

# APPROVAL SHEET

To :

Customer P/N :

UDE P/N : RU3-ZZ-0039

Description : RJ45 Tab up over USB 2.0

Through Hole

10/100/1000 Base-T

Contact Area : Gold Flash

LED : L-Green; R-Yellow

Light Pipe



Spec No.  
RU319011-00

Update Date  
2019/3/26

Revision  
A

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



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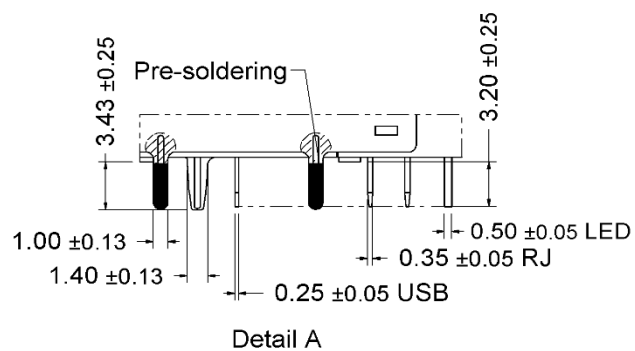
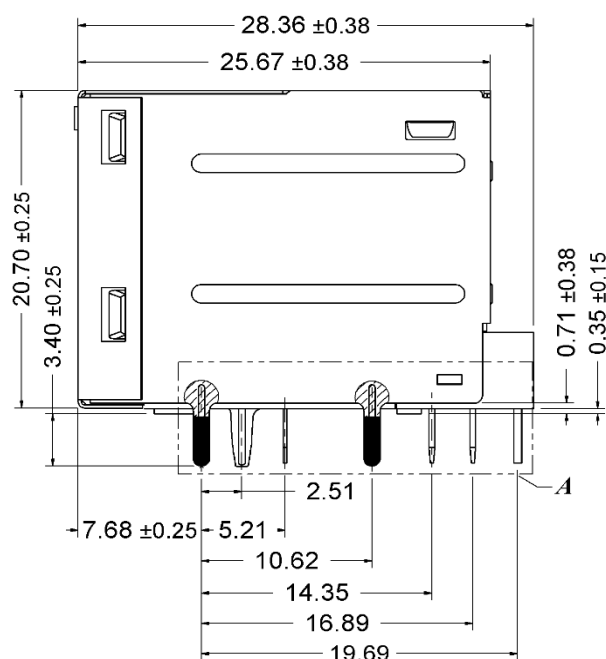
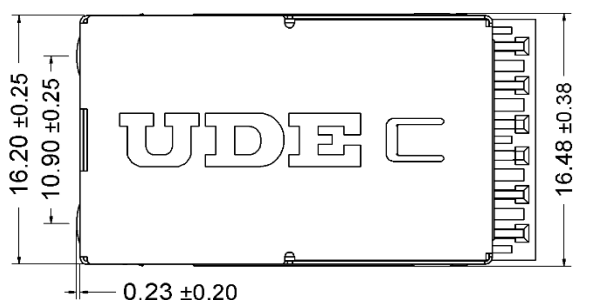
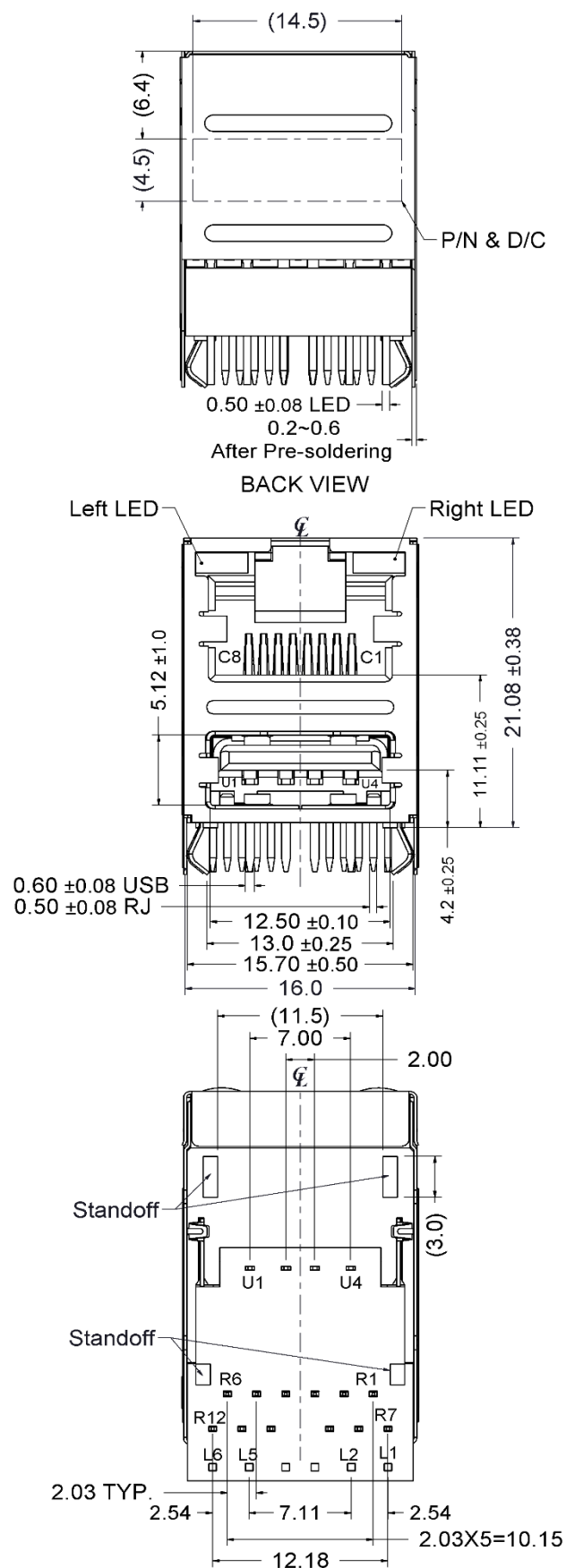
## Revision History

