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PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS:  
5736910 5939955 6425781 6428361 6554638 6840817 7123117  
7429195 7717749 7808751 6217391 6149050 7924130

REVISIONS

| P | LTR | DESCRIPTION | DATE      | DWN | APVD |
|---|-----|-------------|-----------|-----|------|
| A |     | EC-1710010  | 26MAR2020 | TRY | TY   |

**HALOGEN FREE**

URG154G GIGABIT CIRCUIT  


C1: 1000pF, 2kV, CAPACITOR;  
C2-C5: 100nF, 50V, CAPACITORS;  
R1-R4: 750hms, 1/16W, RESISTORS

1. MATERIALS

USB MATERIALS:  
HOUSING: THERMOPLASTIC, BLUE, FLAMMABILITY RATING UL 94V-0  
USB 3.0 CONTACT TYPE 1: PHOSPHOR BRONZE, WITH 1.27um MIN OVERALL NICKEL UNDERPLATE AND SELECTIVE 0.762um MIN GOLD PLATING AT MATING INTERFACE  
USB 3.0 CONTACT TYPE 2: COPPER BASE ALLOY, WITH 1.27um MIN OVERALL NICKEL UNDERPLATE AND SELECTIVE 0.762um MIN GOLD PLATING AT MATING INTERFACE

RJ45 MATERIALS:  
HOUSING: THERMOPLASTIC, BLACK, FLAMMABILITY RATING UL 94V-0  
SHIELD: STAINLESS STEEL, PREPLATED WITH MIN 0.76um SEMI-BRIGHT NICKEL, POST DIPPED WITH 2.54um MIN SOLDER ON SOLDER TAILS  
CONTACT: PHOSPHOR BRONZE, WITH 1.27um MIN OVERALL NICKEL UNDERPLATE AND SELECTIVE 1.27um MIN GOLD PLATING AT MATING INTERFACE

LED MATERIALS:  
DIFFUSED EPOXY LENS, CARBON STEEL LEAD FRAME LEADS, PREPLATED WITH 2.03um MIN SILVER OVER 1.02 MIN NICKEL OVER 1.02um MIN COPPER UNDERPLATE, POST PLATED WITH 2.54um MIN MATTE TIN AND/OR 2.54um MIN SAC SOLDER DIP OR PURE TIN SOLDER DIP.

 MAGNETICS  
-APPLICATION : 10/100/1000 BASE-T  
-IMPEDANCE: 100 OHMS  
-TURNS RATIO(CHIP: CABLE): 1:1 ALL FOUR PAIRS  
-OPEN CIRCUIT INDUCTANCE(OCL): 350uH MIN @100kHz, 0.1 VRMS, 8mADC BIAS FROM 0°C TO 70°C, ALL FOUR PAIRS  
-ALL FOUR PAIRS BI-DIRECTIONAL  
-PERFORMANCE @ 25°C:  
INSERTION LOSS (IL): 1.1 dB MAX FROM 0.5MHz TO 100MHz  
RETURN LOSS (RL): 18dB MIN FROM 0.5MHz TO 40MHz  
12-20LOG(f/80)dB MIN FROM 40.1 MHz TO 100MHz  
CROSSTALK ATTENUATION: 35 dB MIN FROM 0.5 MHz TO 40 MHz  
33-20LOG(f/50) dB MIN FROM 40.1 MHz TO 100 MHz  
COMMON MODE REJECTION RATIO (CMRR): 30dB MIN FROM 0.5MHz TO 100MHz  
-ISOLATION VOLTAGE: 2250VDC (MAX) FOR 60 SECONDS WITH A RISE TIME OF 500V/SEC.


 THE MAGNETIC CIRCUIT ON ALL FOUR CHANNELS IS SYMMETRICAL AND SUPPORTS AUTO-MDIX OPERATION.

4. OPERATING TEMPERATURE: 0°C - 70°C.

 DATUM Y AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.

6. RJ45 CAVITY CONFORMS TO FCC RULES AND REGULATION PART 68 SUBPART F.


 TRP CONNECTOR LOGO, PART NUMBER, DATE CODE, COUNTRY OF ORIGIN, AGENCY APPROVAL MARKING IN APPROPRIATE LOCATION SHOWN.  
DATE CODE: YYWW WHERE "YY" IS YEAR, "WW" IS WORK WEEK, "D" IS DAY OF WEEK, WITH SUNDAY= 1

 LED IS DRIVEN WITH CONSTANT CURRENT AT APPROX 20mA  
LED COLOR: DOMINANT WAVELENGTH (λD)  
GREEN 568 nm TYP at IF=20mA;  
FORWARD VOLTAGE (VF):  
GREEN 2.2V TYP at IF=20mA;

