


Bill of Materials Bluetooth White-Color-mix LED Driver						
Document Number:	02-10817	<div></div>				
Board Number:	04-10817					
Part Number:	ARD00922					
Revision:	2.1					
Engineer:	Adrian Stanciu					
Drawn By:	Adrian Stanciu					
Creation Date:	11/4/2019					
Creation Time:	10:00 AM					
Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
1	C1	CAP CER 1uF 10V 10% X7R SMD 0603	Taiyo Yuden	CELMK107B7105KA-T	Digi-Key	587-1242-1-ND
2	C2, C5	CAP ALU 100uF 200V 20% RAD P7.5D16H20	United Chemi-Con	EKXG201ELL101ML20S	Digi-Key	565-1437-ND
2	C3, C8	CAP FILM 0.1uF 400V 10% RAD P10L11.5W4H6.9	EPCOS (TDK)	B32561J6104K	Digi-Key	B32561J6104K-ND
1	C4	CAP CER 100pF 50V 5% C0G SMD 0805	Würth Electronics	885012007057	Digi-Key	732-7852-1-ND
1	C6	CAP CER 4.7uF 10V 20% X7R SMD 0805	TDK	C2012X7R1A475M125AC	Digi-Key	445-1605-1-ND
4	C7, C12, C15, C20	CAP CER 0.1uF 16V 10% X7R SMD 0603	Samsung	CL10B104KO8NNNC	Digi-Key	1276-1005-1-ND
2	C9, C10	CAP CER 18pF 50V 5% NP0 SMD 0805	Yageo	CC0805JRNPO9BN180	Digi-Key	311-1102-6-ND
1	C11	CAP CER 10uF 10V 10% X5R SMD 0805	Taiyo Yuden	LMK212BJ106KG-T	Digi-Key	587-1300-6-ND
3	C13, C14, C16	CAP CER 1uF 16V 20% Y5V SMD 0603	Yageo	CC0603ZRY5V7BB105	Digi-Key	311-1372-1-ND
1	C17	CAP CER 0.47uF 10V 10% X5R SMD 0603	KEMET	C0603C474K8PACTU	Digi-Key	399-3114-1-ND
1	C19	CAP ALUM 47UF 20% 63V THRU HOLE	Würth Electronics	860080774008	Digi-Key	732-9128-3-ND
4	D1, D2, D3, D5	DIO RECT STTH1L06A 1.3V 1A 600V SMD SMA	STMicroelectronics	STTH1L06A	Digi-Key	497-3241-6-ND
1	D4	DIO RECTBRG MB6S 1V 0.5A 600V SMD SOIC-4	Sensitron Semiconductor	MB6S	Digi-Key	MB6SCT-ND
1	D6	DIO LED BLUE 2.8V 20mA 15mcd Clear SMD 0603	Vishay Lite-On	LTST-C193TBKT-5A	Digi-Key	160-1827-6-ND
1	D8	DIO SCTKY B0520WS 430mV 500mA 20V SOD-323	Diodes	B0520WS-7-F	Digi-Key	B0520WS-FDIDKR-ND
1	F1	RES FUSE 2A 300VAC Slow Radial TH P5.08D8.5H8	Littelfuse Wickmann	38312000000	Digi-Key	WK6298CT-ND
1	J1	CON HDR-1.27 Male 1x4 Tin SMD VERT	Molex	90814-0804	Digi-Key	WM19274-ND
1	J2	CON TERMINAL 5.08mm 1x2 Female 16-22AWG 12A TH R/A	On-Shore Technology	OSTHD020080	Digi-Key	ED2770-ND
1	J3	CON USB2.0 MICRO-B FEMALE TH/SMD R/A	Amphenol FCI	10118194-0001LF	Digi-Key	609-4618-6-ND
1	J5	CON HDR-2.54 Male 1x6 Gold 5.84MH TH R/A	Würth Electronics	61300611021	Digi-Key	732-5339-ND
1	J7	CON HDR-2.54 Male 1x2 Gold 5.84MH TH VERT	Multicomp SPC	SPC20481	Newark	93K5734
1	L1	INDUCTOR 6800uH 380mA 10% SMD L12.3W12.3H10 AEC-Q200	Coilcraft	MSS1210-685KEB	Mouser	994-MSS1210-685KEB
1	MOV1	RES VARISTOR MO 275V 43J Disc 10mm	TDK EPCOS	B72210S0271K151	Digi-Key	495-5961-1-ND
1	NTC1	RES THERMISTOR NTC 200R 0.5A 20% RAD P7.5L11W5.5	Canadian Thermostats	MF72-200D9	Digi-Key	317-1172-ND
1	Q1	TRANS FET N-CH IPD50R500CEAUMA1 550V 7.6A 57W TO-252-3	Infineon	IPD50R500CEAUMA1	Digi-Key	IPD50R500CEAUMA1CT-ND
4	R1, R2, R5, R6	RES TKF 100k 5% 1/8W SMD 0805	Panasonic	ERJ-6GEYJ104V	Digi-Key	P100KACT-ND
