3278 A02 / 3279 2C keyboard top panel led behavour measured.

The original keyboard powered the led board at 24V.

The purpose of this table is to calculate the best replacement resistors to use at 5V, in order to closest approximate the original brightness of the leds.

Each led was powered, through its original current limiting resistor, at 23.9V with a lab power supply, and voltage drop and current were measured.

Right to Left: Test voltage: 23.9 V

	Index on PCB	Current at 24V with original resistor		Original Resistance Measured		Resistance Color Code	Voltage on LED	Atmega VOL at measured current (V)			Total voltage available at 25degC	Voltage dropped by new resistor	New Resistor (ohms)	New resistor std value (ohms)
								-40degC	25degC	85degC				
Green	1	19.12	mA	1.122	kohm	1.1k	2.19	0.55	0.68	0.9	4.32	2.13	111.4016736	120
Yellow	2	9.4	mA	2.33	kohm	2.2k	2.07	0.25	0.3	0.5	4.7	2.63	279.787234	270
Yellow	3	9.17	mA	2.47	kohm	2.2k	2.2	0.25	0.3	0.5	4.7	2.5	272.6281352	270
Green	4	19.38	mA	1.116	kohm	1.1k	2.07	0.55	0.68	0.9	4.32	2.25	116.0990712	120
Red	5	9.48	mA	2.31	kohm	2.2k	2.06	0.25	0.3	0.5	4.7	2.64	278.4810127	270