9. THE PARTS ARE RECOMMENDED FOR WAVE SOLDERING PROCESS, PEAK TEMPERATURE 260°C MAX, 10 SECONDS MAX.

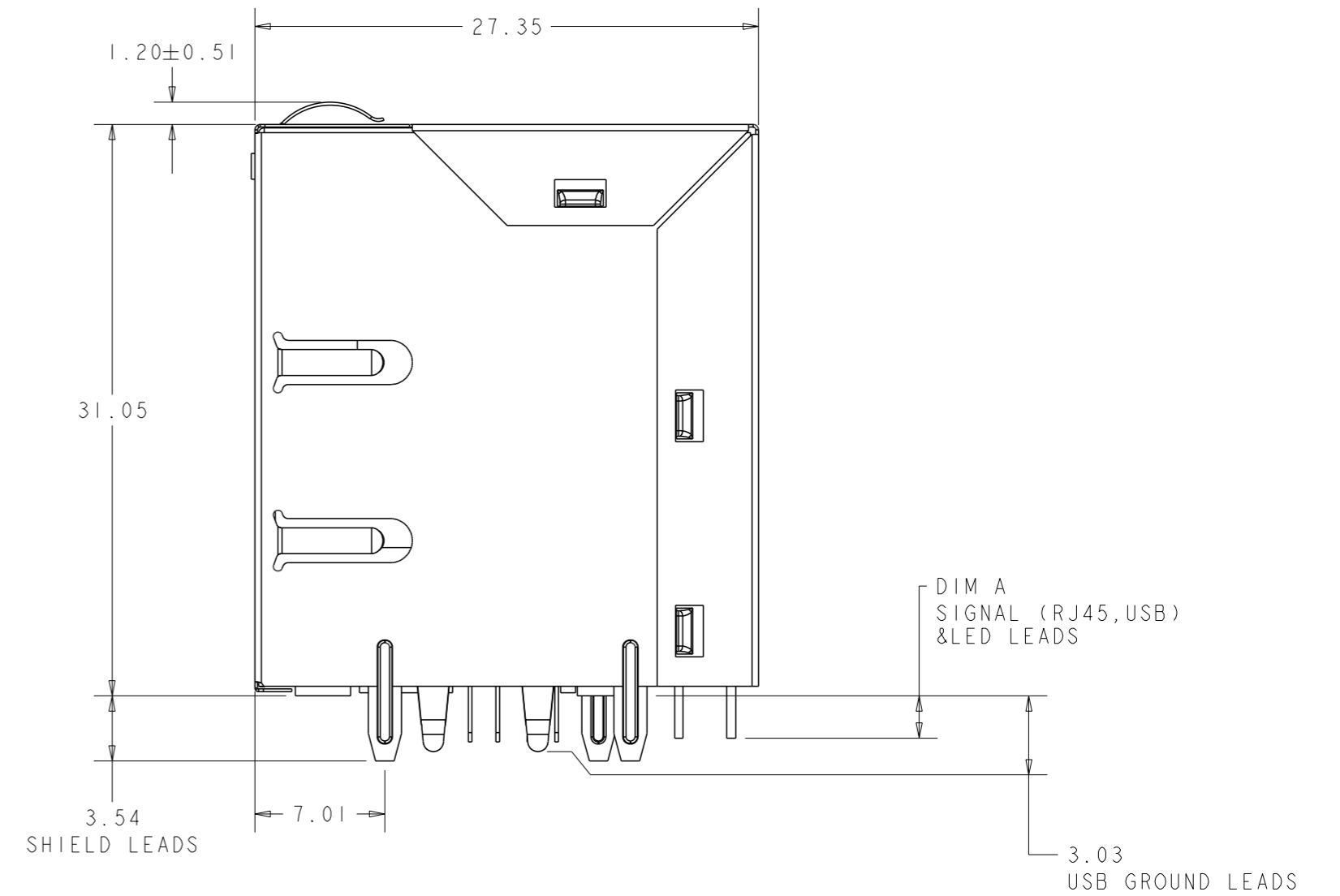
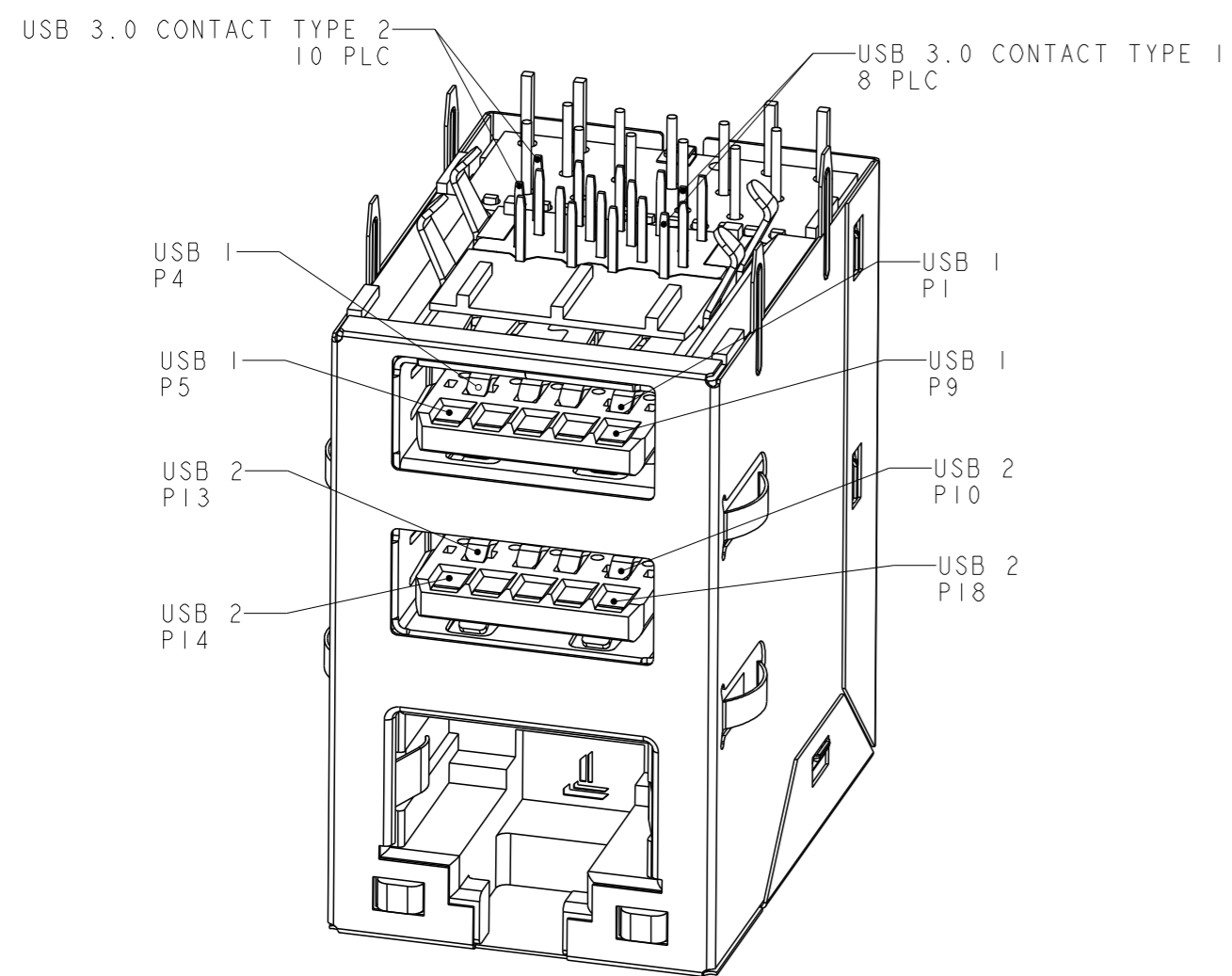
