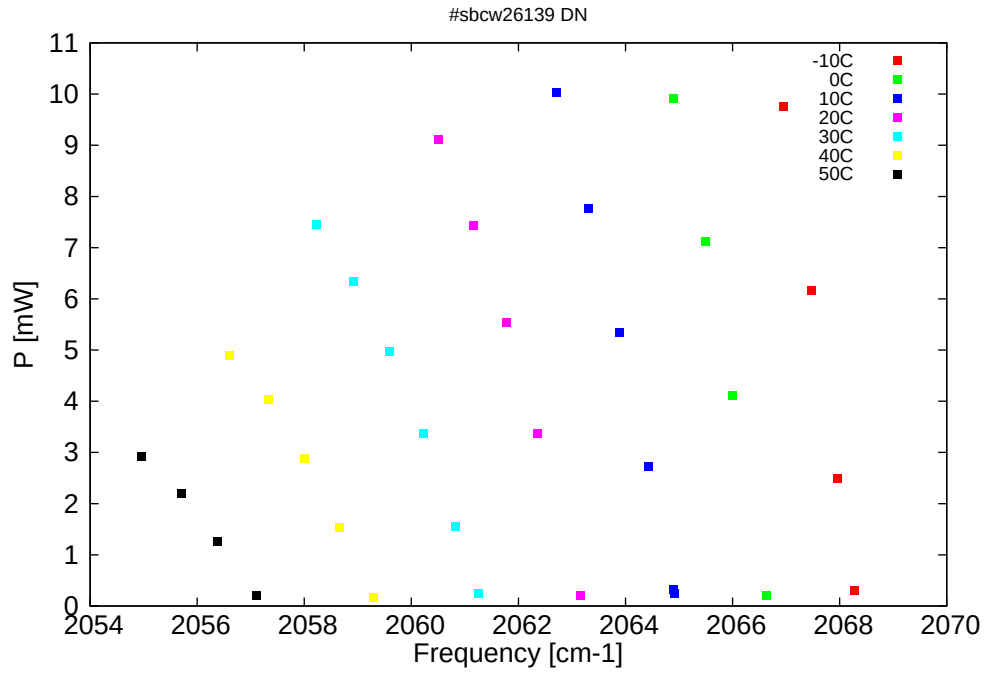


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

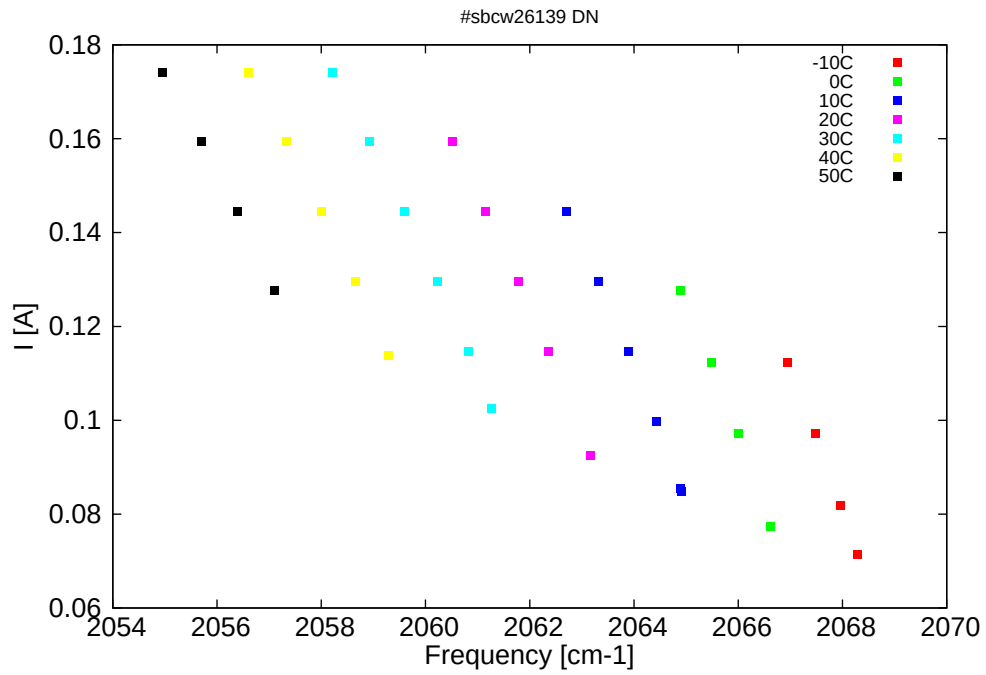


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4834.9	2068.3	0.3	-10	11.76	0.071
4835.7	2068	2.5	-10	12.03	0.082
4836.8	2067.5	6.2	-10	12.41	0.097
4838	2067	9.8	-10	12.78	0.112
4838.8	2066.6	0.2	0	11.78	0.077
4840.3	2066	4.1	0	12.26	0.097
4841.5	2065.5	7.1	0	12.62	0.112
4842.9	2064.9	9.9	0	12.99	0.128
4842.8	2064.9	0.2	10	11.85	0.085
4842.9	2064.9	0.3	10	11.86	0.085
4844	2064.4	2.7	10	12.19	0.1
4845.2	2063.9	5.3	10	12.54	0.115
4846.6	2063.3	7.8	10	12.88	0.13
4848	2062.7	10	10	13.23	0.144
4846.9	2063.2	0.2	20	11.92	0.093
4848.8	2062.4	3.4	20	12.41	0.115
4850.2	2061.8	5.5	20	12.75	0.13
4851.6	2061.2	7.4	20	13.09	0.144
4853.2	2060.5	9.1	20	13.43	0.159
