

# APPROVAL SHEET

To :

Customer P/N :

UDE P/N : RU4-ZZ-0039

Description : RJ45 Tab up over USB 2.0 stack  
Through Hole

10G Base-T

Contact Area : 30μ" Min. Gold

LED : L-Green; R-Yellow



Spec No.  
RU417030-00

Update Date  
2017/6/7

Revision  
A

| Approved | Checked | Prepared |
|----------|---------|----------|
|          |         |          |



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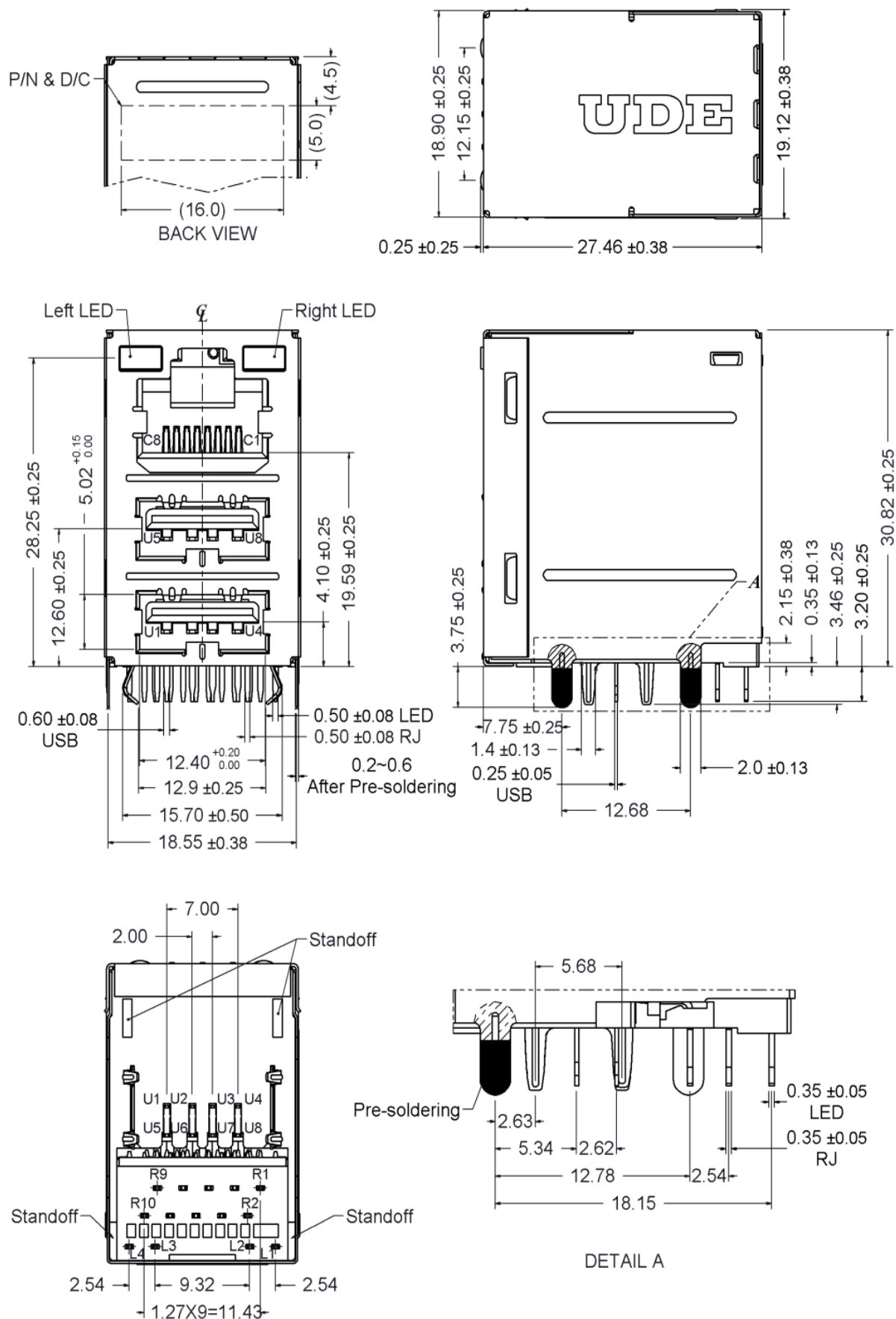
## Revision History

[illegible]

## 1. MECHANICAL DIMENSION

## Product Dimension

|         |                                                              |
|---------|--------------------------------------------------------------|
| Unit:mm | General Tolerance :<br>X.X : $\pm 0.38$<br>X.XX : $\pm 0.20$ |
|---------|--------------------------------------------------------------|



## Recommended PCB Layout. Component side of board

All dimension units are "mm".