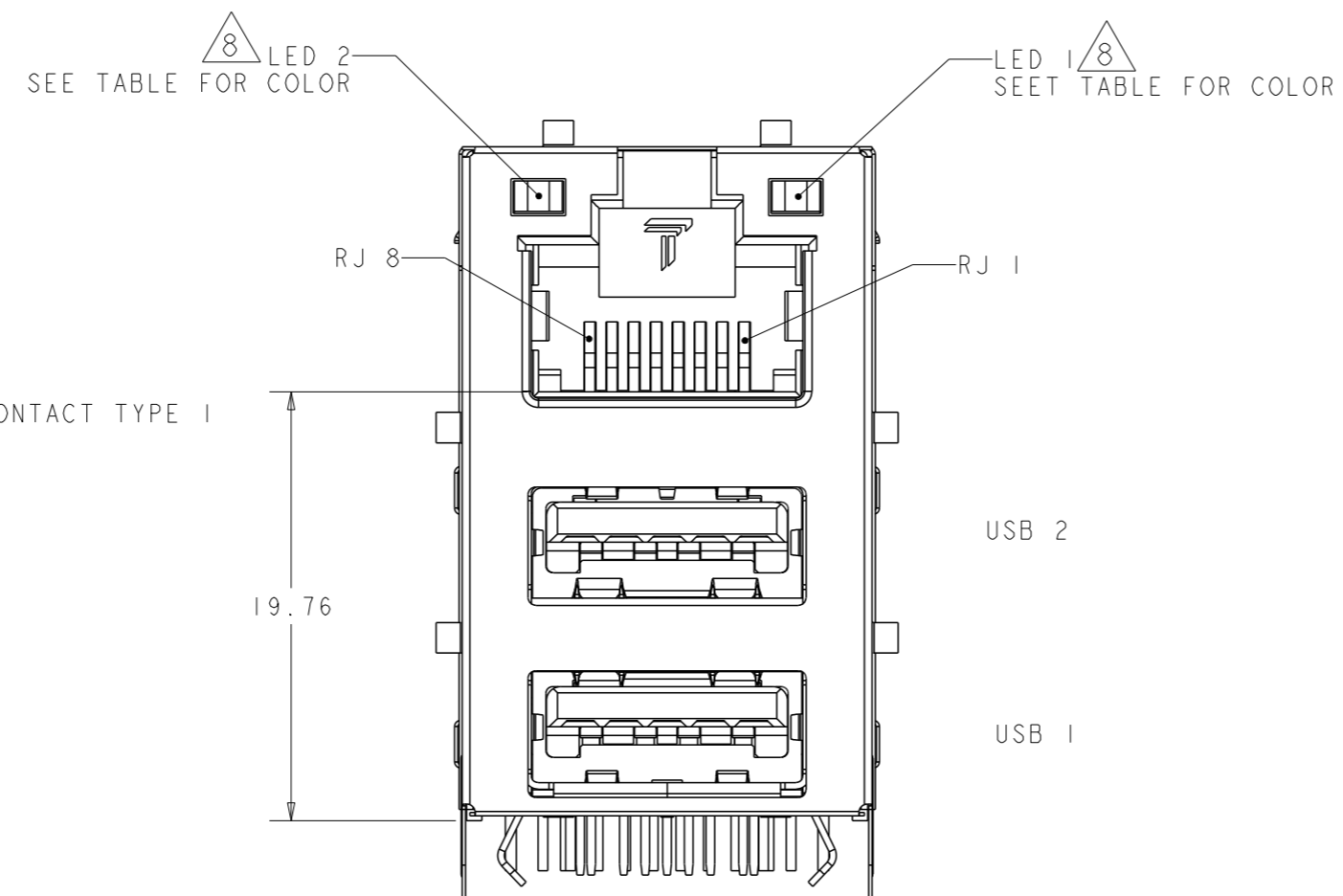
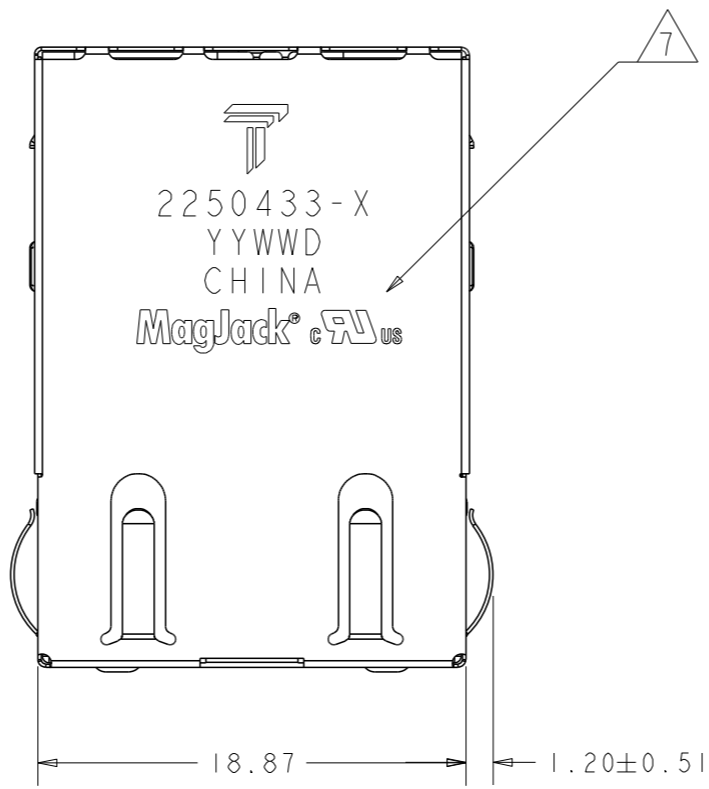
10. LOW HALOGEN SPEC (EXCEPT LIGHT PIPE):  
CHLORINE (Cl) 900PPM MAX  
BROMINE (Br) 900PPM MAX  
TOTAL BROMINE AND CHLORINE (Br+Cl) 1500PPM MAX  
LIGHT PIPE COMPLY WITH LOW HALOGEN SPECIFICATION "DIN VDE 0472"  
CHLORINE (Cl) 1000PPM MAX  
BROMINE (Br) 1000PPM MAX  
TOTAL BROMINE AND CHLORINE (Br+Cl) 2000PPM MAX

