



## Bill of Materials for the D\_LED\_B-GEVB Evaluation Board

| Designator              | Quantity | Description  | Value          | Tolerance | Footprint   | Manufacturer         | Manufacturer Part Number | Substitution Allowed | Lead Free |
|-------------------------|----------|--|----------------|-----------|---|----------------------|--------------------------|----------------------|-----------|
| C1                      | 1        | CAP CER 220PF 100V X7R 0603                                    | 220pF 100V     | ±5%       | 0603  | AVX Corporation      | 06031C221JAT2A           | Yes                  | Yes       |
| C2,C35                  | 2        | CAP CER 10UF 16V X5R 0805                                      | 10µF 16V       | ±20%      | 0805  | Würth Electronics    | 885012107014             | Yes                  | Yes       |
| C3,C4                   | 2        | CAP CER 2.2UF 100V X7R 1210                                    | 2.2µF 100V     | ±10%      | 1210  | Kemet                | C1210C225K1RACTU         | Yes                  | Yes       |
| C5,C33,C34,C36          | 4        | CAP CER 10UF 50V X7R 1210                                      | 10µF 50V       | ±20%      | 1210  | Taiyo Yuden          | UMK325AB7106MM-T         | Yes                  | Yes       |
| C7                      | 1        | CAP ALUM 22UF 20% 100V SMD                                     | 22µF 100V      | ±20%      | 0.315" Dia  | Panasonic Electronic | EEE-TG2A220              | Yes                  | Yes       |
| C8,C10,C11,C14,C16,C17  | 6        | -  | -              | -         | -   | -                    | -                        | Yes                  | Yes       |
| C9                      | 1        | CAP CER 0.47UF 100V X7R 0805                                   | 0.47µF 100V    | ±10%      | 0805  | AVX Corporation      | 08051C474KAZ2A           | Yes                  | Yes       |
| C12,C13                 | 2        | CAP CER 0.47UF 25V X7R 0805                                    | 0.47µF 25V     | ±10%      | 0805  | Würth Electronics    | 885012207076             | Yes                  | Yes       |
| C15                     | 1        | CAP CER 0.1UF 50V X7R 0603                                     | 0.10µF 50V     | ±10%      | 0603  | Würth Electronics    | 885012206095             | Yes                  | Yes       |
| C18                     | 1        | CAP CER 0.1UF 16V X7R 0603                                     | 0.10µF 16V     | ±10%      | 0603  | Würth Electronics    | 885012206046             | Yes                  | Yes       |
| C19                     | 1        | CAP CER 2200PF 25V X7R 0603                                    | 2200PF 25V     | ±10%      | 0603  | Würth Electronics    | 885012206061             | Yes                  | Yes       |
| C20,C24                 | 2        | CAP CER 10000PF 100V X7R 0805                                  | 10000PF 100V   | ±10%      | 0805  | Kemet                | C0805C103K1RACTU         | Yes                  | Yes       |
| C21,C22,C23,C25,C26,C27 | 6        | CAP CER 0.1UF 100V X7R 0805                                    | 0.1UF 100V     | ±10%      | 0805  | Kemet                | C0805C104K1RACAUTO       | Yes                  | Yes       |
| C28,C29                 | 2        | 47pF 50V Ceramic Capacitor C0G, NP0 0603                       | 47pF 50V       | ±5%       | 0603  | Würth Electronics    | 885012006055             | Yes                  | Yes       |
| C30,C31                 | 2        | CAP CER 220PF 100V X7R 0603                                    | 220PF 100V     | ±10%      | 0603  | Yageo                | CC0603KRX7R0BB221        | Yes                  | Yes       |
| D1                      | 1        | DIODE SCHOTTKY 100V 3A SMC                                     | -              | -         | SMC   | ON Semiconductor     | MBRS3100T3G              | No                   | Yes       |
| D2,D3                   | 2        | DIODE SCHOTTKY 100V 2A SMA                                     | -              | -         | SMA   | ON Semiconductor     | MBRA2H100T3G             | No                   | Yes       |
| D8                      | 1        | DIODE SCHOTTKY 100V 5A DPAK                                    | -              | -         | DPAK-3  | ON Semiconductor     | MBRD5H100T4G             | No                   | Yes       |
| J1,J15                  | 2        | STACKING HEADER ARDUINO SHIELD                                 | -              | -         | -   | Samtec               | ESW-108-14-G-S           | Yes                  | Yes       |
| J10,J12                 | 2        | 2 Position Terminal Block Header, Male Pins, Shrouded (4 Side) | -              | -         | 0.150" (3.81mm)<br>90°, Right Angle<br>Through Hole | Würth Electronics    | 691322310002             | Yes                  | Yes       |
| J13                     | 1        | STACKING HEADER ARDUINO SHIELD                                 | -              | -         | -   | Samtec               | ESW-110-14-G-S           | Yes                  | Yes       |
| J14                     | 1        | STACKING HEADER ARDUINO SHIELD                                 | -              | -         | -   | Samtec               | ESW-106-14-G-S           | Yes                  | Yes       |
| J16                     | 1        | 2 Position Terminal Block Header, Male Pins, Shrouded (4 Side) | -              | -         | 0.150" (3.81mm)<br>90°, Right Angle<br>Through Hole | Würth Electronics    | 691322310002             | Yes                  | Yes       |
| J20                     | 1        | 2 Positions Header, Unshrouded Connector                       | -              | -         | 0.100" (2.54mm)<br>Through Hole Gold                | Würth Electronics    | 61300211121              | Yes                  | Yes       |
| L1                      | 1        | Fixed Inductors XAL6060 High Current 22 uH 20% 5 A             | 22 uH 5A       | 20%       | XAL6060-223MEB                                      | Coilcraft Inc        | XAL6060-223MEB           | Yes                  | Yes       |
| L2,L4                   | 2        | Fixed Inductors MSS1038T High Temp 100 uH 20% 1.45 A           | 100 uH 1.45 A  | 20%       | 10.5 mm x 10.2 mm                                   | Coilcraft Inc        | MSS1038T-104MLC          | Yes                  | Yes       |
| L3,L5                   | 2        | FERRITE BEAD 60 OHM 0805 1LN                                   | 60 OHM         | -         | 0805  | Würth Electronics    | 742792063                | Yes                  | Yes       |
| Q1                      | 1        | MOSFET N-CH 100V 17A   | 100V, 17A      | -         | DPAK-3  | ON Semiconductor     | NTD6416ANT4G             | No                   | Yes       |
| R1                      | 1        | RES SMD 100 OHM 1% 1/10W 0603                                  | 100 OHM 1/10W  | 1%        | 0603  | Bourns Inc           | CR0603-FX-1000ELF        | Yes                  | Yes       |
| R2                      | 1        | RES SMD 470 OHM 1% 1/10W 0603                                  | 470 OHM 1/10W  | 1%        | 0603  | Yageo                | RC0603FR-07470RL         | Yes                  | Yes       |
| R3                      | 1        | RES SMD 100K OHM 1% 1/10W 0603                                 | 100K OHM 1/10W | 1%        | 0603  | Yageo                | RC0603FR-07100KL         | Yes                  | Yes       |
| R4                      | 1        | RES SMD 47 OHM 1% 1/8W 0805                                    | 47 OHM 1/8W    | 1%        | 0805  | Yageo                | RC0805FR-0747RLL         | Yes                  | Yes       |

