

# APPROVAL SHEET

To :

Customer P/N :

UDE P/N : 05-A00397263-1

Description : RJ45 Tab up over USB 3.0 stack  
Through Hole

10/100/1000 Base-T

Contact Area : 30μ" Gold

LED:L-Yellow;R-Green/Orange



Spec No.  
05-137-MS

Update Date  
2015/12/23

Revision  
D

Approved	Checked	Prepared



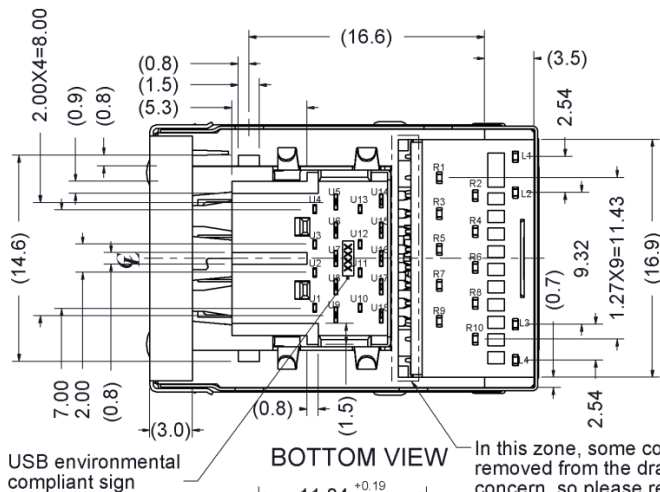
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## 1. MECHANICAL DIMENSION

## 1.1 Product Dimension

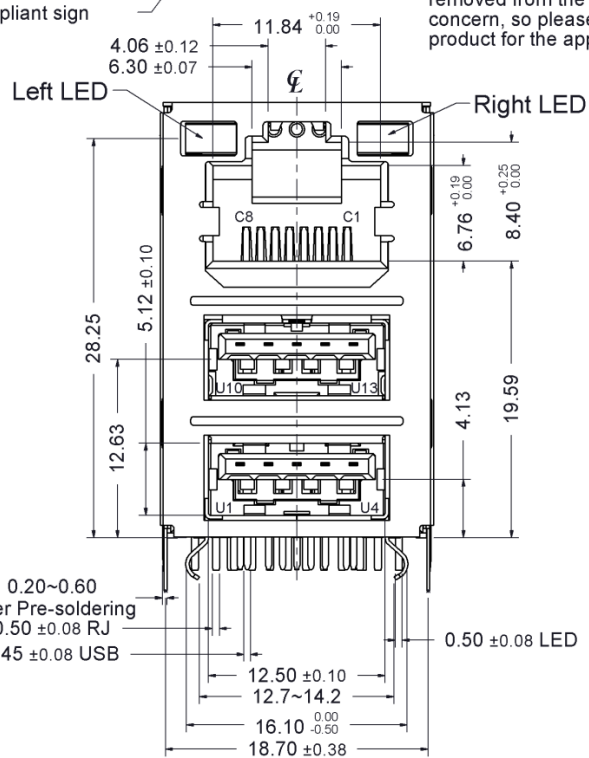
General Tolerance : X.X :  $\pm 0.38$   
X.XX :  $\pm 0.25$