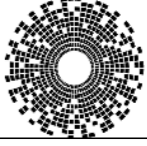
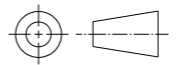
|       |       |       |             |
|-------|-------|-------|-------------|
| 3.25  | GREEN | GREEN | 2250433-1   |
| DIM A | LED2  | LED1  | PART NUMBER |

|   |  |  |   |                         |
|---|--|--|---|-------------------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT, AND COMPLIANT TO ASME Y14.5M |  | DWN<br>JAMISON CHEN<br>14 JUL 2016     | <br>DONGGUAN CHINA |                         |
| DIMENSIONS:<br>mm   |  | CHK<br>TOWER YU/YI LIU<br>14 JUL 2016  |   |                         |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                              |  | APVD<br>TONY YUAN<br>14 JUL 2016       | DESC<br>MAGJACK OVER DUAL USB3.0 URG154G CIRCUIT, GIGABIT, W/ LEDS                                      |                         |
| 0 PLC ±<br>1 PLC ±<br>2 PLC ±0.25<br>3 PLC ±<br>4 PLC ±             |  | MODEL NAME<br>MAGJACK OVER USB NON-PoE | SIZE<br>A2  | DRAWING NO<br>C-2250433 |
| PRODUCT SPEC<br>108-104004  |  | RESTRICTED TO<br>-                     |   | SCALE<br>NTS            |
|   |  | CUSTOMER DRAWING                       |   | SHEET 1 OF 4 REV A      |

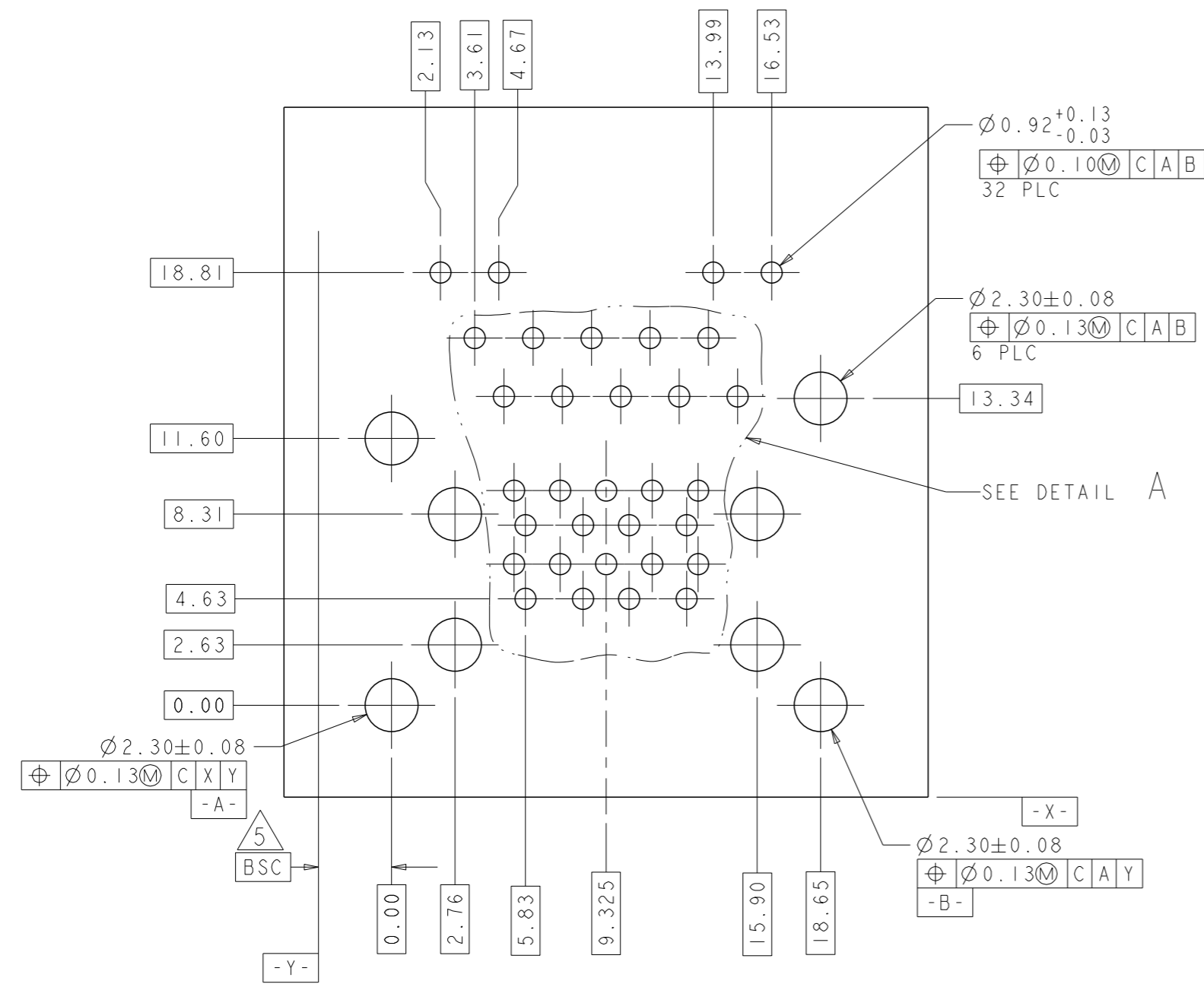
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**HALOGEN FREE**

