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| LED1 POLARITY |        |        | LED2 POLARITY |        |        |
|---------------|--------|--------|---------------|--------|--------|
| PIN 13        | PIN 14 | COLOR  | PIN 15        | PIN 16 | COLOR  |
| -             | +      | YELLOW | +             | -      | ORANGE |
|               |        |        | -             | +      | GREEN  |

# ELECTRICAL CHARACTERISTICS @ 25°C

## URNS RATIO

|    |         |
|----|---------|
| TX | 1CT : 1 |
| RX | 1CT : 1 |

QCL @ 100kHz/100mVRMS  
8mA DC BIAS

350μH MIN.

## INS. LOSS

1MHz TO 100MHz

-1.0 dB MAX

## RET. LOSS (MIN)

1MHz-30MHz  
30MHz-60MHz  
60MHz-80MHz

-18 dB  
-18+20LOG(F/30MHz) dB  
-12 dB

## CROSS TALK (TX - RX)

500kHz-100MHz

-35 dB MIN

## CM TO CM REJ

100kHz-100MHz

-30 dB MIN

## CM TO DM REJ

100kHz-100MHz

-40 dB MIN

HIPOT (Isolation Voltage):

1500 Vrms or 2250VDC

OPERATING TEMPERATURE:

-40°C TO 85°C

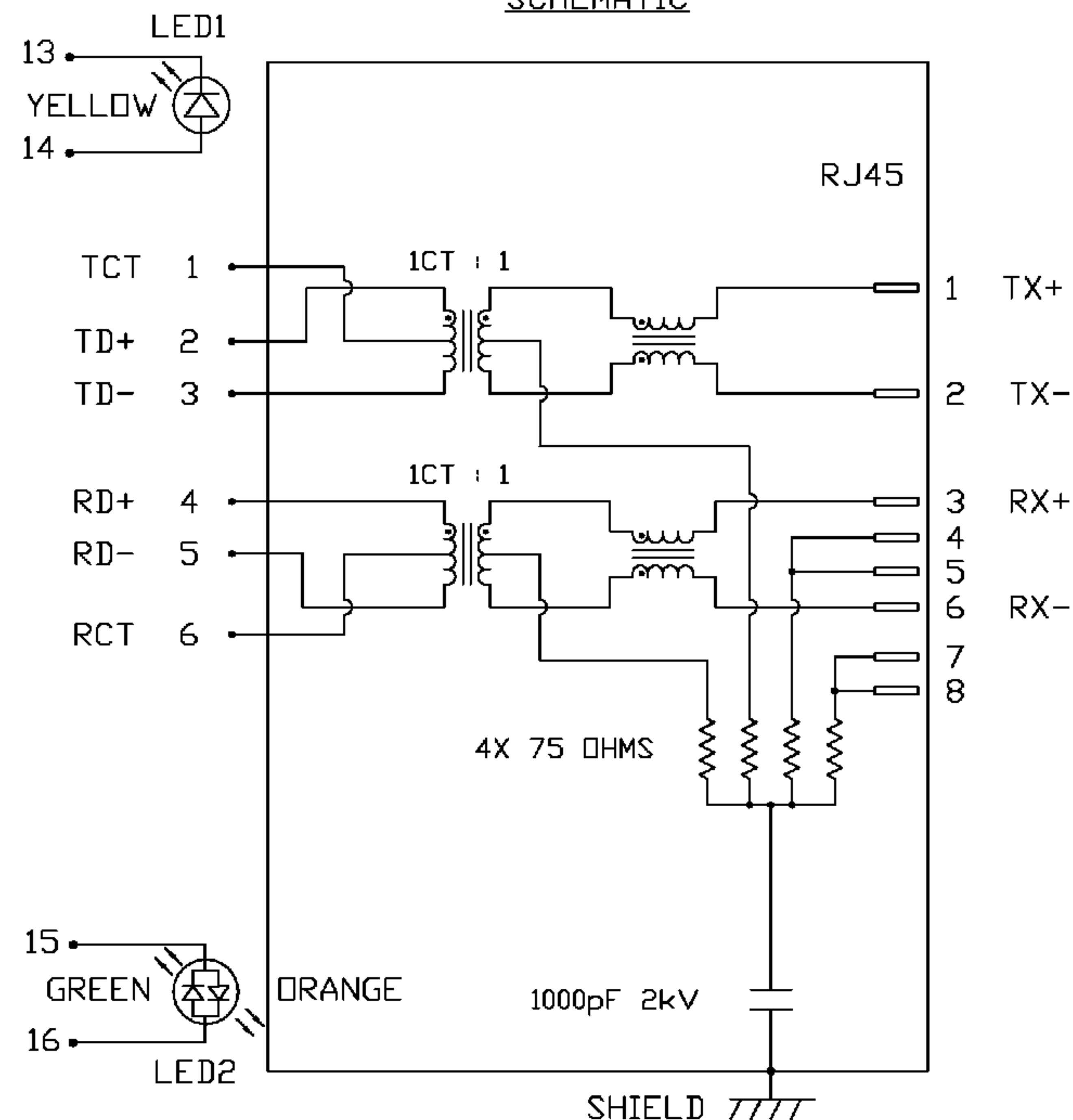
## LED 1

VF (FORWARD VOLTAGE) IF=20mA YELLOW 2.1V TYP.  
λD (DOMINANT WAVELENGTH) IF=20mA YELLOW 590nm TYP.

## LED 2

VF (FORWARD VOLTAGE) IF=20mA GREEN 2.2V TYP.  
ORANGE 2.0V TYP.  
λD (DOMINANT WAVELENGTH) IF=20mA GREEN 565nm TYP.  
ORANGE 610nm TYP.

# SCHEMATIC



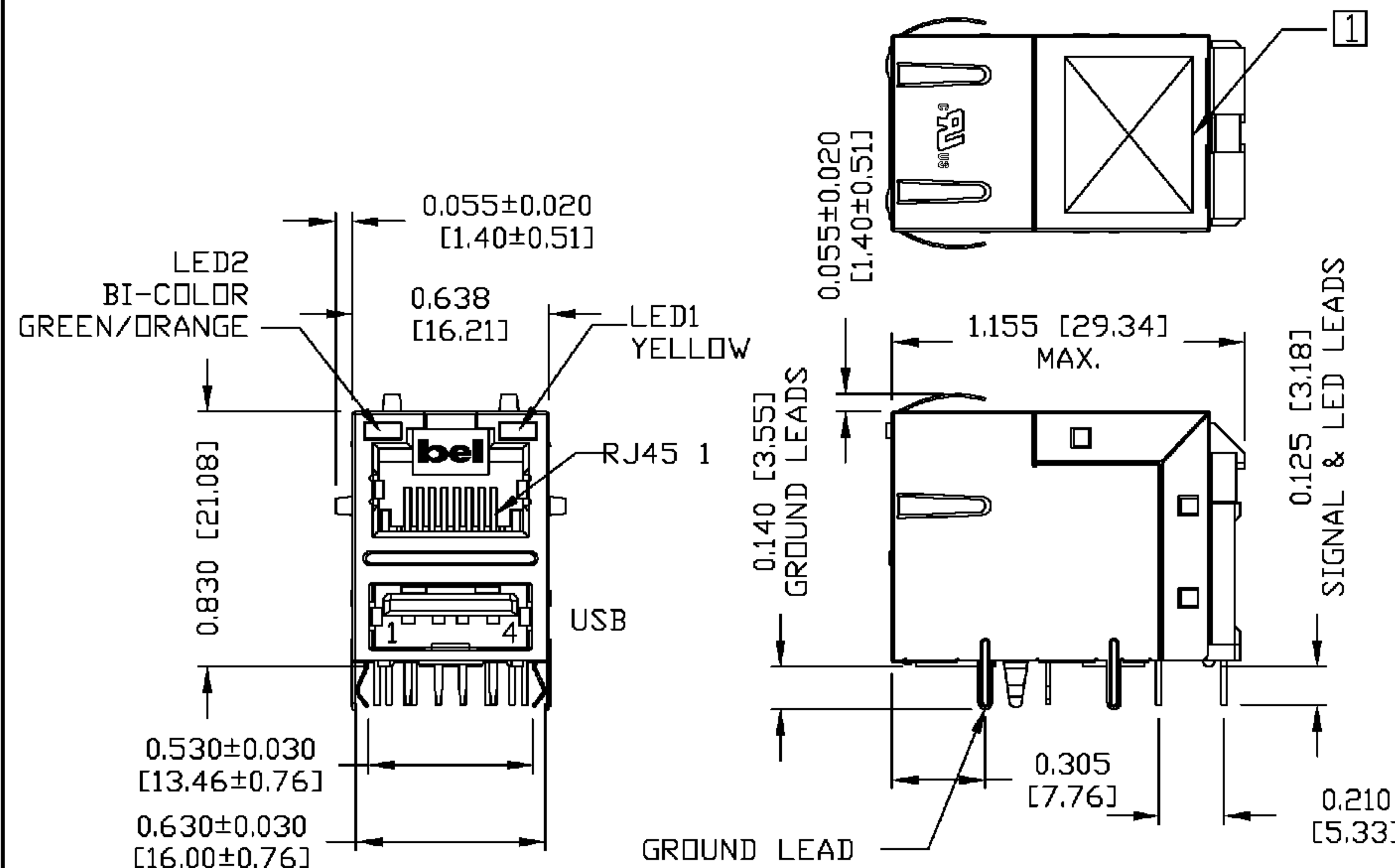
# USB ELECTRICAL:

INSULATION RESISTANCE: 1000 MEGA (MIN)  
CONTACT RESISTANCE: 25 MILLI (MAX)  
DIELECTRIC WITHSTANDING: 750 VAC

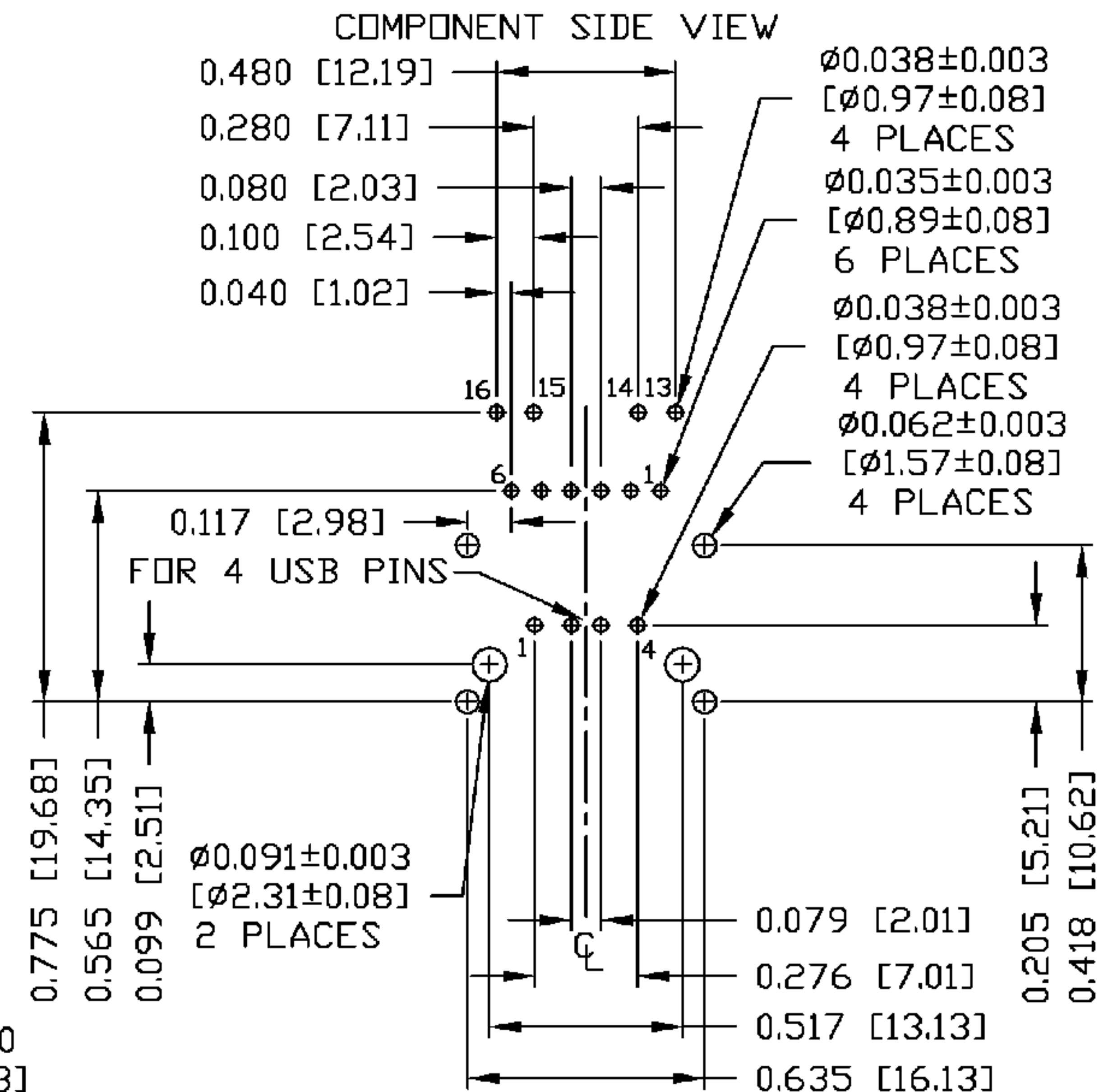
| ORIGINATED BY | DATE     | TITLE                         | PART NO. / DRAWING NO. | STANDARD DIM. | [ ] METRIC DIM. AS REFERENCE |           |
|---------------|----------|-------------------------------|------------------------|---------------|------------------------------|-----------|
| CHUNG         | 02-16-06 | MagJack® Combo                | 0821-1X1T-36           | TOL. IN INCH  | UNIT : INCH [mm]             | REV. : E  |
| DRAWN BY      | DATE     | (single USB, Ext. Temp. MDIX) | FILE NAME              | .X            | SCALE : N/A                  | SIZE : A4 |
| DE            | 02-16-06 |                               |                        | .XX           |                              |           |
|               |          |                               |                        | .XXX          |                              | PAGE : 2  |

