

# APPROVAL SHEET

To :

Customer P/N :

UDE P/N : RM3-138A9V1F

Description : RJ45 multiport 2X1

Through Hole

10/100/1000 Base-T

Contact Area : 30 $\mu$ " Gold

LED:L-Green; R-Green/Yellow



Spec No.  
RM3138-00

Update Date  
2015/12/25

Revision  
C

Approved	Checked	Prepared



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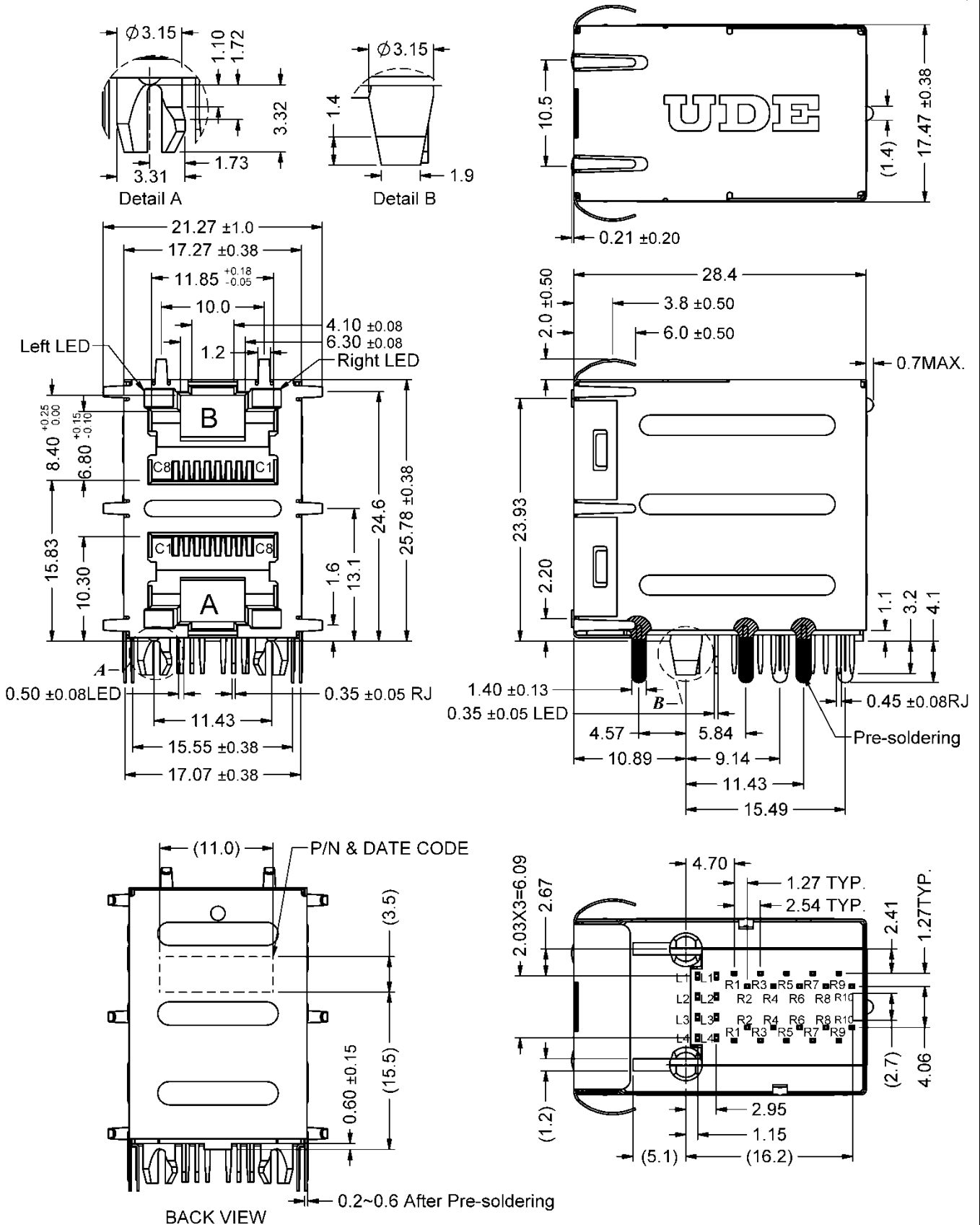
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1. MECHANICAL DIMENSION

