



Color Orb Prototype

Bill-of-Materials

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Notes:

1) Unused designators: C5, C6, C15

Item	Quantity	Reference	Manufacturer	Manuf. Part #	Distributor	Distrib. Part #	Description
1	4	C1,C2,C9,C14	Kemet	C0603C104K4RACTU	Digi-Key	399-1096-1-ND	0.1uF bypass capacitor, 16V, X7R, 0603
2	1	C3	Kemet	C0603C224Z3VACTU	Digi-Key	399-1103-1-ND	0.22uF ceramic capacitor, 25V, Y5V, 0603
3	1	C4	Kemet	T491A105K016AT	Digi-Key	399-3678-1-ND	1uF, 16V tantalum capacitor, size A
4	2	C7,C8	Kemet	T491A106K010AT	Digi-Key	399-3684-1-ND	10uF, 10V tantalum capacitor, size A
5	1	C10	Murata	GRM188R71H103KA01D	Digi-Key	490-1512-1-ND	0.01uF ceramic capacitor, 50V, X7R, 0603
6	1	C11	Murata	GRM188R71H333KA61D	Digi-Key	490-3286-1-ND	0.033uF ceramic capacitor, 50V, X7R, 0603
7	1	C12	Kemet	T491X227K010AT	Digi-Key	399-3818-1-ND	220uF, 10V tantalum capacitor, size D
8	1	C13	Murata	GRM188R71H473KA61D	Digi-Key	490-3287-1-ND	0.047uF ceramic capacitor, 50V, X7R, 0603
9	2	C16,C19	Samsung	CL21B334KBFNNE	Digi-Key	1276-1123-1-ND	0.33uF ceramic capacitor, 16V, X7R, 0805
10	2	C17,C18	Taiyo Yuden	TMK107F474ZA-T	Digi-Key	587-1259-1-ND	0.47uF ceramic capacitor, 25V, Y5V, 0603
11	1	D1	Lite-On	LTL2H3SEK	Digi-Key	160-1698-ND	5mm LED, Red water-clear, 639nm, 4200mcd @ 20mA, 1.9V
12	1	D2	Lite-On	LTL2T3TGK6	Digi-Key	160-1615-ND	5mm LED, Green water-clear, 525nm, 1900mcd @ 20mA, 3.5V
13	1	D3	Lite-On	LTL353QRKNN	Digi-Key	160-1611-ND	5mm LED, Blue water-clear, 468nm, 3.5V, 1900mcd @ 20mA
14	1	J1	CUI, Inc.	SJ1-3514-SMT	Digi-Key	CP1-3514SJCT-ND	Connector, Stereo Jack, 3.5mm, 4 position, SMD
15	1	J2	CUI, Inc.	PJ-202A	Digi-Key	CP-202A-ND	Connector, Power Jack, 2.1mm, PCB mount
16	1	MK1	N/A	ECM-60PC-R	Jameco	136574	Electret Condenser Microphone, 20Hz-12kHz, -54dB, 5V, PCB mount
17	3	Q1,Q2,Q3	ON Semiconductor	BC807-25LT1G	Digi-Key	BC807-25LT1GOSCT-ND	Transistor, PNP, -500mA @ -45V, SOT23-3
18	10	R1,R2,R3,R4,R5,R6,R10,R11,R13,R14	Panasonic	ERJ-3GEYJ102V	Digi-Key	P1.0KGCT-ND	1.0k, 5%, 1/10W, 0603
19	1	R7	Panasonic	ERJ-3GEYJ750V	Digi-Key	P75GCT-ND	75 ohm, 5%, 1/10W, 0603
20	1	R8	Panasonic	ERJ-3GEYJ330V	Digi-Key	P33GCT-ND	33 ohm, 5%, 1/10W, 0603
21	1	R9	Panasonic	ERJ-3GEYJ180V	Digi-Key	P18GCT-ND	18 ohm, 5%, 1/10W, 0603
22	2	R12,R19	Panasonic	ERJ-3GEYJ103V	Digi-Key	P10KGCT-ND	10k, 5%, 1/10W, 0603
23	1	R15	Copal Electronics	CT6EP103	Digi-Key	CT6EP103-ND	Potentiometer, 10k ohm, 1/2W, top adjustment
24	1	R16	Panasonic	ERJ-3GEYJ472V	Digi-Key	P4.7KGCT-ND	4.7k, 5%, 1/10W, 0603
25	2	R17,R18	Panasonic	ERJ-3GEYJ104V	Digi-Key	P100KGCT-ND	100k, 5%, 1/10W, 0603
26	1	R20	Panasonic	ERJ-3GEYJ100V	Digi-Key	P10GCT-ND	10 ohm, 5%, 1/10W, 0603
27	1	R21	Panasonic	ERJ-3GEYJ474V	Digi-Key	P470KGCT-ND	470k, 5%, 1/10W, 0603
28	1	SW1	E-Switch	EG1271	Digi-Key	EG1918-ND	SPDT slide switch, 300mA, PCB mount, L = 2mm
29	1	U1	National Semiconductor	LM4970SD	Digi-Key	LM4970SDCT-ND	Audio-Synchronized Color LED Driver
30	1	U2	Microchip	PIC10F200T-I/OT	Digi-Key	PIC10F200T-I/OTCT-ND	PIC Microcontroller, SOT23-6
31	1	U3	National Semiconductor	LM386M-1	Digi-Key	LM386M-1-ND	Audio Amplifier, SOIC8
32	1	U4	Texas Instruments	UA741CD	Digi-Key	296-11106-5-ND	Op Amp, General Purpose, SOIC8
33	1	U5	Texas Instruments	UA78L05CPK	Digi-Key	296-13531-1-ND	Voltage Regulator, Linear, Positive 5V, SOT89-3