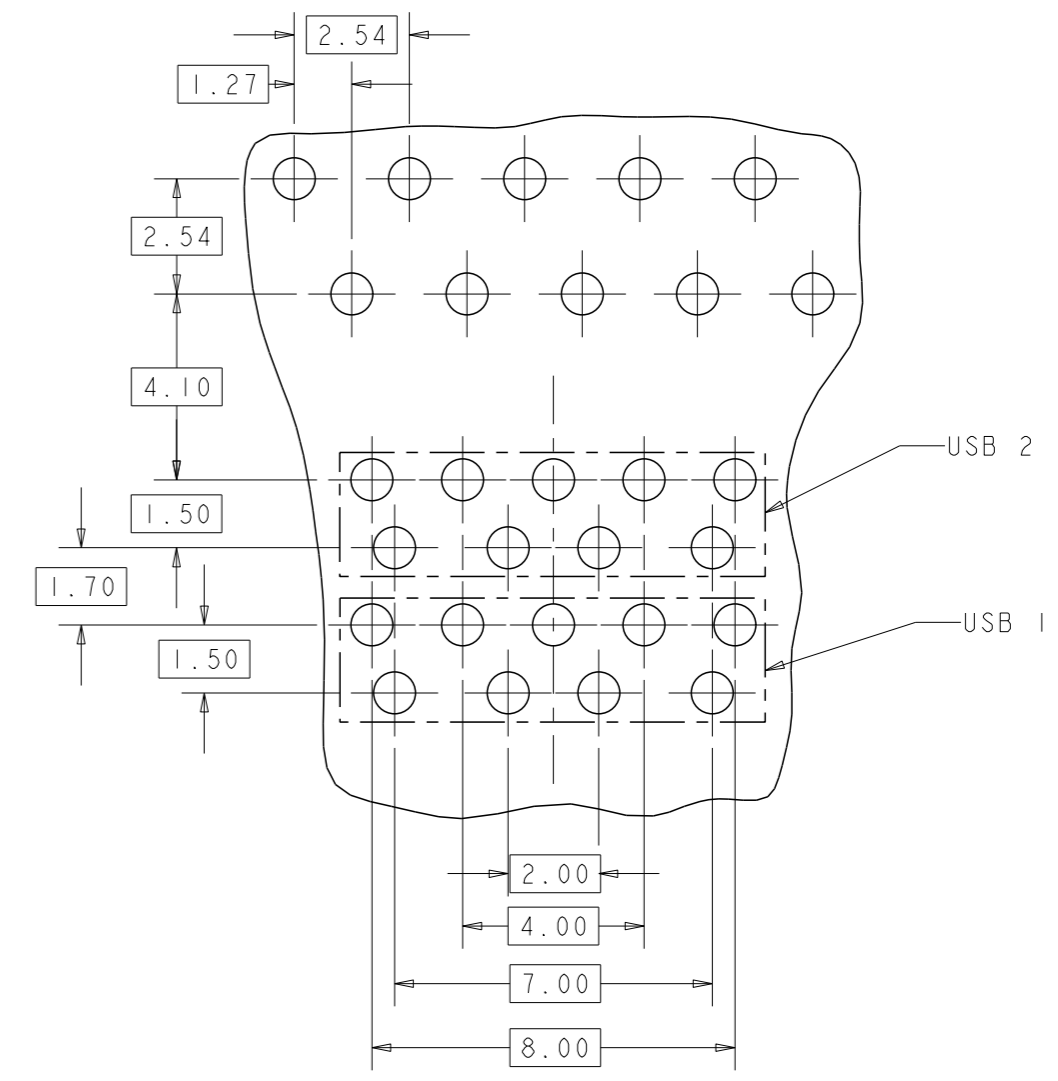
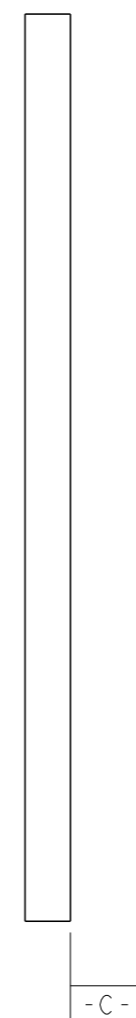