USB environmental  
compliant sign

BOTTOM VIEW

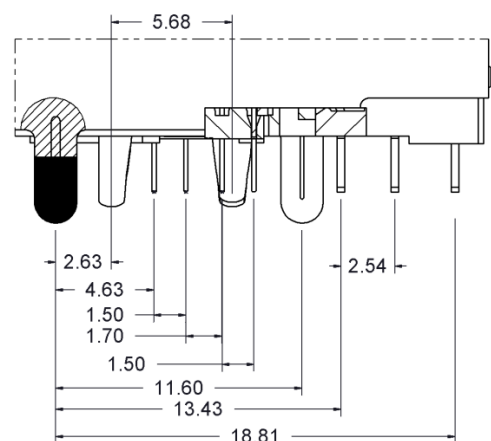
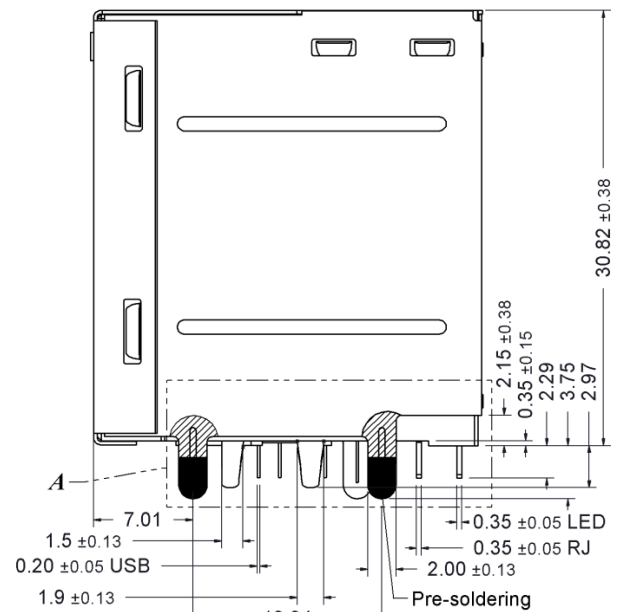
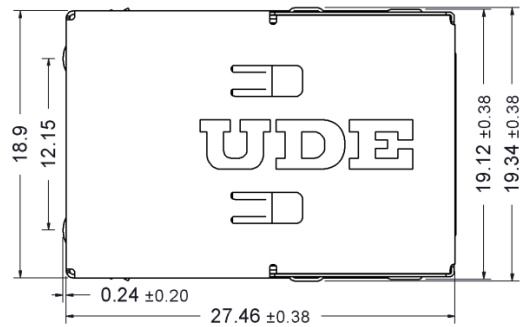
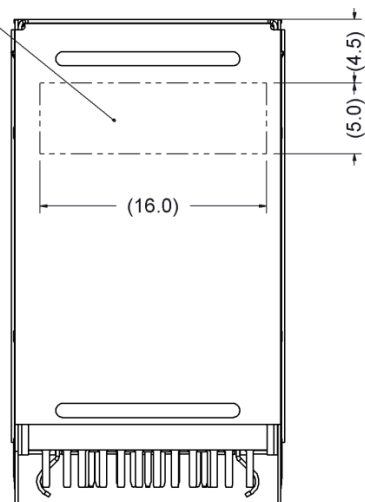
In this zone, some components were removed from the drawing for confidential concern, so please refer to the actual product for the appearance checking



