

Datasheet for #sbcw27023 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.

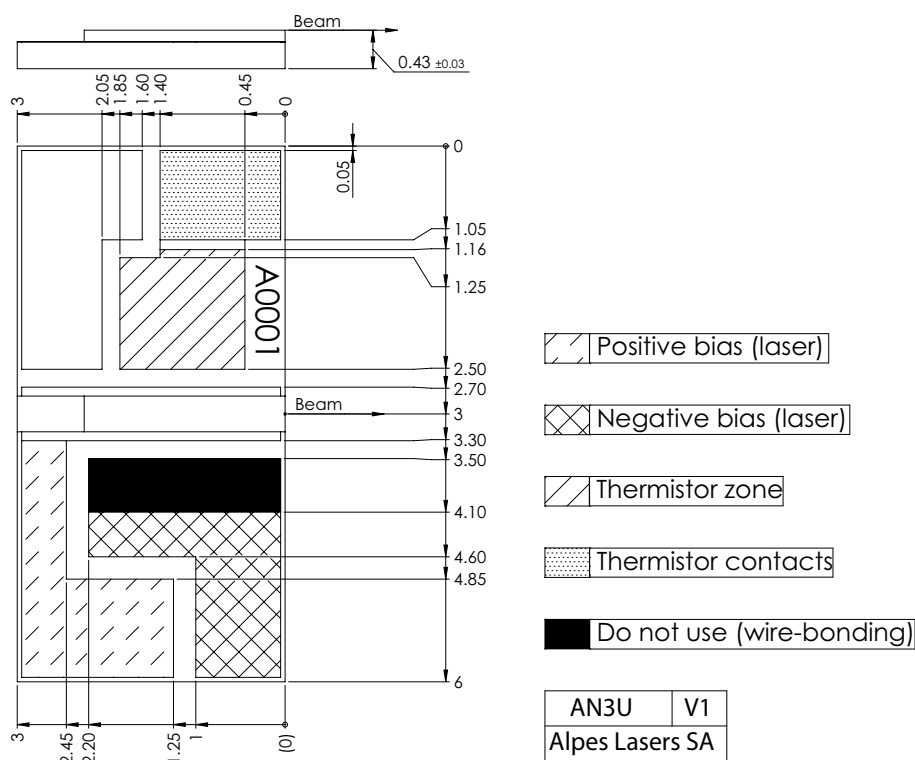


Figure 1: Mechanical and electrical interface for #sbcw27023 DN (please note that AlN submount numbering is A0XLJ)