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| DIMENSIONS:<br>mm   |  | CHK<br>TOWER YU/YI LIU<br>14 JUL 2016     |  |
|    |  | APVD<br>TONY YUAN<br>14 JUL 2016          | DESC<br>MAGJACK OVER DUAL USB3.0<br>URG154G CIRCUIT, GIGABIT, W/ LEDS  |
| TOLERANCES UNLESS<br>OTHERWISE SPECIFIED:   |  | MODEL NAME<br>MAGJACK<br>OVER USB NON-POE | SIZE<br>A2   |
| 0 PLC ±<br>1 PLC ±<br>2 PLC ±0.25<br>3 PLC ±<br>4 PLC ±<br>ANGLES ±<br>APPLICATION SPEC |  | CUSTOMER DRAWING                          | CAGE CODE<br>C-2250433<br>DRAWING NO<br>C-2250433<br>RESTRICTED TO<br>-<br>SCALE NTS<br>SHEET 2 OF 4<br>REV A                                  |
| PRODUCT SPEC<br>108-104004  |  |   |  |


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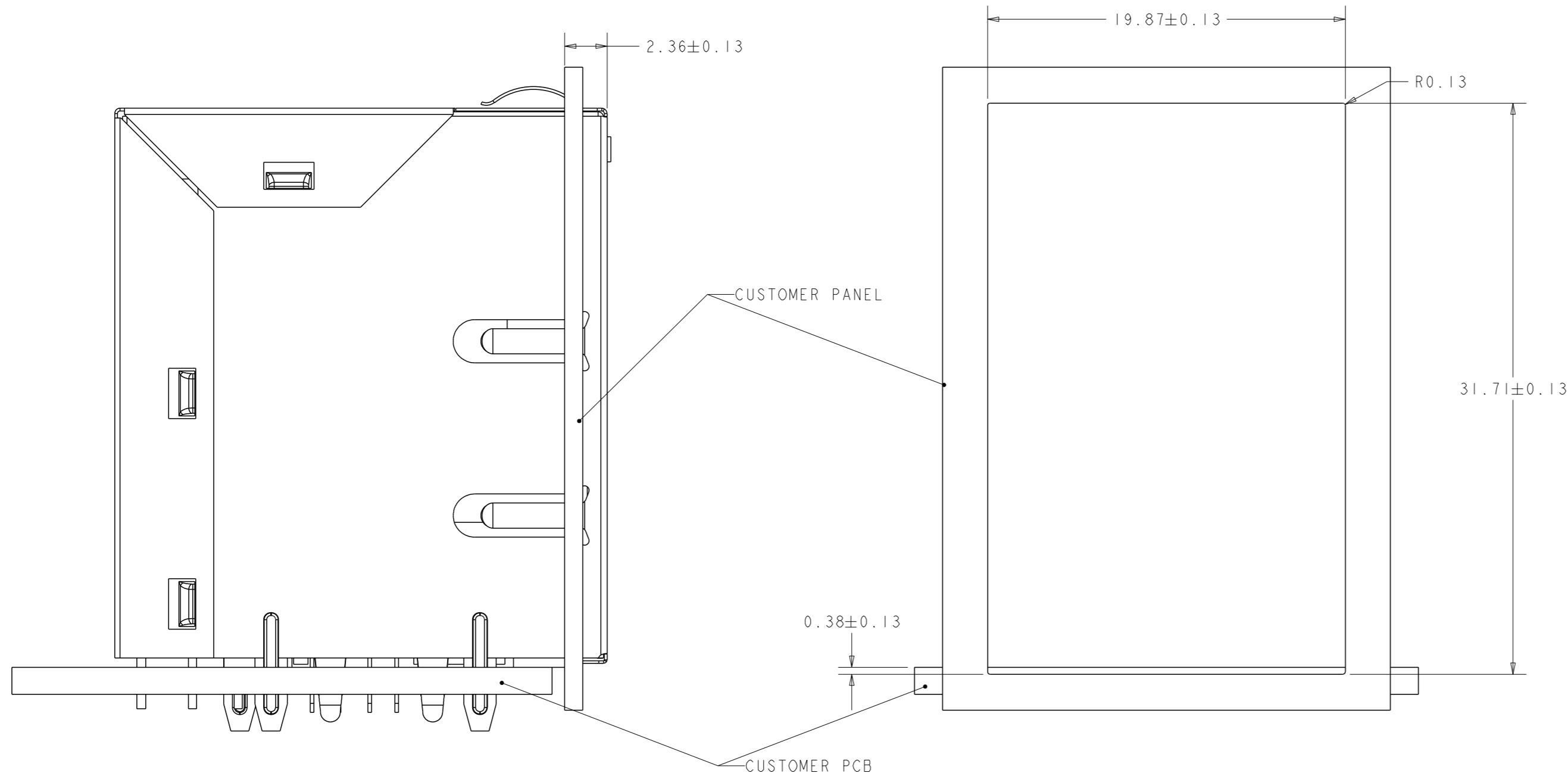
**RECOMMENDED PC BOARD LAYOUT  
(VIEW FROM COMPONENT SIDE)**