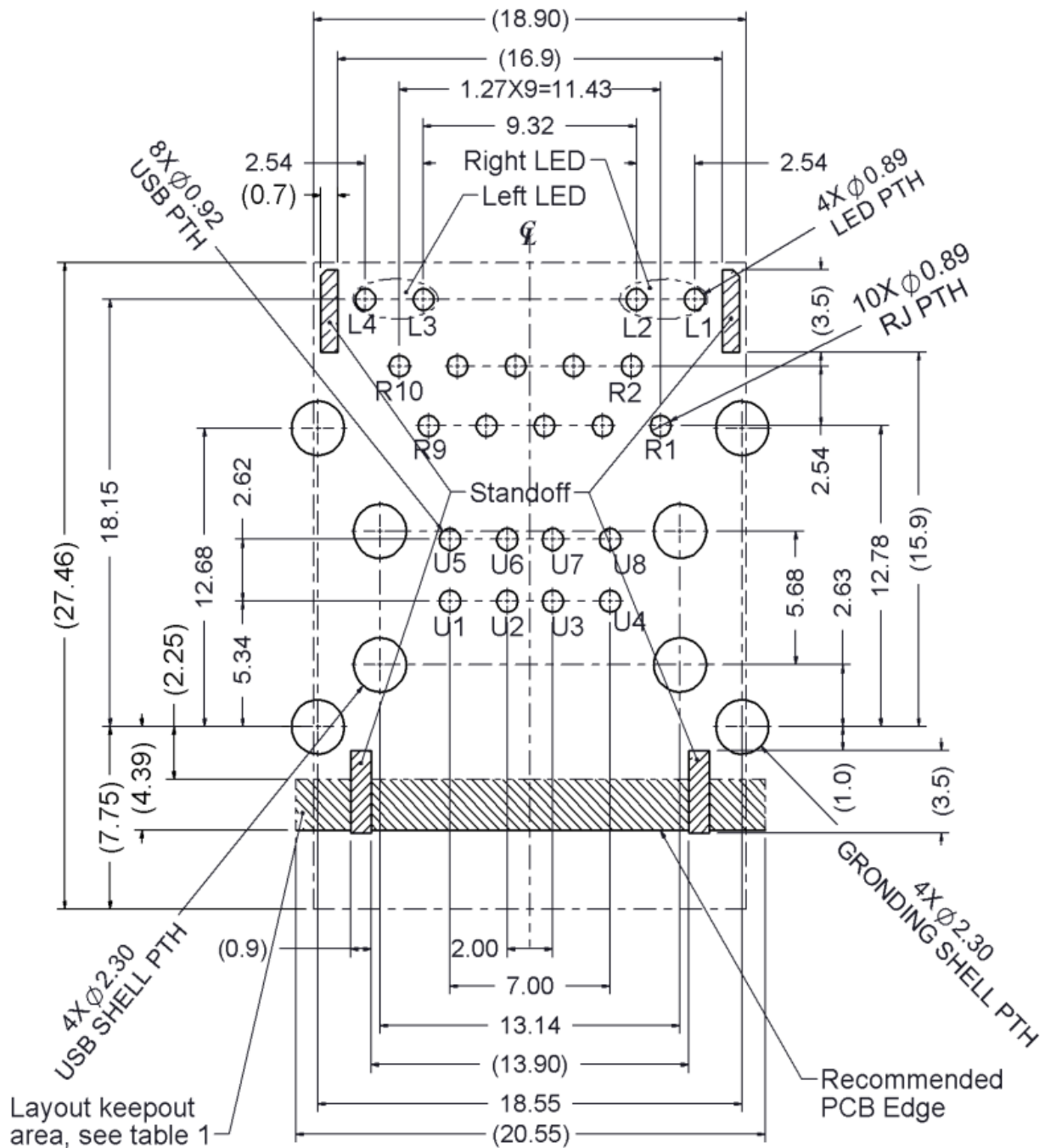
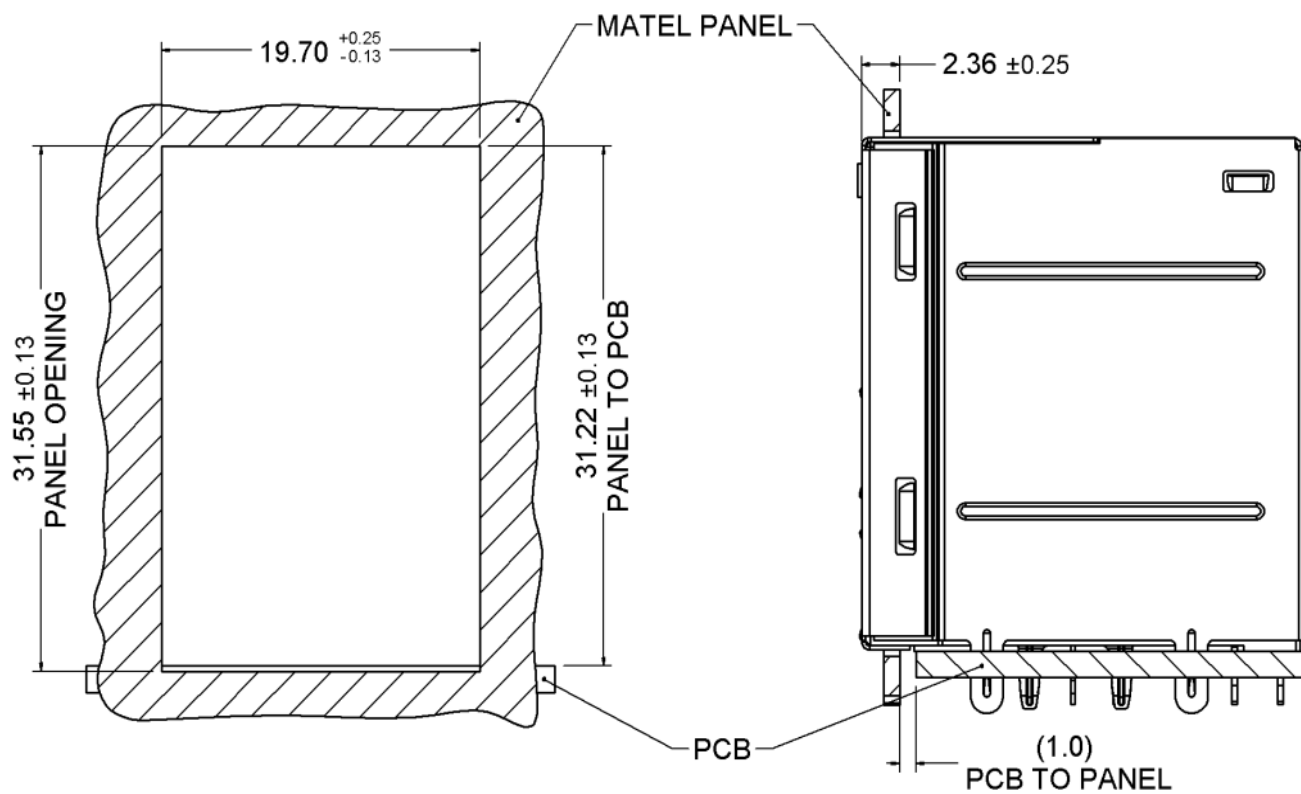
All dimension tolerances are  $\pm 0.05\text{mm}$  unless otherwise specified.