Left LED

Right LED

P&N/D&C

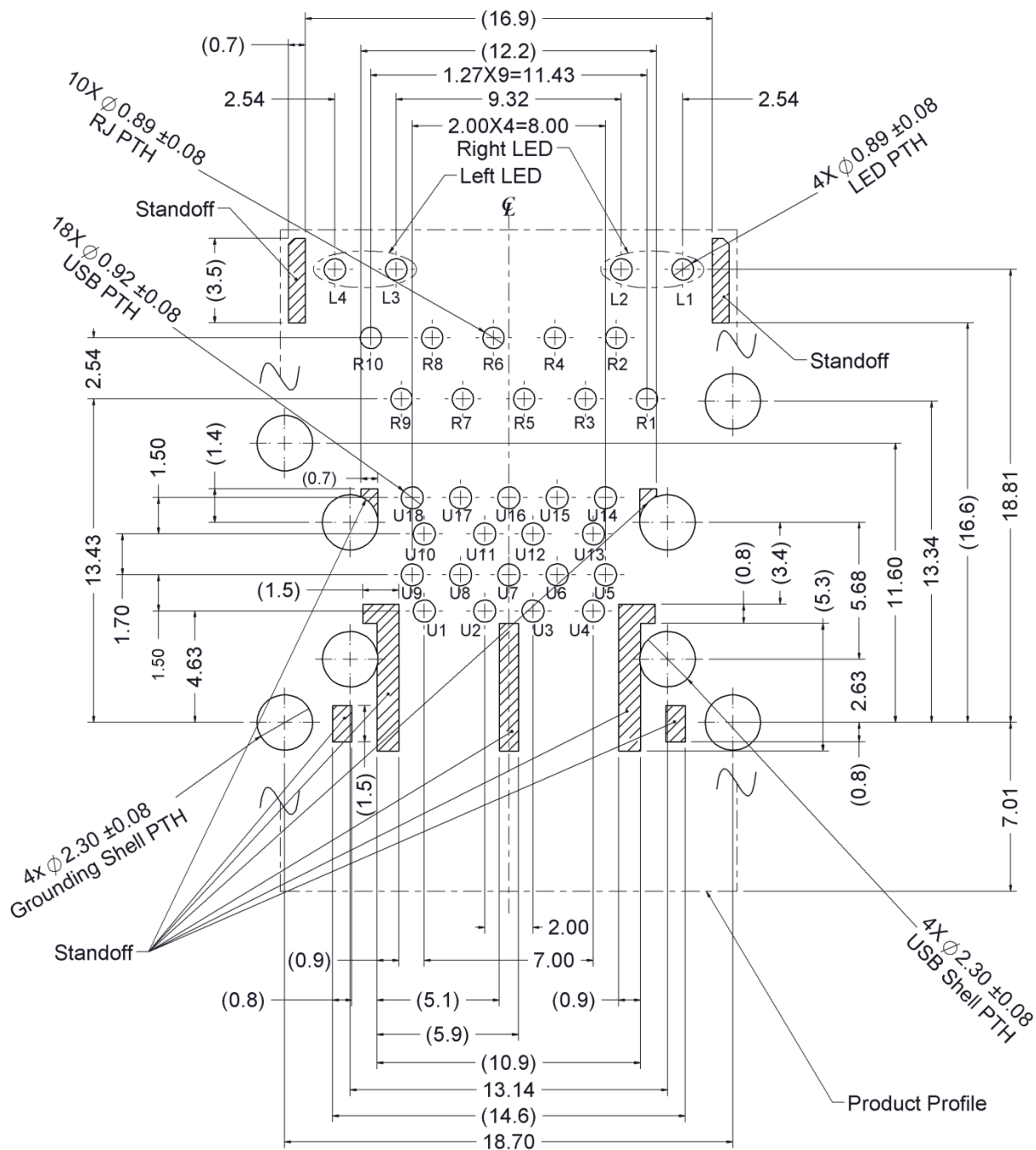


DETAIL A

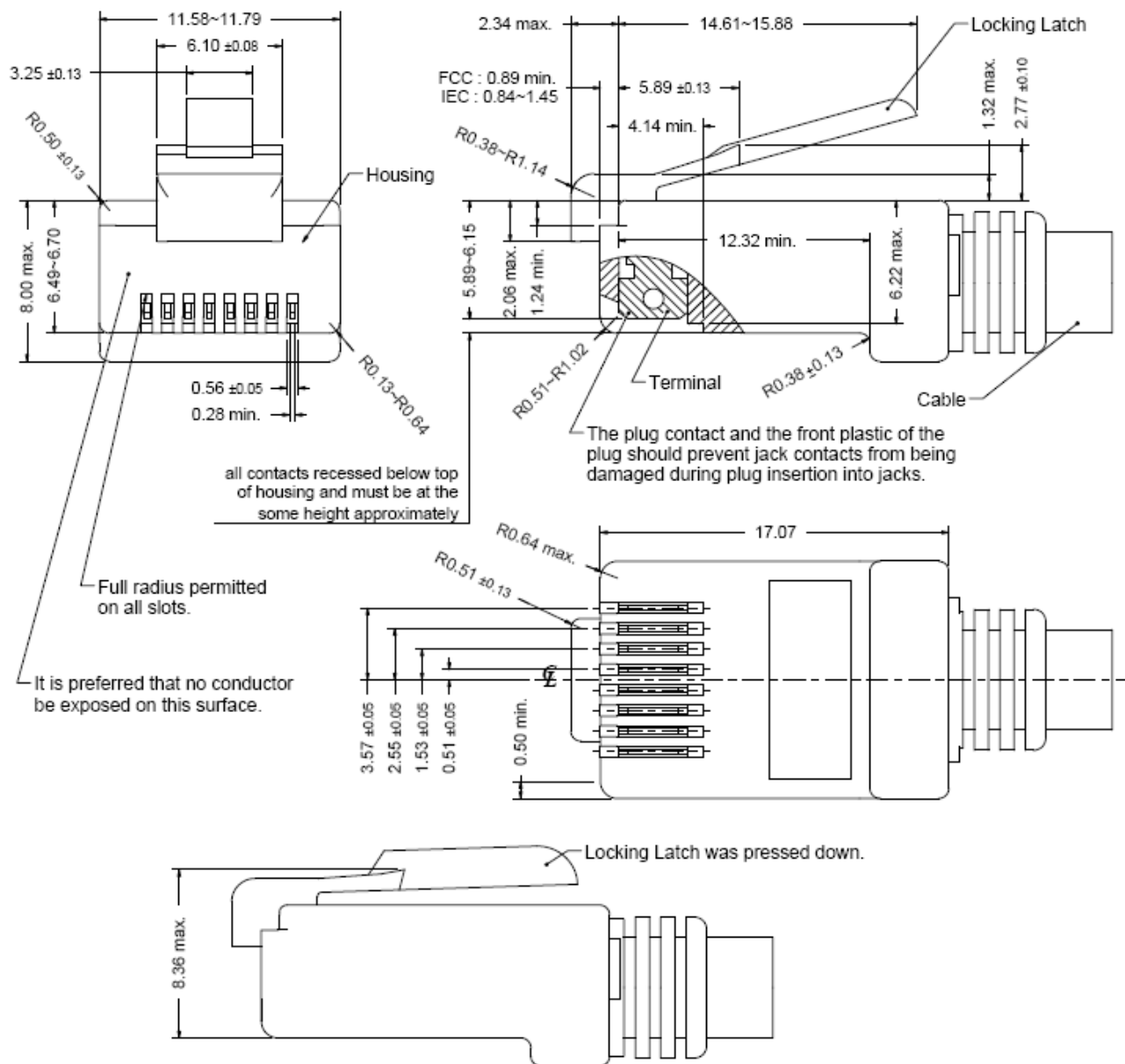
## 1.2 Recommended PCB Layout

### Component Side of