[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".

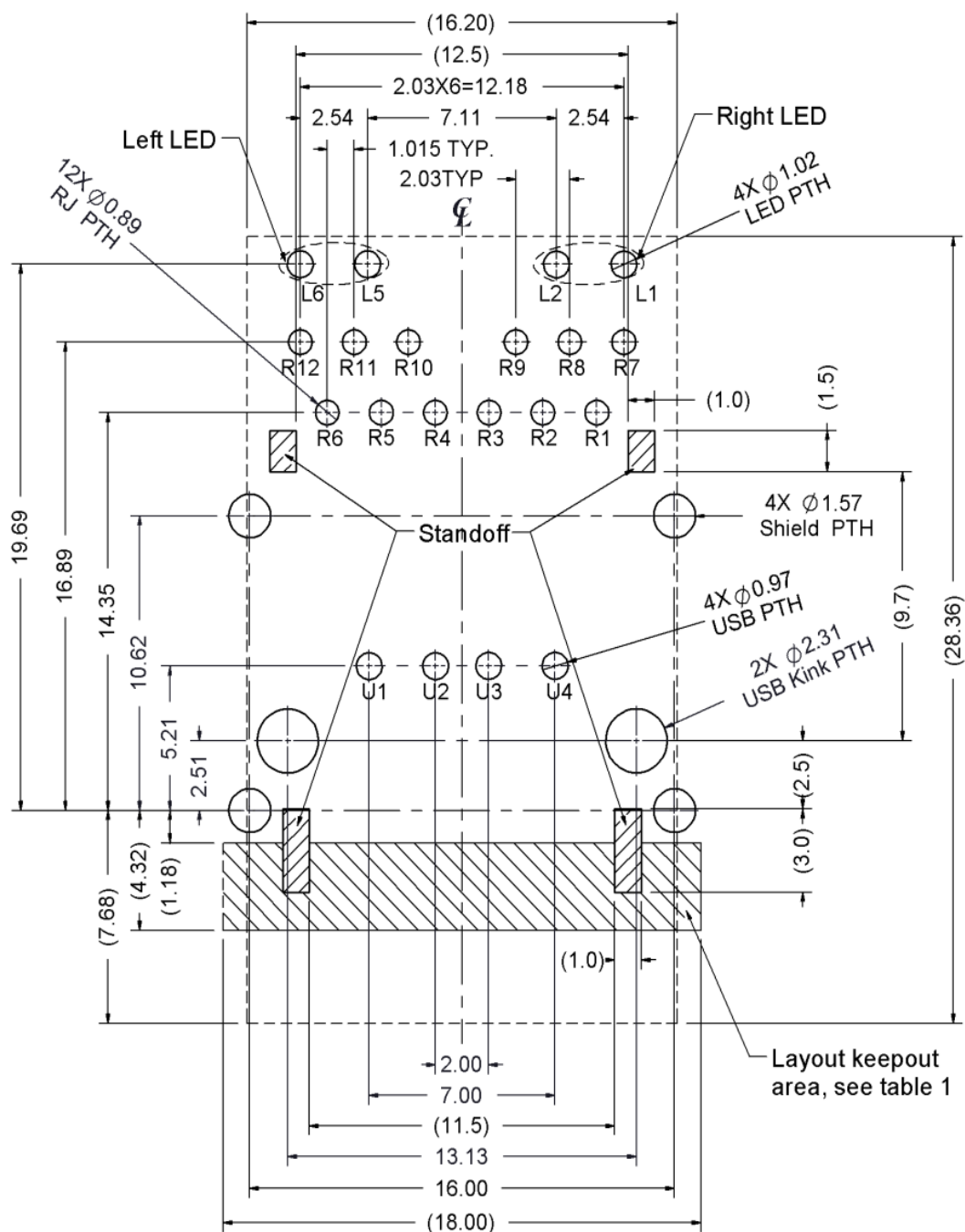