Table1

| Layout<br>Layer | Trace | component | Grounding | Test<br>Point | Via Hole | PTH | NPTH |
|-----------------|-------|-----------|-----------|---------------|----------|-----|------|
| Component side  | X     | X         | O         | X             | X        | X   | O    |
| Inner layer     | O     | NA        | O         | NA            | O        | X   | O    |
| Bottom side     | O     | O         | O         | O             | O        | X   | O    |

X--Forbid; O--OK; NA--Not Applicable.

## Recommended Panel cutout



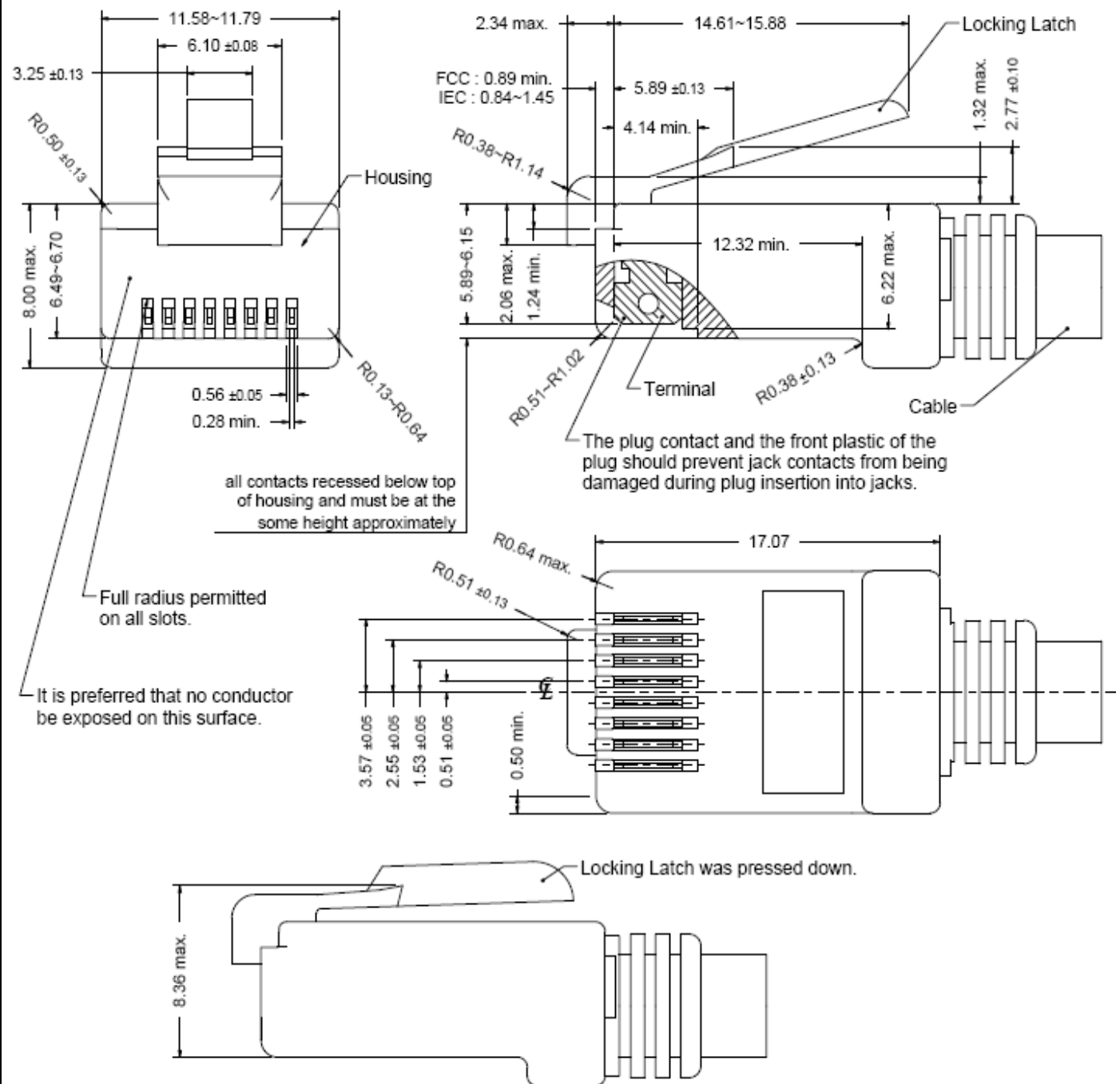
## 2. Packing Information

40 pcs finished goods per tray

5 trays(200 pcs finished goods) per inner box

4 Inner boxes(800 pcs finished goods) per master carton

### 3. Standard RJ45 Plug Specification



- All dimensions follow :

FCC subpart F, 68,500, Figure (C)(2)(i) & (C)(2)(ii) & (C)(3)(i)

IEC 60603-7

- All plugs must be meeting the requirements of plug Go & No-Go gauge.