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## MECHANICAL SPECIFICATION



## RECOMMENDED PCB FOOTPRINT



### RJ45 MECHANICAL:

PLASTIC HOUSING: THERMOPLASTIC PBT  
 FLAMMABILITY RATING UL 94V-0  
 CONTACT PLATING: 30 MICRO-INCH HARD GOLD PLATING  
 PINS: TIN-COATED COPPER WIRE, DIA 0.018 INCH.  
 METAL SHIELD: NICKEL PLATED ON COPPER ALLOY.  
 (ALL GROUND LEADS ARE SOLDER DIPPED)

### USB MECHANICAL:

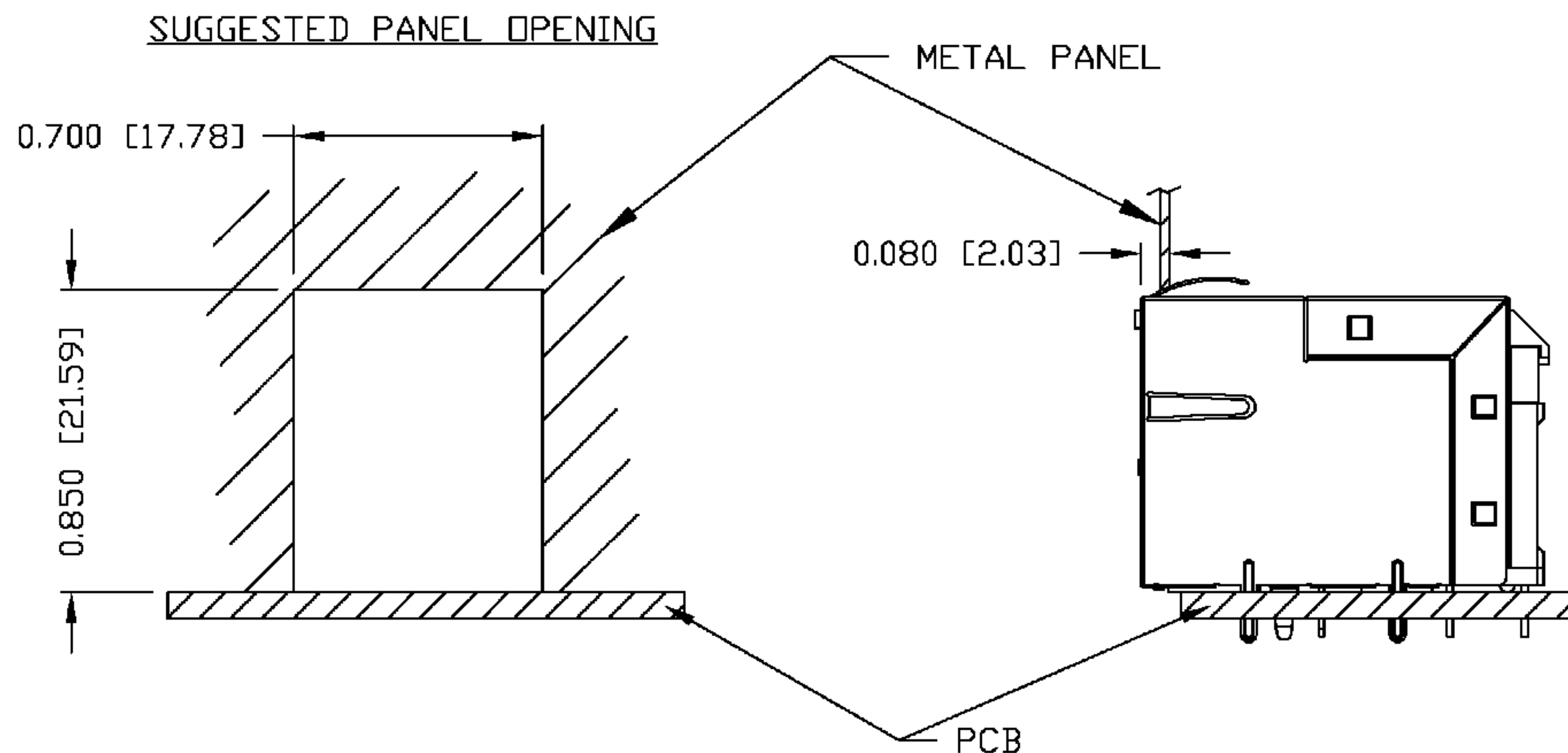
MATING FORCE: 35 NEWTONS MAXIMUM  
 UNMATING FORCE: 10 NEWTONS MINIMUM  
 CONTACT: PROSPER BRONZE  
 30 MICRO-INCH MIN GOLD PLATING ON  
 CONTACT AREA AND TIN/LEAD ON SOLDER TAIL.