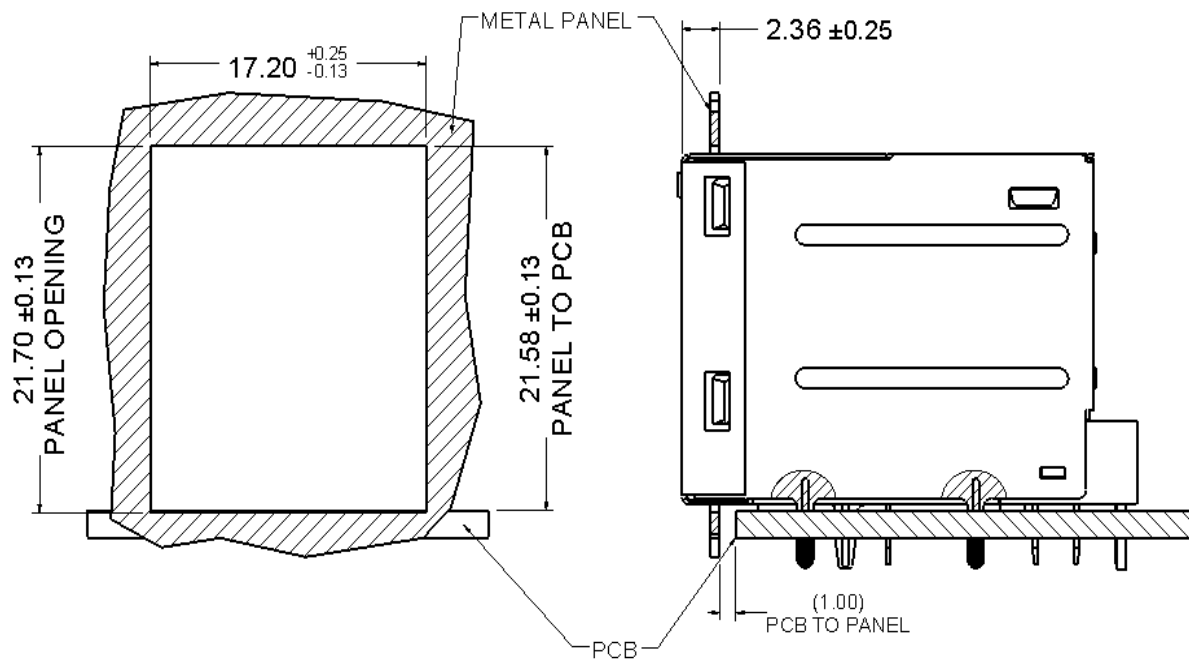
All dimension tolerances are  $\pm 0.05$ mm unless otherwise specified.