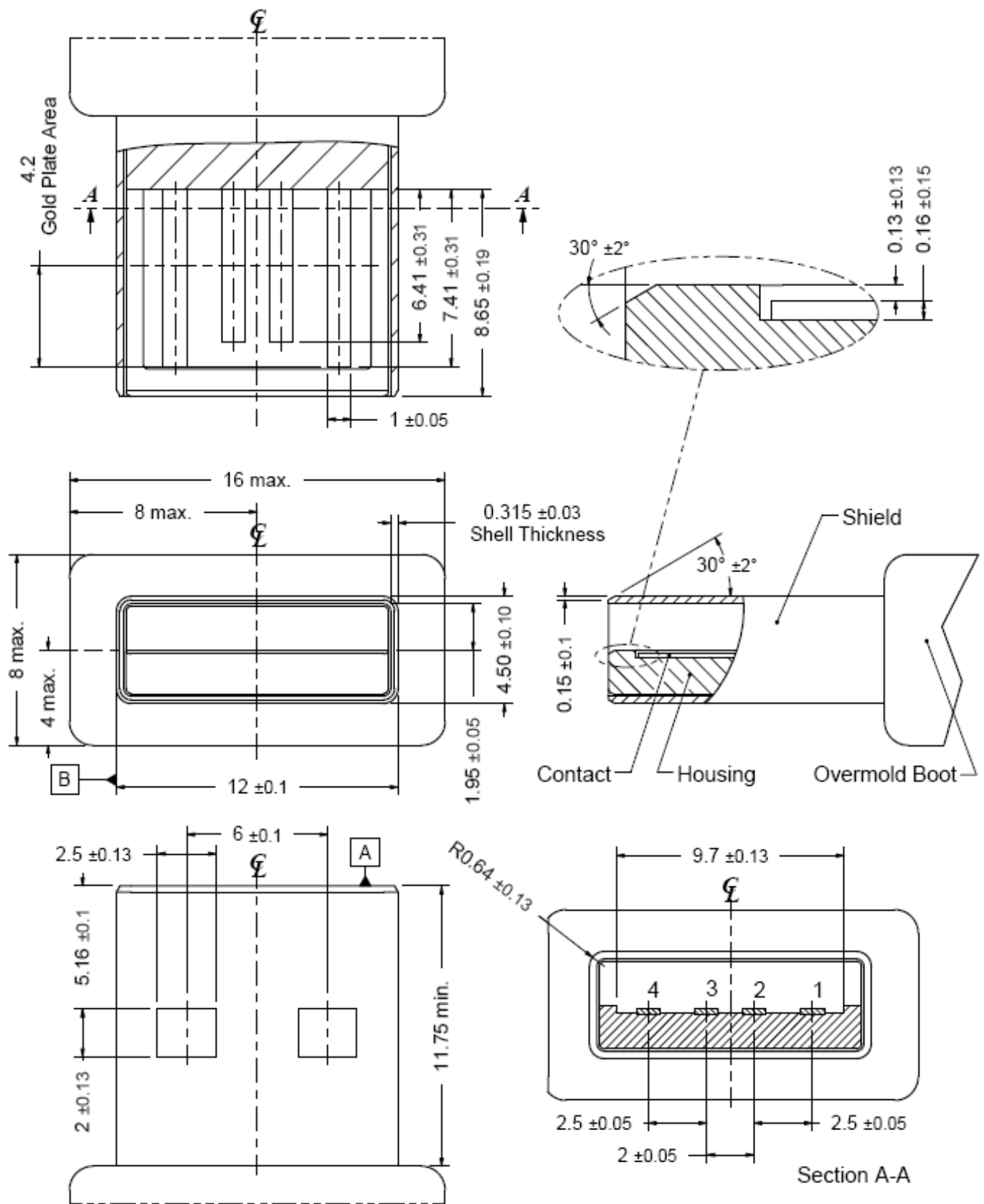
Gauge follow : FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)

- There must be no damage to Housing and Locking Latch.

- There must be no nicks and cuts in cable.