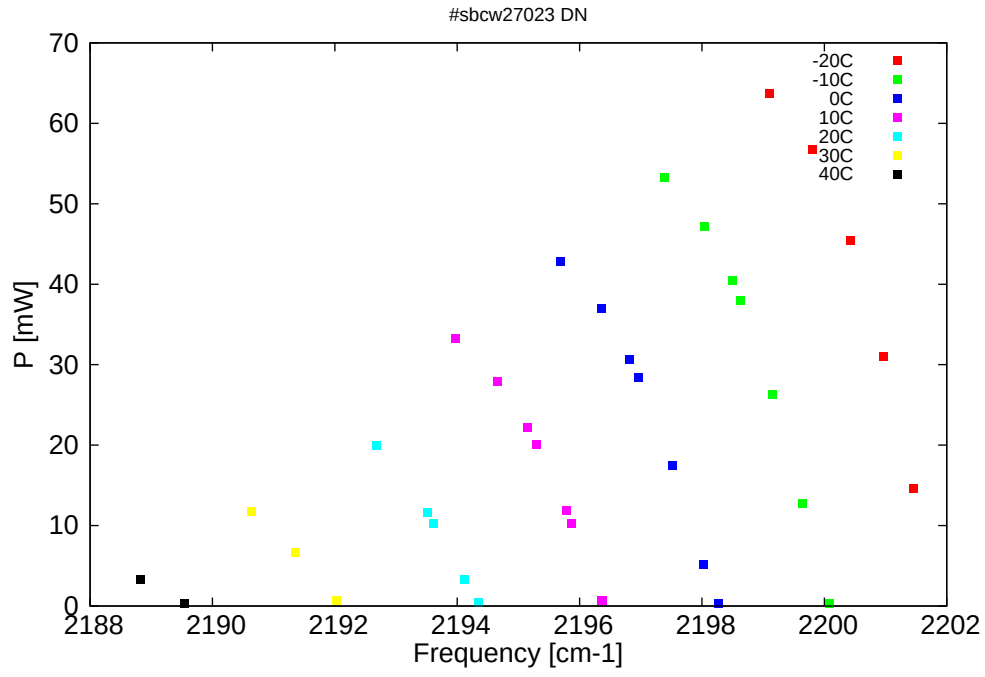


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

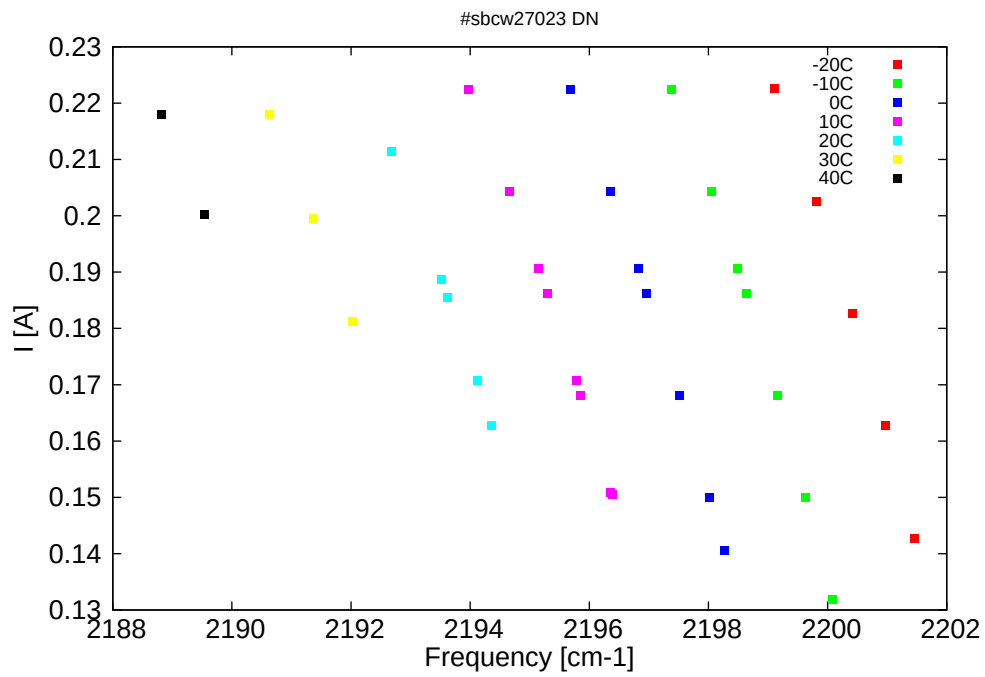


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4542.5	2201.5	14.6	-20	9.32	0.143
4543.5	2201	31	-20	9.55	0.163
4544.6	2200.4	45.4	-20	9.8	0.183
4545.9	2199.8	56.7	-20	10.06	0.203
4547.3	2199.1	63.7	-20	10.33	0.223
4545.3	2200.1	0.4	-10	9.16	0.132
4546.2	2199.6	12.7	-10	9.37	0.15
4547.2	2199.2	26.3	-10	9.59	0.168
4548.3	2198.6	37.9	-10	9.81	0.186
4548.6	2198.5	40.5	-10	9.87	0.191
4549.5	2198	47.2	-10	10.05	0.204
4550.9	2197.4	53.3	-10	10.29	0.223
4549	2198.3	0.4	0	9.24	0.141
4549.6	2198	5.1	0	9.34	0.15
4550.6	2197.5	17.5	0	9.56	0.168
4551.7	2197	28.4	0	9.78	0.186
4552	2196.8	30.7	0	9.84	0.191
4553	2196.4	37	0	10.02	0.204
4554.4	2195.7	42.8	0	10.26	0.223
4552.9	2196.4	0.6	10	9.34	0.151
4553	2196.4	0.7	10	9.34	0.151
4554	2195.9	10.3	10	9.53	0.168
4554.2	2195.8	11.8	10	9.56	0.171
4555.2	2195.3	20.1	10	9.75	0.186
4555.5	2195.1	22.2	10	9.81	0.191
4556.5	2194.7	27.9	10	9.99	0.204
4558	2194	33.3	10	10.24	0.223
4557.2	2194.4	0.4	20	9.46	0.163
4557.6	2194.1	3.3	20	9.55	0.171
4558.7	2193.6	10.3	20	9.73	0.185
4558.9	2193.5	11.7	20	9.76	0.189
4560.6	2192.7	20	20	10.06	0.211
4562	2192	0.6	30	9.67	0.181
4563.4	2191.4	6.6	30	9.89	0.2
4564.9	2190.6	11.7	30	10.14	0.218
4567.2	2189.5	0.3	40	9.91	0.2
4568.7	2188.8	3.3	40	10.13	0.218

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

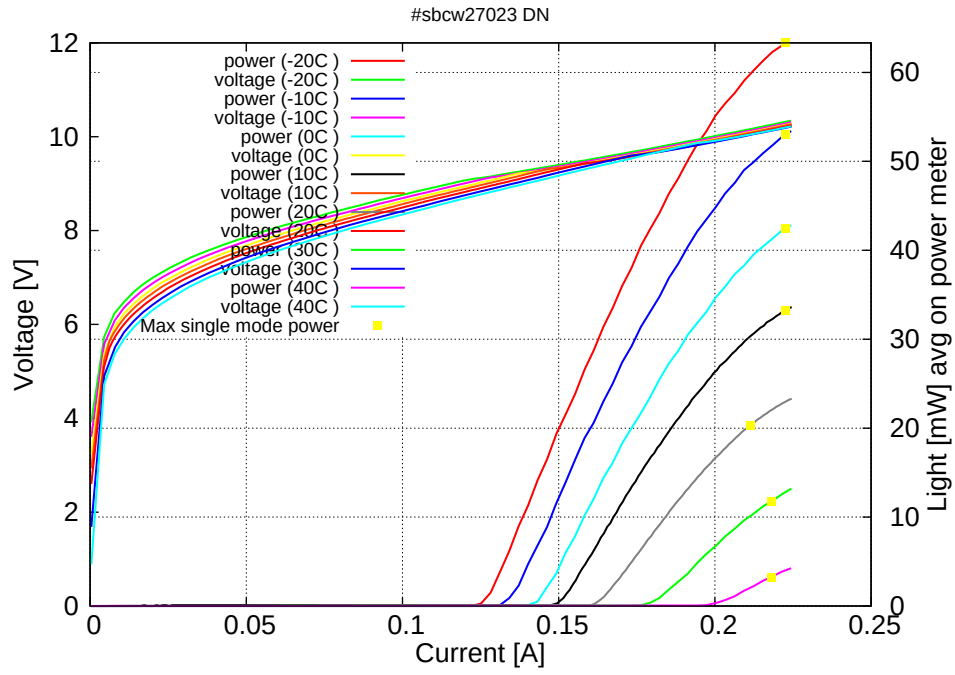


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.225A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