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



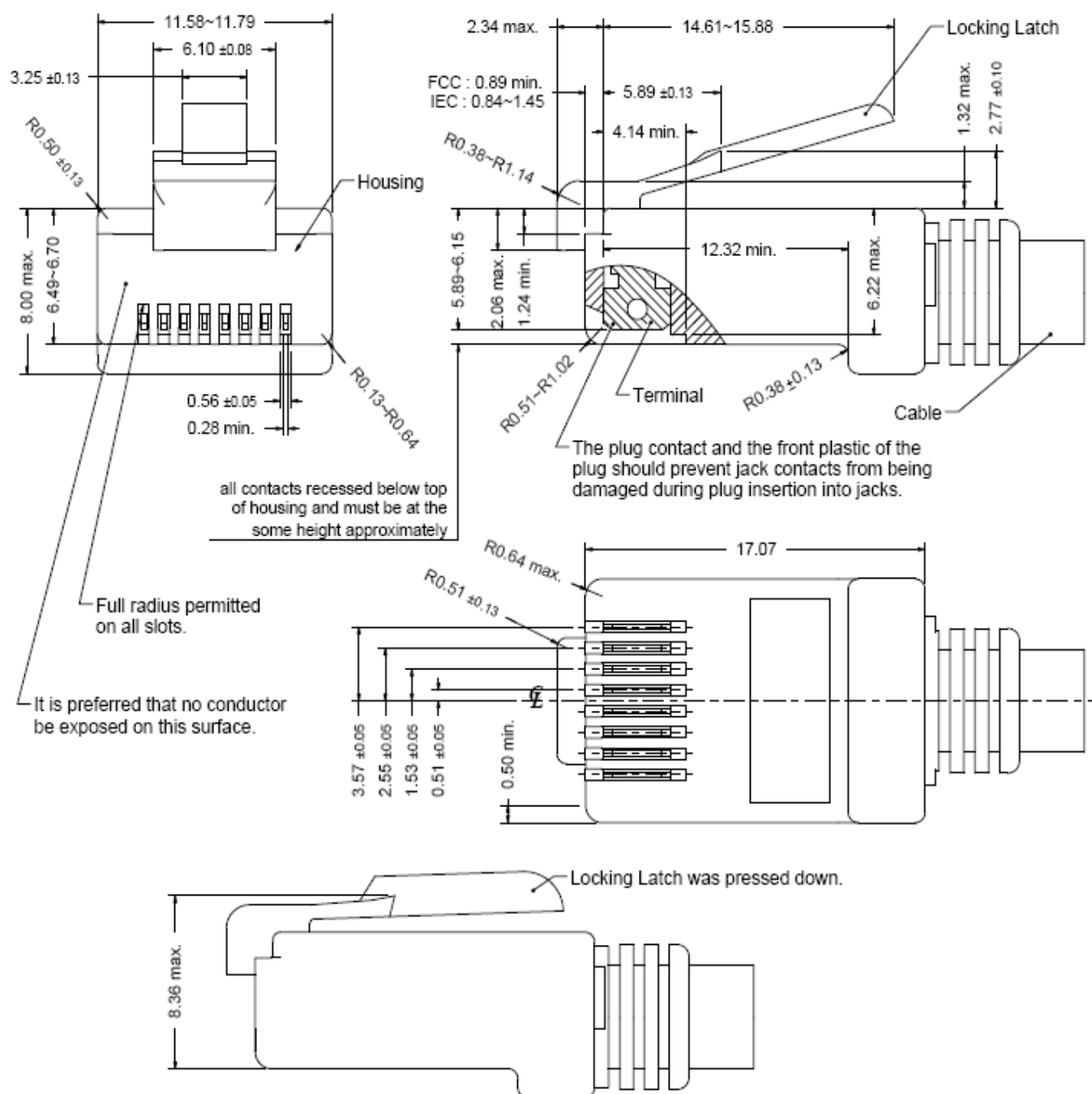
## 2. Packing Information

40 pcs finished goods per tray