|  |    |  |                |    |        |                          |                   |     |     |
|--|----|--|----------------|----|--------|--------------------------|-------------------|-----|-----|
| R5,R7,R8,R10,R11,R14,R25,R30,R31,R32,R33 | 11 | RES SMD 0.0OHM JUMPER 1/10W 0603               | Jumper, 1/10W  | -  | 0603   | Yageo                    | RC0603JR-070RL    | Yes | Yes |
| R6                                       | 1  | RES SMD 0.01 OHM 1% 1W 1206                    | 0.01 OHM 1W    | 1% | 1206   | Bourns Inc               | CRF1206-FX-R010EL | Yes | Yes |
| R9,R12                                   | 2  | RES SMD 0.2 OHM 1% 1/2W 1206                   | 0.2 OHM 1/2W   | 1% | 1206   | TT<br>Electronics/Welwyn | LR1206-R20FW      | Yes | Yes |
| R13,R15                                  | 2  | RES SMD 10K OHM 1% 1/10W 0603                  | 10K OHM 1/10W  | 1% | 0603   | Vishay Dale              | CRCW060310K0FKEA  | Yes | Yes |
| R16                                      | 1  | RES SMD 470K OHM 1% 1/10W 0603                 | 470K OHM 1/10W | 1% | 0603   | Vishay Dale              | CRCW0603470KFKEA  | Yes | Yes |
| R17,R18                                  | 2  | RES SMD 100 OHM 1% 1/10W 0603                  | 100 OHM 1/10W  | 1% | 0603   | Yageo                    | RC0603FR-07100RL  | Yes | Yes |
| R19,R24                                  | 2  | RES SMD 22K OHM 1% 1/10W 0603                  | 22k OHM 1/10W  | 1% | 0603   | Vishay Dale              | CRCW060322K0FKEA  | Yes | Yes |
| R20,R26,R27,R28                          | 4  | RES SMD 10K OHM 1% 1/10W 0603                  | 10k OHM 1/10W  | 1% | 0603   | Vishay Dale              | CRCW060310K0FKEA  | Yes | Yes |
| R29                                      | 1  | RES SMD 0.0 OHM JUMPER 1/8W 0805               | Jumper 1/8W    | -  | 0805   | Yageo                    | RC0805JR-070RL    | Yes | Yes |
| R34,R35,R36                              | 3  | RES SMD 10K OHM 1% 1/10W 0603                  | 10k, 1/10W     | -  | 0603   | Vishay Dale              | CRCW060310K0FKEA  | Yes | Yes |
| TP5,TP9,TP10,TP11,TP12,TP13,TP14         | 7  | -  | -              | -  | -      | -                        | -                 | Yes | Yes |
| U1                                       | 1  | Power Ballast and Dual LED                     | -              | -  | 32-QFN | ON Semiconductor         | NCV78763MW0R2G    | No  | Yes |
| U22                                      | 1  | IC I/O EXPANDER I2C 16B                        | -              | -  | QFN-24 | ON Semiconductor         | PCA9655EMTTXG     | No  | Yes |
| J10_FEMALE,<br>J12_FEMALE,<br>J16_FEMALE | 3  | 2 Position Terminal Block Plug, Female Sockets | -              | -  | 0.150" | Würth Electronics        | 691361300002      | Yes | Yes |