1	R3	RES CF 18R 2% 1W SMD 0207	Vishay Beyschlag	CMB02070X1809GB200	Digi-Key	CMB-18CT-ND
2	R4, R22	RES TKF 4.7k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ472V	Digi-Key	P4.7KGDKR-ND
1	R7	RES TKF 4.7k 1% 1/16W SMD 0603	Multicomp	MC0063W060314K7	Newark	58K4608
1	R8	RES TKF 100k 1% 1/8W SMD 0805	Vishay Dale	CRCW0805100KFKEC	Arrow	CRCW0805100KFKEC
1	R9	RES TKF 100k 1% 1/10W SMD 0603	TE Connectivity	1622827-1	Digi-Key	A106046DKR-ND
1	R10	RES TKF 1k 1% 1/10W SMD 0603	Yageo	RC0603FR-071KL	Digi-Key	311-1.00KHRDKR-ND
1	R11	RES TKF 100R 1% 1/4W SMD 1206	Yageo	RC1206FR-07100RL	Digi-Key	311-100FRDKR-ND
2	R12, R13	RES TKF 2R 1% 1/8W SMD 0805	Yageo	RC0805FR-072RL	Digi-Key	311-2.00CRCT-ND
1	R14	RES TKF 390k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF3903V	Digi-Key	P390KHCT-ND
1	R15	RES TKF 12k 1% 1/10W SMD 0603	Yageo	RC0603FR-0712KL	Digi-Key	311-12.0KHRCT-ND
2	R16, R17	RES TKF 2.1k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF2101V	Digi-Key	P2.10KHCT-ND
1	R19	RES TKF 27k 1% 1/10W SMD 0603	Yageo	RC0603FR-0727KL	Digi-Key	311-27.0KHRDKR-ND
1	R24	RES TKF 100R 1% 1/8W SMD 0805	Panasonic	ERJ-6ENF1000V	Digi-Key	P100CDKR-ND
2	SW1, SW2	SWITCH TACT SPST 24V 50mA 147873-1 SMD	ALCOSWITCH - TE CONNECTIVITY	147873-1	Mouser	506-147873-1
1	TH1	TEMP SENSOR RTD 100 OHM 0603	Vishay Beyschlag	PTS060301B100RP100	Digi-Key	PTS0603100CT-ND
2	U2, U3	IC PHOTO HCPL-181 4-SMD	Broadcom Avago	HCPL-181-00CE	Digi-Key	516-1788-6-ND
3	Z1, Z2, Z3	DIO ZNR MMSZ7V5T1G 7.5V 500mW SMD SOD-123	Rochester Electronics	MMSZ7V5T1G	Digi-Key	MMSZ7V5T1GOSCT-ND
Microchip Parts listed below						
2	M2, M3	TRANS FET N-CH TN2510N8-G 100V 730mA 1.6W SOT-89	Microchip	TN2510N8-G	Digi-Key	TN2510N8-GDKR-ND
1	Q2	TRANS FET N-CH DN2470K4-G 700V 0.17A 2.5W TO-252-3	Microchip	DN2470K4-G	Digi-Key	DN2470K4-GCT-ND
1	U1	MCHP ANALOG LED DRIVER HV9961LG-G SOIC-8	Microchip	HV9961LG-G	Digi-Key	HV9961LG-GDKR-ND
1	U4	MCHP RF BLUETOOTH RN4871-V/RM118 MODULE-16	Microchip	RN4871-V/RM118	Digi-Key	RN4871-V/RM118-ND
1	U5	MCHP ANALOG LDO 3.3V MCP1703AT-5002E/CB SOT-23A-3	Microchip	MCP1703AT-3302E/CB	Digi-Key	MCP1703AT-3302E/CBDKR-ND
1	U6	MCHP MCU 8-BIT 32MHz 3.5kB PIC16F15313T-I/SN SOIC-8	Microchip	PIC16F15313T-I/SN	Digi-Key	PIC16F15313T-I/SNCT-ND
1	U7	MCHP INTERFACE USB I2C/UART MCP2221A-I/ML QFN-16	Microchip	MCP2221A-I/ML	Digi-Key	MCP2221A-I/ML-ND
1	U8	MCHP ANALOG VOLATGE DETECTOR 1.9V MCP112T-195I/TT SOT-23-3	Microchip	MCP112T-195I/TT	Digi-Key	MCP112T-195I/TTCT-ND
Mechanical Parts to be added in the package						
1	CBL1	MECH HW CABLE Picoflex IDT to IDT 4-COND 250mm	Molex	92315-0425	Digi-Key	WM13323-ND
Do Not Populate Parts listed below						
0	D7	DIO LED GREEN 2.05V 10mA CLEAR SMD 0603	Panasonic SSG	LNJ326W83RA	Digi-Key	P13485CT-ND
0	R18	RES TKF 12k 1% 1/10W SMD 0603	Yageo	RC0603FR-0712KL	Digi-Key	311-12.0KHRCT-ND
0	Shld1	MECH HW BOARD SHIELD 0.65X0.65X0.142" AL FRAME 2118707-4	TE Connectivity	2118707-4	Digi-Key	A126141CT-ND