Board

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



### 1.3 Standard RJ45 Plug Specification



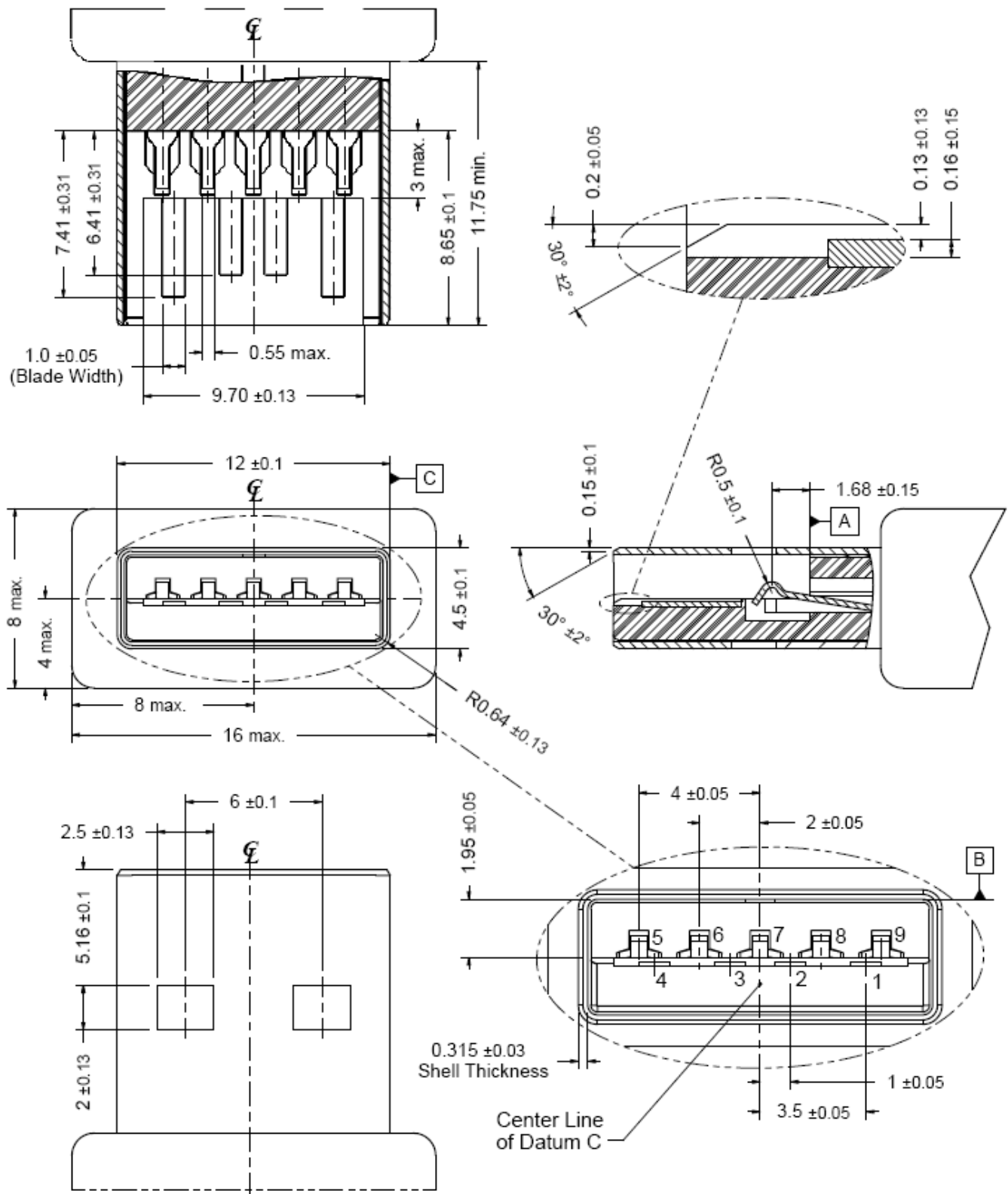
- All dimensions follow :