7trays(280 pcs finished goods) per inner box

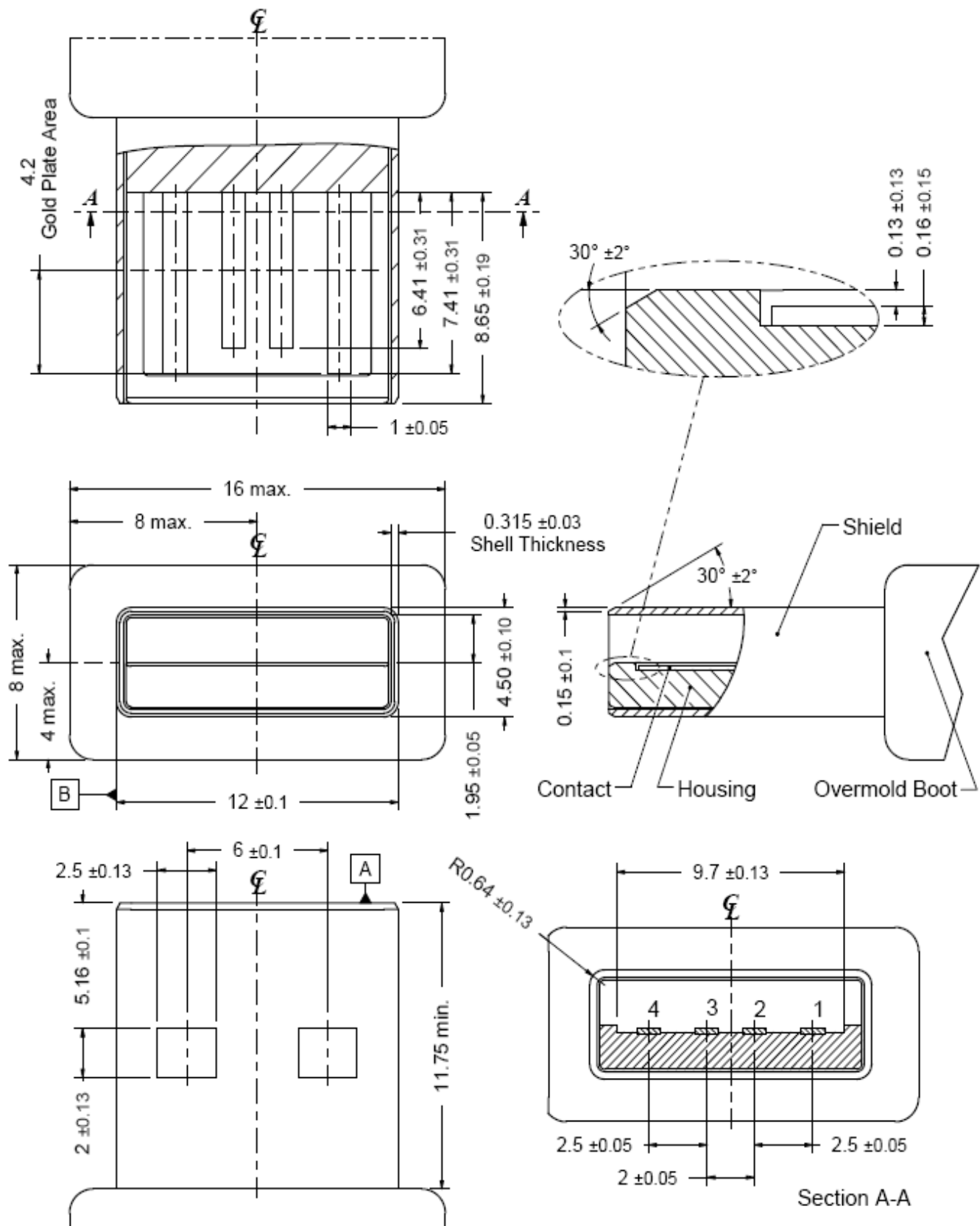
4 Inner boxes(1120 pcs finished goods) per master carton