DETAIL A  
SCALE 6:1

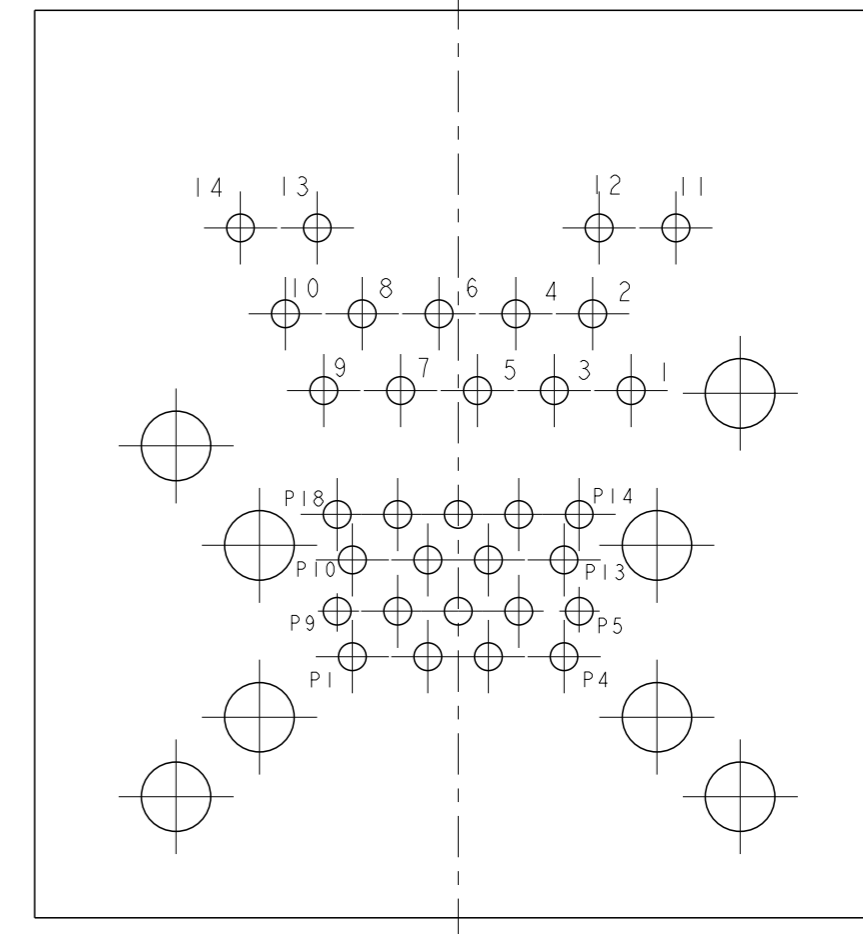
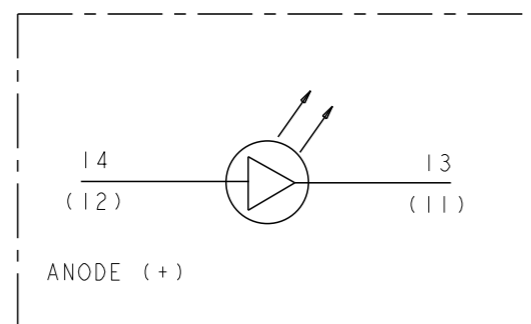
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|---|---|---|---|
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| PRODUCT SPEC<br>108-104004  | - | CAGE CODE<br>C-2250433                    | DRAWING NO<br>C-2250433   |
| CUSTOMER DRAWING  |   | SCALE<br>NTS                              | SHEET 3 OF 4<br>REV A   |

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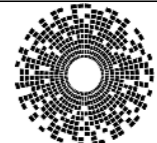
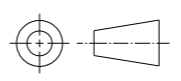
**SUGGEST CUSTOMER CUTOUT DIMENSIONS**

SINGLE COLOR LED



**USB 3.0 STANDARD-A CONNECTOR PIN ASSIGNMENTS**

| PIN NUMBER | SIGNAL NAME | DESCRIPTION                              |
|------------|-------------|--|
| P1 & P10   | VBUS        | POWER                                    |
| P2 & P11   | D-          | USB 2.0 DIFFERENTIAL PAIR                |
| P3 & P12   | D+          |  |
| P4 & P13   | GND         |  |
| P5 & P14   | STDA_SSRX-  | SUPERSPEED RECEIVER DIFFERENTIAL PAIR    |
| P6 & P15   | STDA_SSRX+  |  |
| P7 & P16   | GND_DRAIN   | GROUND FOR SIGNAL RETURN                 |
| P8 & P17   | STDA_SSTX-  | SUPERSPEED TRANSMITTER DIFFERENTIAL PAIR |
| P9 & P18   | STDA_SSTX+  |  |

|   |  |  |   |
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|   |  | RESTRICTED TO<br>-                     |   |
|   |  | CUSTOMER DRAWING                       |   |
|   |  | SCALE NTS SHEET 4 OF 4 REV A           |   |