

Datasheet for #sbcw21593 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.

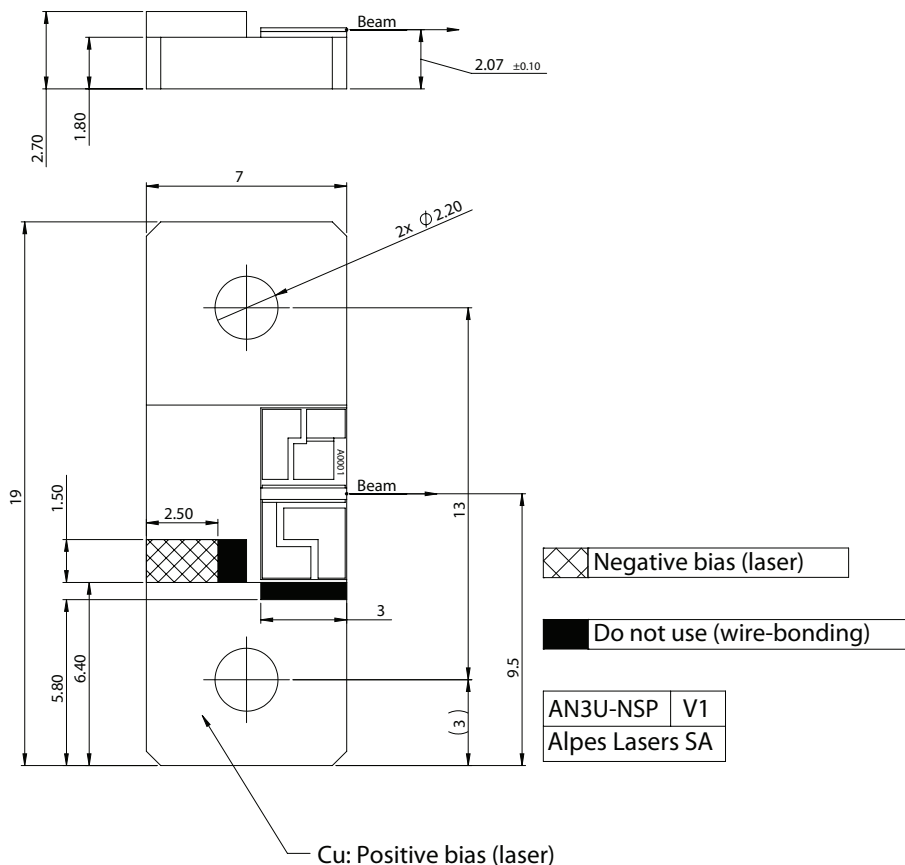


Figure 1: Mechanical and electrical interface for #sbcw21593 DN

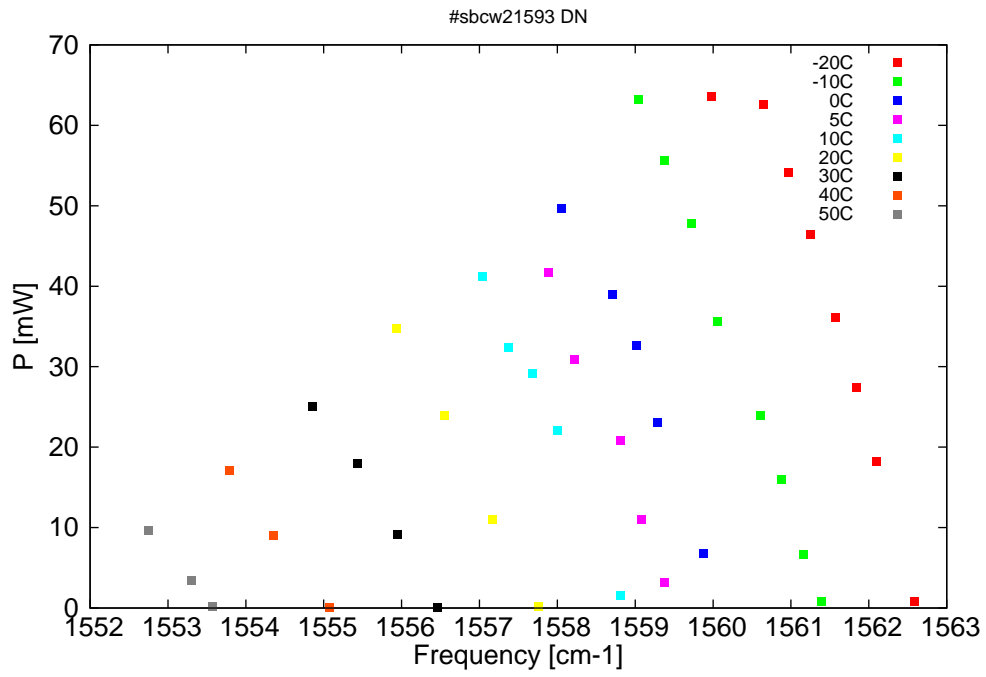


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

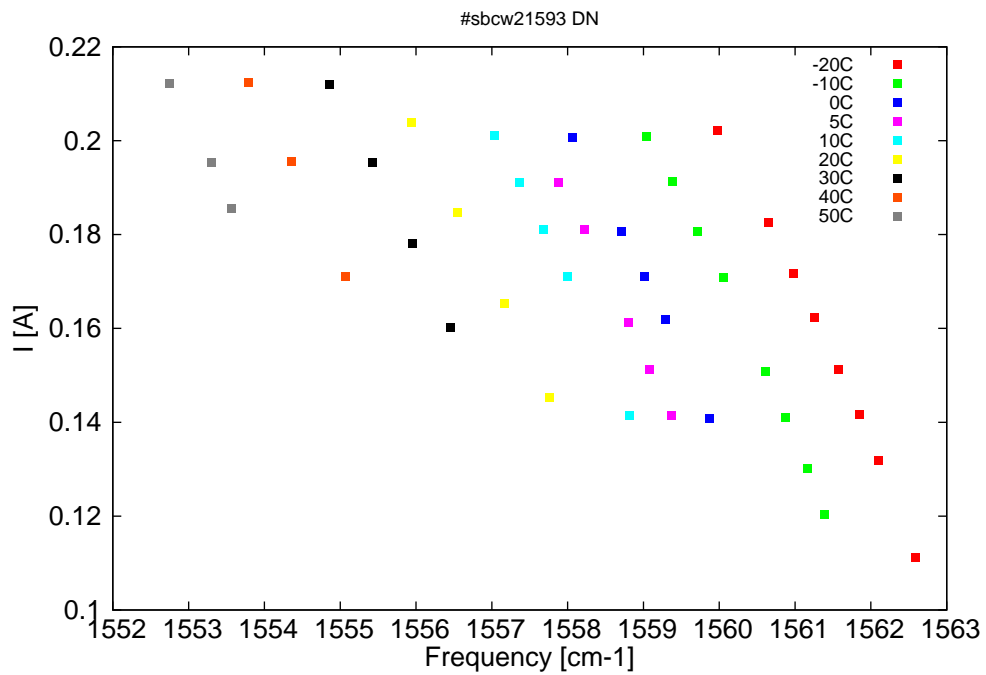


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6399.6	1562.6	0.9	-20	14.37	0.111
6401.6	1562.1	18.2	-20	14.79	0.132
6402.7	1561.8	27.4	-20	14.99	0.142
6403.8	1561.6	36.1	-20	15.17	0.151
6405.1	1561.3	46.4	-20	15.38	0.162
6406.3	1561	54.2	-20	15.54	0.172
6407.6	1560.6	62.5	-20	15.72	0.182
6410.4	1560	63.6	-20	16.05	0.202
6404.6	1561.4	0.7	-10	14.1	0.12
6405.5	1561.2	6.7	-10	14.29	0.13