### 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 : Gold Flash

USB Terminal : Phosphor Bronze, Thickness=0.25mm

Finish : Contact Area : Gold Flash

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

Input Terminal : Brass, Thickness=0.35mm

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

Case Terminal : Brass, Thickness=0.30mm

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

Plastic Parts <UL94V-0>

Housing :PBT, Black

Case : PBT, Black

Spacer : PBT, Black

Light Pipe : PC, Transparent

Shield Parts

Front Shield : Stainless steel, Thickness=0.20mm, unplating

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

USB Shield : Stainless steel, Thickness=0.25mm, unplating

USB Kink : Brass, Thickness=0.25mm

Finish : 100 $\mu$ " min. Matte. Tin over 50 $\mu$ " 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 : 750 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

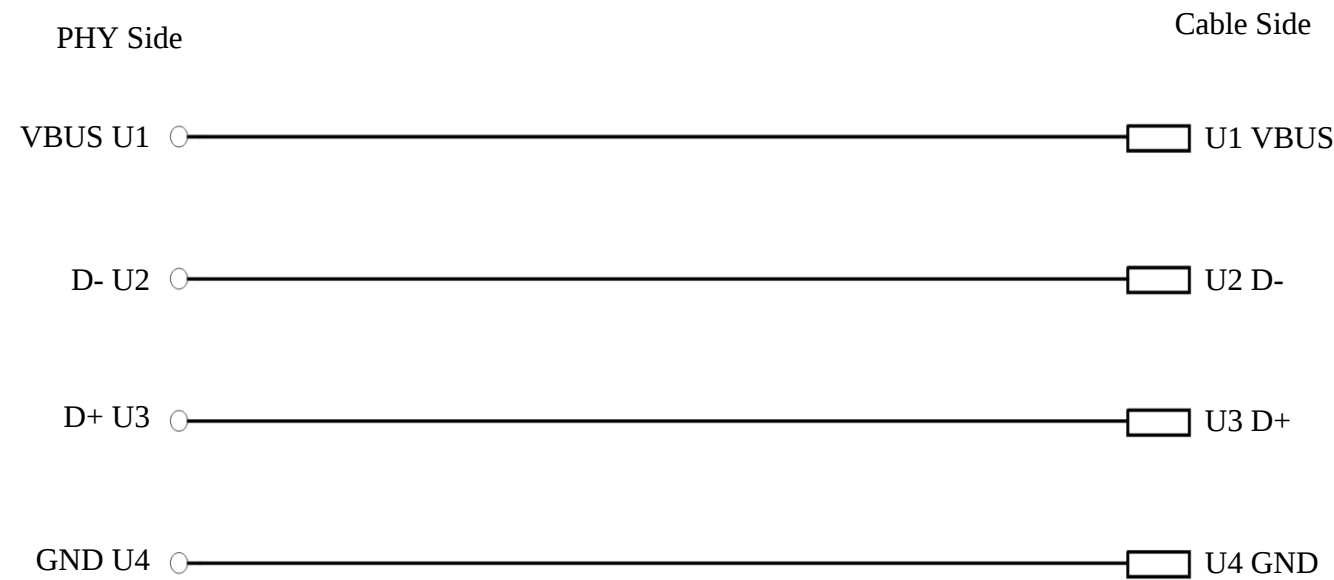
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table.

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.