4851.4	2061.3	0.2	30	12.05	0.103
4852.4	2060.8	1.6	30	12.31	0.115
4853.8	2060.2	3.4	30	12.63	0.13
4855.3	2059.6	5	30	12.97	0.144
4856.9	2058.9	6.3	30	13.3	0.159
4858.6	2058.2	7.5	30	13.65	0.174
4856.1	2059.3	0.2	40	12.21	0.114
4857.5	2058.7	1.5	40	12.53	0.13
4859.1	2058	2.9	40	12.85	0.144
4860.7	2057.3	4	40	13.18	0.159
4862.4	2056.6	4.9	40	13.52	0.174
4861.2	2057.1	0.2	50	12.43	0.128
4862.9	2056.4	1.3	50	12.76	0.144
4864.5	2055.7	2.2	50	13.09	0.159
4866.3	2055	2.9	50	13.42	0.174

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

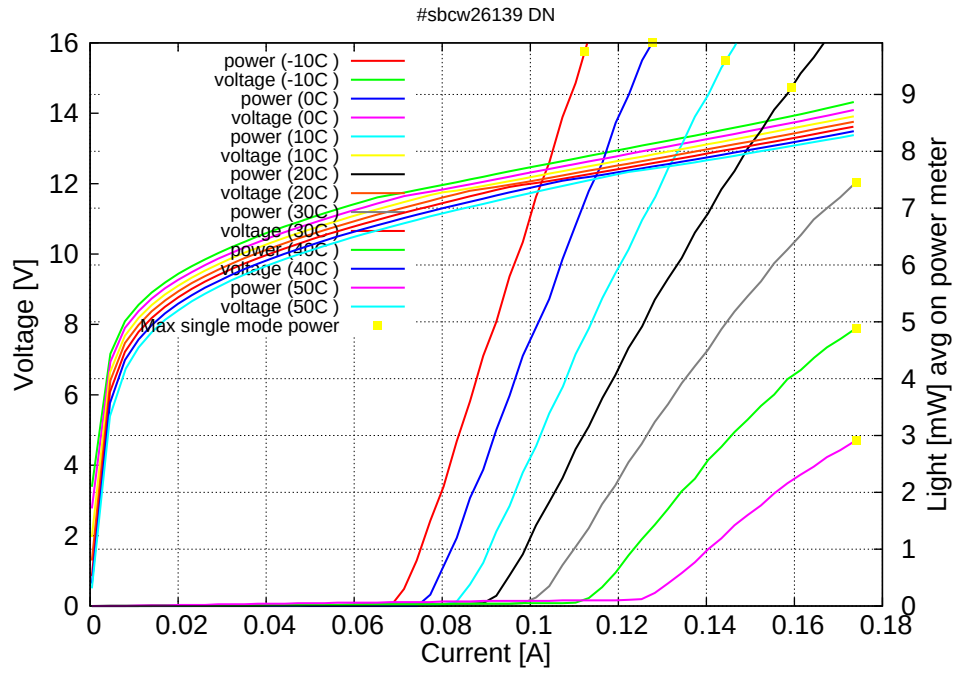


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.07A$ / $V_{th}=11.7V$ (2-wires measurements). Maximum operation current: 0.115A at -10C, 0.13A at 0C, 0.145A at 10C, 0.16A at 20C, 0.175A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