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

## 1.4 Standard USB 3.0 Plug Specification



- All dimensions follow : Universal Serial Bus 3.0 Specification, Revision 1.0.

Figure 5-2. USB 3.0 Standard Plug-A interface dimensions

- Non-dimensions geometry for reference only, subject to change.

- Drawing for mating interface dimensions only.

Views may not show realistic manufacturing condition.

## 2. REQUIREMENTS

### 2.1 Design and Construction

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

### 2.2 Material

#### 2.2.1 Terminal Parts (Underplating : 50μ" min. Nickel overall)

2.2.1.1 RJ Terminal : PH. Bronze, C5191R-H, Thickness=0.30mm

Finish : Contact Area : 30μ" Gold

2.2.1.2 USB 2.0 Terminal : Brass, C2680R-EH, Thickness=0.20mm

Finish : Contact Area : 30μ" Gold

Solder Tail : 100μ" min. Mt. Tin

2.2.1.3 USB 3.0 Terminal : Brass, C2680R-EH, Thickness=0.20mm

Finish : Contact Area : 30μ" Gold

Solder Tail : 100μ" min. Mt. Tin

2.2.1.4 Input Terminal : Brass, C2680R-EH, Thickness=0.35mm

Finish : 100μ" min. Mt. Tin

2.2.1.5 LED Terminal : Brass, C2680R-EH, Thickness=0.35mm

Finish : 100μ" min. Mt. Tin

#### 2.2.2 Plastic Parts <UL94V-0>

2.2.2.1 RJ Housing : PBT, Black, 30% G.F.

2.2.2.2 Spacer : PBT, Black, 30% G.F.

2.2.2.3 USB Housing : PBT, Blue(300C), 30% G.F.

2.2.2.4 USB Top Housing : PBT, Blue(300C), 30% G.F.

2.2.2.5 USB Bottom Housing : PBT, Blue(300C), 30% G.F.

2.2.2.6 USB Spacer : PA9T, Blue(300C), 30% G.F.