6406.7	1560.9	16	-10	14.51	0.141
6407.8	1560.6	23.9	-10	14.69	0.151
6410	1560.1	35.6	-10	15.05	0.171
6411.4	1559.7	47.8	-10	15.21	0.181
6412.8	1559.4	55.6	-10	15.39	0.191
6414.2	1559	63.2	-10	15.54	0.201
6410.8	1559.9	6.7	0	14.03	0.141
6413.2	1559.3	23.1	0	14.42	0.162
6414.3	1559	32.6	0	14.57	0.171
6415.6	1558.7	39	0	14.73	0.181
6418.2	1558.1	49.7	0	15.05	0.201
6412.8	1559.4	3.1	5	13.8	0.142
6414	1559.1	11	5	13.99	0.151
6415.2	1558.8	20.8	5	14.16	0.161
6417.6	1558.2	30.9	5	14.49	0.181
6419	1557.9	41.7	5	14.66	0.191
6415.1	1558.8	1.5	10	13.58	0.141
6418.5	1558	22.1	10	14.09	0.171
6419.8	1557.7	29.2	10	14.26	0.181
6421.1	1557.4	32.4	10	14.41	0.191
6422.4	1557	41.3	10	14.56	0.201
6419.5	1557.8	0.2	20	13.21	0.145
6421.9	1557.2	11	20	13.54	0.165
6424.5	1556.5	23.9	20	13.86	0.185
6427	1555.9	34.8	20	14.15	0.204
6424.9	1556.5	0	30	12.84	0.16
6426.9	1556	9.1	30	13.13	0.178
6429.1	1555.4	17.9	30	13.39	0.195
6431.4	1554.9	25	30	13.64	0.212
6430.6	1555.1	0.1	40	12.57	0.171
6433.5	1554.4	9	40	12.94	0.196
6435.9	1553.8	17.1	40	13.19	0.213
6436.8	1553.6	0.2	50	12.36	0.186
6437.9	1553.3	3.5	50	12.49	0.195
6440.2	1552.7	9.6	50	12.75	0.212

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

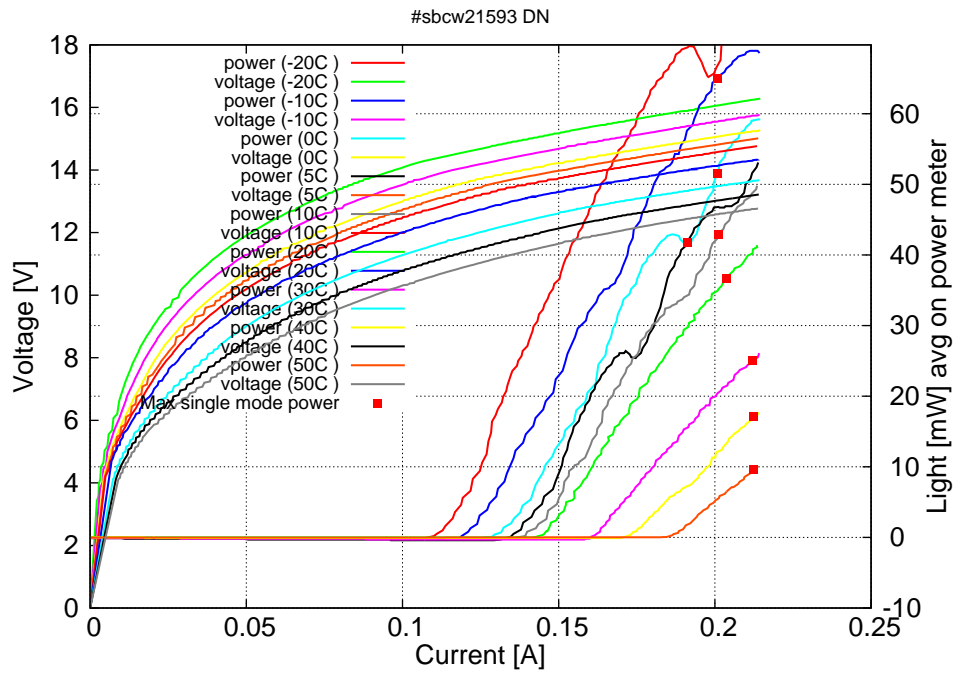


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=14.4V$ (2-wires measurements). Maximum operation current: 0.205A between -20C and 20C, 0.215A between 30C and 50C.