- Durability : 750 cycles generally

## 4. Standard USB 2.0 Plug Specification



- All dimensions follow : Universal Serial Bus Specification 2.0 (April 27,2000)

Figure 6-9. USB Series A Plug Interface Drawing

## 5. REQUIREMENTS

### Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable.

### Material

Terminal Parts (Underplating : 50 $\mu$ " min. Nickel overall)

RJ Terminal : Phosphor Bronze, Thickness=0.30mm

Finish Contact Area : 30 $\mu$ " min. Gold

USB Terminal : Phosphor Bronze, Thickness=0.25mm

Finish Contact Area : 30 $\mu$ " min. Gold

Solder Tail : 100 $\mu$ " min. Bright Tin

Input Terminal : Brass, Thickness=0.35mm

Finish : 100 $\mu$ " min. Bright Tin

Case Terminal : CP Wire, Diameter=0.40mm

Finish : 100 $\mu$ " min. Bright Tin

Plastic Parts <UL94V-0>

Housing : PBT, Black

Case : PF2A5-151J, Black

Spacer : PBT, Black

Shield Parts

Front Shield : stainless steel, Thickness=0.25mm, unplating

Back Shield : stainless steel, Thickness=0.20mm, Pre-soldering

USB Kink : Brass, Thickness=0.25mm

Finish : 100 $\mu$ " min. Tin over 30 $\mu$ " min. Nickel overall

## 6. Operating and Storage Temperature

Operating Temperature : 0°C to +70°C

Storage Temperature : -40°C to +85°C

## 7. RJ45 specifications

Insulation Resistance : 500MΩ min.

Insertion force with the latch depressed : 20N max.

Removal force with the latch depressed : 20N max.

Locking Force of Plug Latch : 50N min. @ 60+/-5 sec.

Durability : 2500 cycles

## 8. USB 2.0 specifications

Insulation Resistance : 1000MΩ min.

Dielectric Withstanding Voltage : 500Vac @1min.

Insertion force : 35N max.

Removal force : 10N min.

Durability : 1500 cycles

## 9. Performance and Test Description

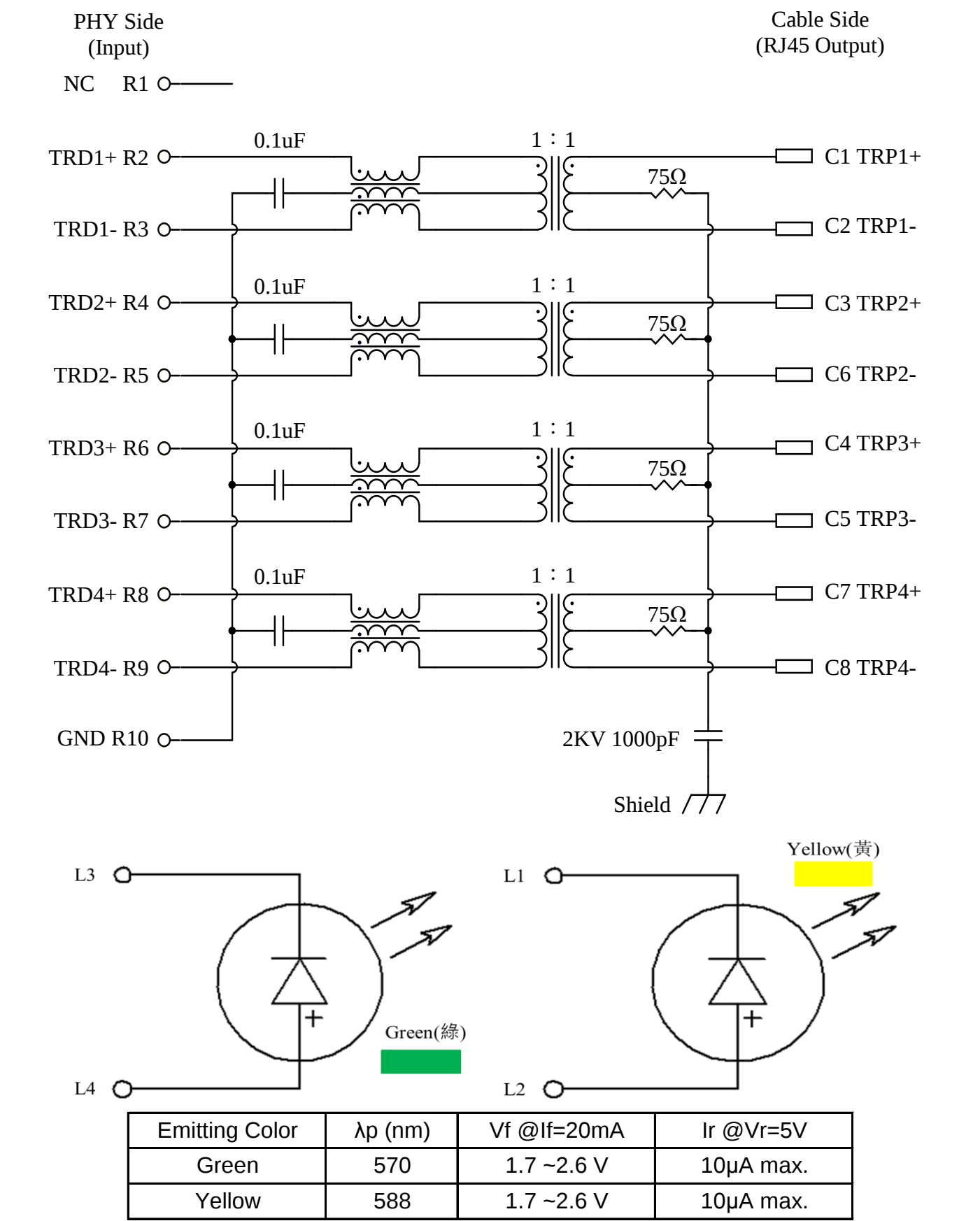
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table.