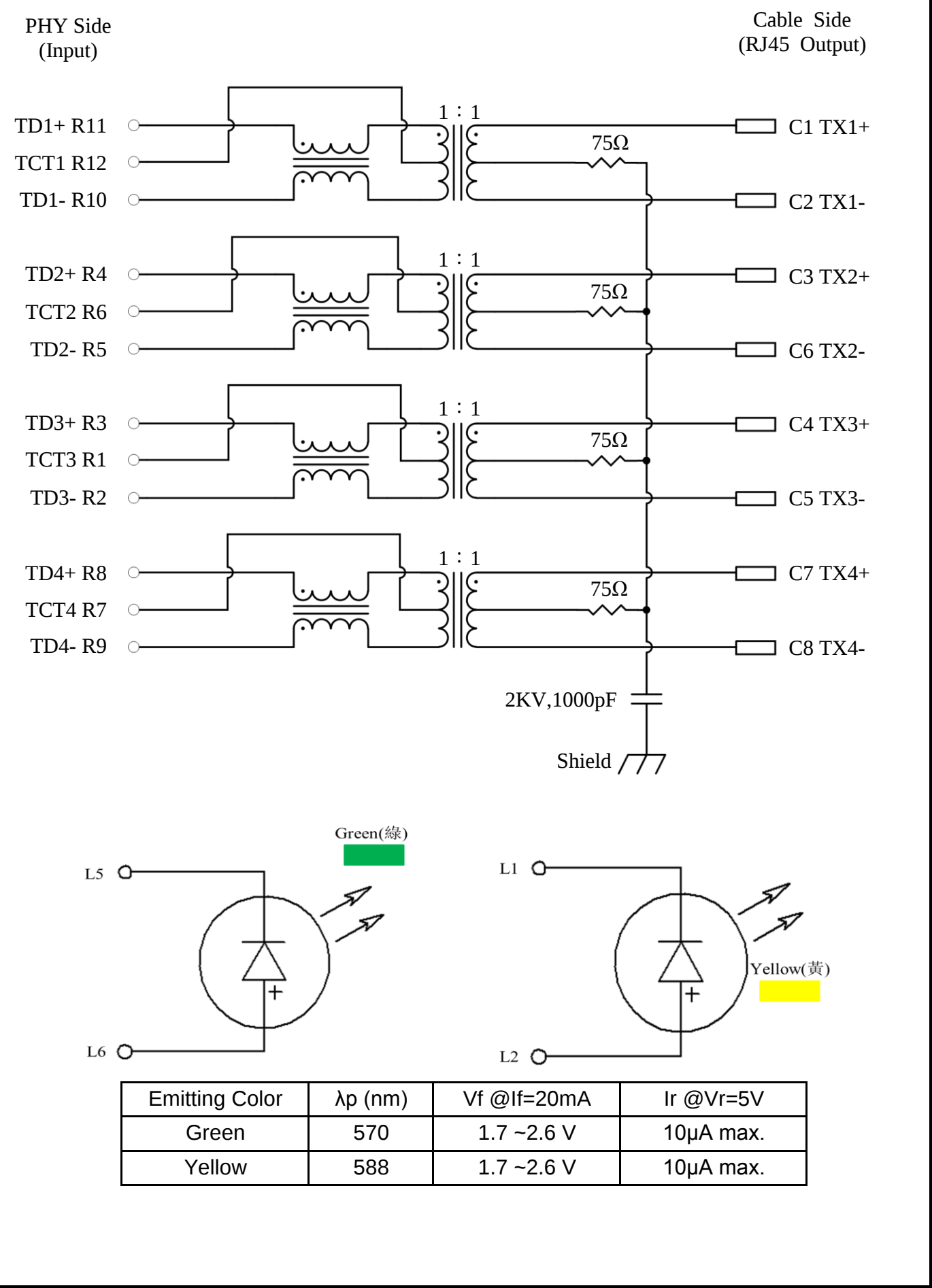
11. USB 2.0 Standard-A Schematic



USB 2.0 Standard-A Pin Assignment

| Pin Number | Signal Name | Description              | Mating Sequence |
|------------|-------------|--------------------------|-----------------|
| U1         | VBUS        | Power                    | Second          |
| U2         | D-          | USB2.0 Differential pair | Third           |
| U3         | D+          |                          |                 |
| U4         | GND         | Ground for power return  | Second          |
| Shell      | Shield      | Connector metal shell    | First           |

12. ELECTRICAL CHARACTERISTCS @25℃



## Transmitter filter &amp; Receiver filter

Type : Balance low pass 100Ω impedance

Insertion loss : 1~100MHz -1.0dB max.

Return loss : 1~30MHz -18dB min. load 100Ω

30~60MHz -16dB min. load 100Ω

60~80MHz -12dB min. load 100Ω

80~100MHz -10dB min. load 100Ω

## Common Mode Rejection

@1~100 MHz -30dB min.

## Cross Talk

@ 1~100MHz -30dB min.

Inductance (OCL) @ 100KHz, 0.1V, 8mA DC BIAS

Input(TD1+,TD1-); (TD2+,TD2-); (TD3+,TD3-); (TD4+,TD4-) : 350 μH min.

## HiPot Test

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

## 13. WAVE SOLDERING TEMPERATURE PROFILE

Note :

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