[1] MARK PART WITH MFG. LOGO, MFG. NAME, PART NUMBER, AND DATE CODE.

UL US UL RECOGNIZED - FILE #E196366 AND E169987.

|                        |                  |                                                                  |                                            |                               |        |                                                                                       |           |                                                                                                                                      |
|------------------------|------------------|------------------------------------------------------------------|--------------------------------------------|-------------------------------|--------|---------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------|
| ORIGINATED BY<br>ANTON | DATE<br>02-16-06 | TITLE<br><br>MagJack® Combo<br><br>(single USB, Ext. Temp. MDIX) | PART NO. / DRAWING NO.<br><br>0821-1X1T-36 | STANDARD DIM.<br>TOL. IN INCH |        | [ ] METRIC DIM. AS REFERENCE                                                          |           | <br><br>COMPONENTS FOR A<br>CONNECTED<br>PLANET |
| DRAWN BY<br>TING       | DATE<br>02-16-06 |                                                                  | FILE NAME<br><br>08211X1T36E.DWG           | .X                            |        | UNIT : INCH [mm]                                                                      | REV. : E  |                                                                                                                                      |
|                        |                  |                                                                  |                                            | .XX                           |        | SCALE : N/A                                                                           | SIZE : A4 |                                                                                                                                      |
|                        |                  |                                                                  |                                            | .XXX                          | ±0.010 |  | PAGE : 3  |                                                                                                                                      |

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#### NOTES:

THE DISTANCE OF PANEL INSIDE SURFACE RELATIVE TO FRONT SURFACE OF PART IS ONLY A SUGGESTION. IN CASE THIS DISTANCE IS DIFFERENT, THE REQUIRED PANEL OPENING DIMENSIONS CHANGE ACCORDINGLY.

#### PACKING INFORMATION

PACKING TRAY : 0200-0148-48 (TOP)  
0200-0148-49 (BOTTOM)

PACKING QUANTITY : 60 PCS FINISHED GOODS PER TRAY  
8 TRAYS (480 PCS FINISHED GOODS) PER CARTON BOX

NOTE : CARDBOARDS ARE PLACED BETWEEN LAYERS OF PACKING TRAY INSIDE CARTON BOX  
(INCLUDE THE UPPERMOST AND LOWERMOST TRAY)

|                        |                  |                                                                  |                                            |                               |        |                                                                                       |           |
|------------------------|------------------|------------------------------------------------------------------|--------------------------------------------|-------------------------------|--------|---------------------------------------------------------------------------------------|-----------|
| ORIGINATED BY<br>ANTON | DATE<br>02-16-06 | TITLE<br><br>MagJack® Combo<br><br>(single USB, Ext. Temp. MDIX) | PART NO. / DRAWING NO.<br><br>0821-1X1T-36 | STANDARD DIM.<br>TOL. IN INCH |        | [ ] METRIC DIM. AS REFERENCE                                                          |           |
| DRAWN BY<br>TING       | DATE<br>02-16-06 |                                                                  | FILE NAME<br><br>08211X1T36E.DWG           | .X                            |        | UNIT : INCH [mm]                                                                      | REV. : E  |
|                        |                  |                                                                  |                                            | .XX                           |        | SCALE : N/A                                                                           | SIZE : A4 |
|                        |                  |                                                                  |                                            | .XXX                          | ±0.004 |  | PAGE : 4  |

  
COMPONENTS FOR A  
CONNECTED  
PLANET

**bel**  
COMPONENTS FOR A  
CONNECTED  
PLANET