All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

## 10 Packaging and Packing

All parts shall be packaged and packed to protect against physical damage 、 corrosion and deterioration during shipment and storage.

11. ELECTRICAL CHARACTERISTICS @ 25℃



## Transmitter filter &amp; Receiver filter

Type : Balance low pass 100Ω impedance

Insertion loss : 1~400MHz -2.0dB(-1.4TYP) max.

|               |        |            |           |
|---------------|--------|------------|-----------|
| Return loss : | 1MHz   | -20dB min. | load 100Ω |
|               | 100MHz | -20dB min. | load 100Ω |
|               | 200MHz | -18dB min. | load 100Ω |
|               | 300MHz | -15dB min. | load 100Ω |
|               | 400MHz | -10dB min. | load 100Ω |
|               | 500MHz | -8dB min.  | load 100Ω |

## Reflected CM to Diff Conversion(REF)

|        |            |
|--------|------------|
| 50MHz  | -30dB min. |
| 100MHz | -27dB min. |
| 200MHz | -24dB min. |
| 300MHz | -22dB min. |
| 400MHz | -21dB min. |
| 500MHz | -20dB min. |

## Reflected Diff to CM Conversion(REF)

|        |            |
|--------|------------|
| 1MHz   | -48dB min. |
| 100MHz | -35dB min. |
| 400MHz | -24dB min. |
| 500MHz | -24dB min. |

## CM to Diff Conversion (REF)

|        |            |
|--------|------------|
| 50MHz  | -48dB min. |
| 100MHz | -42dB min. |
| 200MHz | -36dB min. |
| 300MHz | -33dB min. |
| 400MHz | -30dB min. |
| 500MHz | -28dB min. |

## CM to CM Attenuation (REF)

|         |            |
|---------|------------|
| 1MHz    | -22dB min. |
| 500MHz  | -20dB min. |
| 800MHz  | -20dB min. |
| 1000MHz | -17dB min. |

## Cross Talk (REF)

|        |            |
|--------|------------|
| 1MHz   | -34dB min. |
| 350MHz | -23dB min. |
| 500MHz | -23dB min. |

## Inductance (OCL) @ 25°C, 100KHz, 100mV, 8mA DC BIAS

Input(TRD1+ 、 TRD1-), (TRD2+ 、 TRD2-), (TRD3+ 、 TRD3-), (TRD4+ 、 TRD4-) : 160uH min.

## HiPot Test

PHY Side(input) To Cable Side(output) : 1500Vac 60s or 2250Vdc 60s

## 12. WAVE SOLDERING TEMPERATURE PROFILE

Note :

The measuring point for the specified temperature shall be on the soldered part of the lead.