2.2.2.7 USB Cover : PBT, Blue(300C), 30% G.F.

#### 2.2.3 Shield Parts

2.2.3.1 Front Shield : Stainless, SUS 304R-1/2H, Thickness=0.25mm, unplating

2.2.3.2 Back Shield : Stainless, SUS 304R-1/2H, Thickness=0.20mm,  
Pre-soldering

2.2.3.3 Grounding Spring : Brass, C2680R-H, Thickness=0.20mm  
Finish : 100μ" min. Tin

2.2.3.4 USB Shield : Stainless, SUS 304R-1/2H, Thickness=0.25mm,  
Pre-soldering

2.2.3.5 USB Tongue Shield : Stainless, SUS 304R-1/2H, Thickness=0.25mm

2.2.3.6 USB Back Shield : Stainless, SUS 304R-1/2H, Thickness=0.20mm

### 2.3 Operating and Storage Temperature

Operating Temperature : 0°C to +70°C

Storage Temperature : -40°C to +85°C

### 2.4 RJ45 specifications

Insulation Resistance : 500MΩ min.

Insertion force with the latch depressed : 22N max

Removal force with the latch depressed : 44N max

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

Durability : 2500 cycles

### 2.5 USB 3.0 specifications

Contact Current Rating: 1A

Contact Resistance: 30mΩ Max.

Insulation Resistance : 1000MΩ min.

Dielectric Withstanding Voltage : 500Vac @ 1min

Insertion force : 35 N max at a max. rate of 12.5mm per minute

Extraction force : 10 N min and 8 N after the specified insertion/extraction

Durability : 1500 cycles for standard class

### 2.6 Performance and Test Description

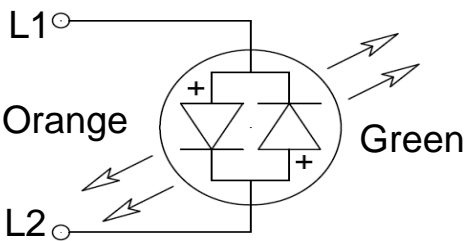
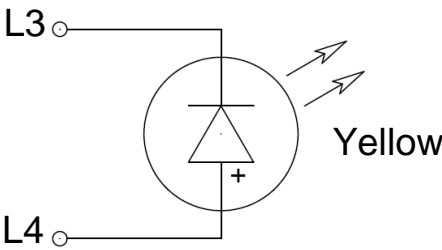
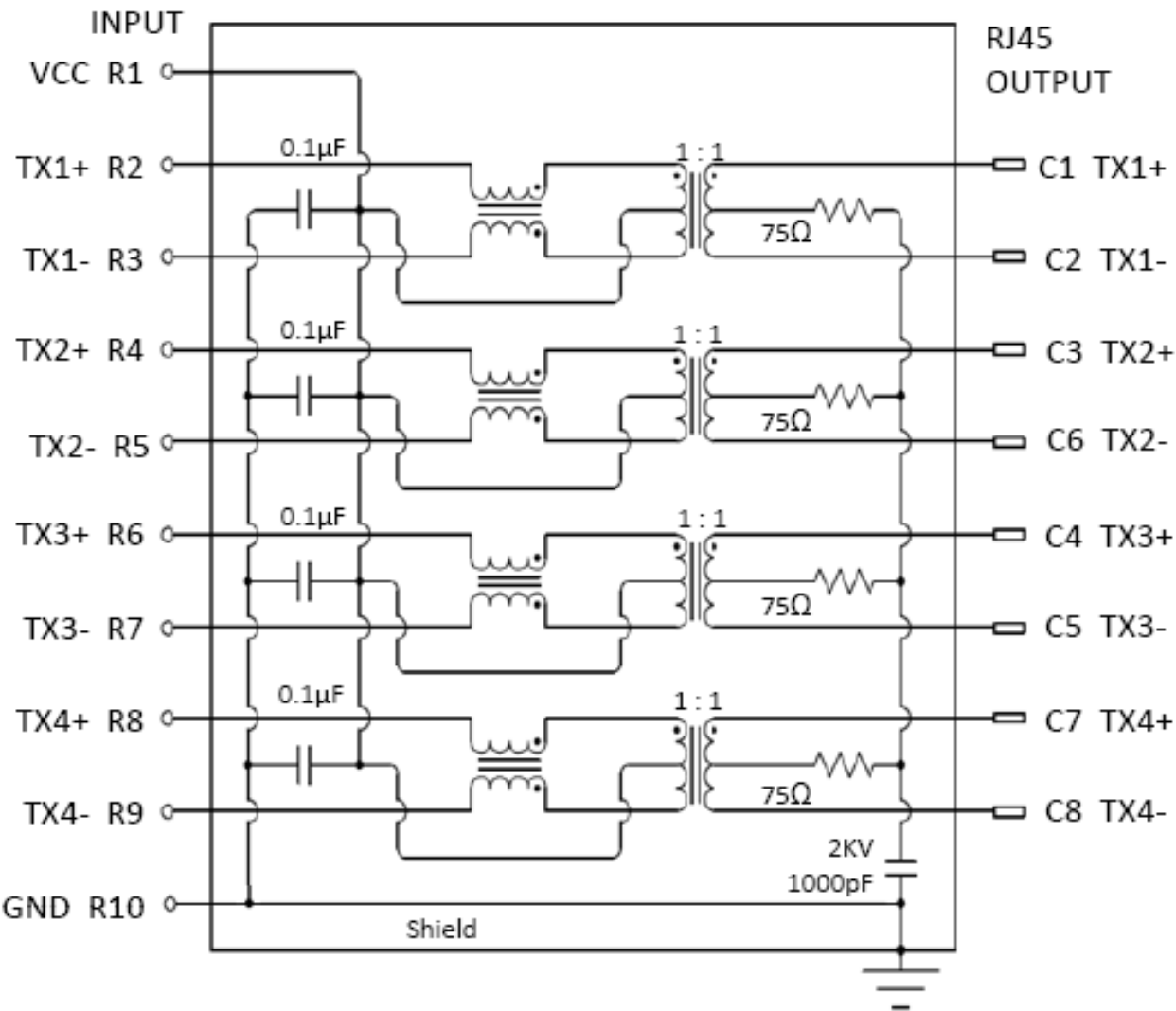
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

### 2.7 Packaging and Packing

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

3. ELECTRICAL CHARACTERISTICS

3.1 Schematic



Emitting Color	$\lambda_p$ (nm)	$V_f$ @ $I_f=20\text{mA}$	$I_r$ @ $V_r=5\text{V}$
Green	565	1.7 ~2.6 V	10μA max.
Yellow	585	1.7 ~2.6 V	10μA max.
Orange	610	1.7 ~2.6 V	10μA max.



### 3.2 Transmitter filter & Receiver filter

Type : Balance low pass 100Ω impedance

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

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

30~60MHz -16dB min. load 100Ω

60~80MHz -12dB min. load 100Ω

80~100MHz -10dB min. load 100Ω

### 3.3 Common Mode Rejection

@ 1~100 MHz -30dB min.

### 3.4 Cross Talk

@ 1~100 MHz -30dB min.

### 3.5 Inductance @ 100KHz, 0.1V, 8mA DC BIAS

Input (R2-R3), Input(R4-R5), Input (R6-R7), Input(R8-R9): 350 μH min.

### 3.6 HiPot Test

Input(R2-R3) To Output(C1-C2): 1500Vac 60s or 2250Vdc 60s

Input(R4-R5) To Output(C3-C6): 1500Vac 60s or 2250Vdc 60s

Input(R6-R7) To Output(C4-C5): 1500Vac 60s or 2250Vdc 60s

Input(R8-R9) To Output(C7-C8): 1500Vac 60s or 2250Vdc 60s

## 4. ORDER INFORMATION

0 5 -  $\frac{A00}{A}$   $\frac{39}{B}$   $\frac{726}{C}$   $\frac{3}{D}$  -  $\frac{1}{E}$

## A. Mechanical Code :

without Spring

## B. LED Code :

L-Yellow;R-Green/Orange. <Refer to Schematic of LED>

## C. Schematics Code :

726 : 726 circuit

## D. Plating Code :

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

Contact Area - 1 : Gold Flash

6 : 5 microinches Gold plating

5 : 10 microinches Gold plating

2 : 15 microinches Gold plating

**3 : 30 microinches Gold plating**

4 : 50 microinches Gold plating

## E. Packing &amp; Logo Code :

Packing with Tray, with UDE logo

## 5. DIPPING TEMPERATURE PROFILE

Note :

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