1.1 Product Dimension

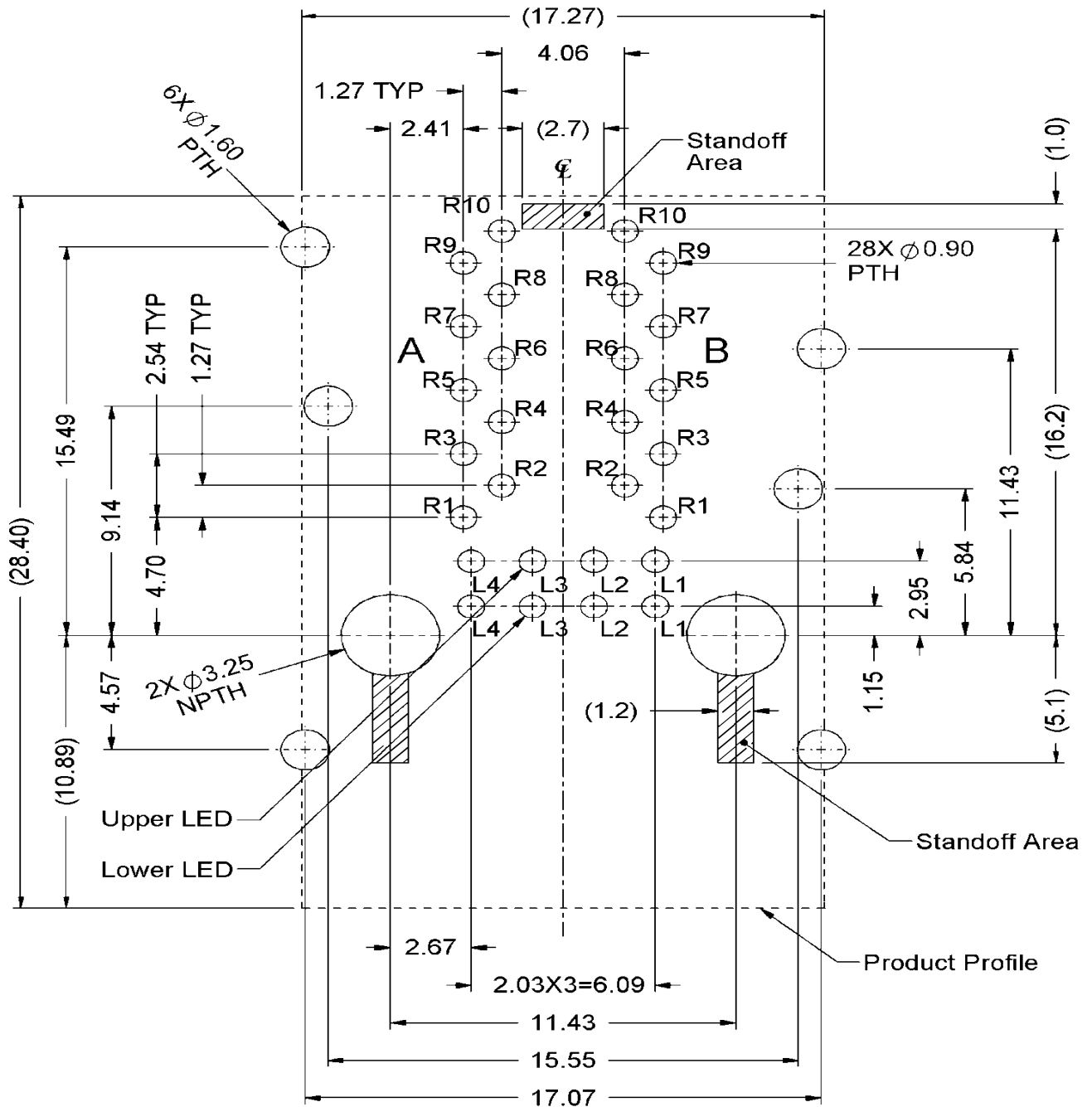
General Tolerance : X.X : ± 0.38  
X.XX : ± 0.25



### 1.2 Recommended PCB Layout

#### Component Side of Board

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



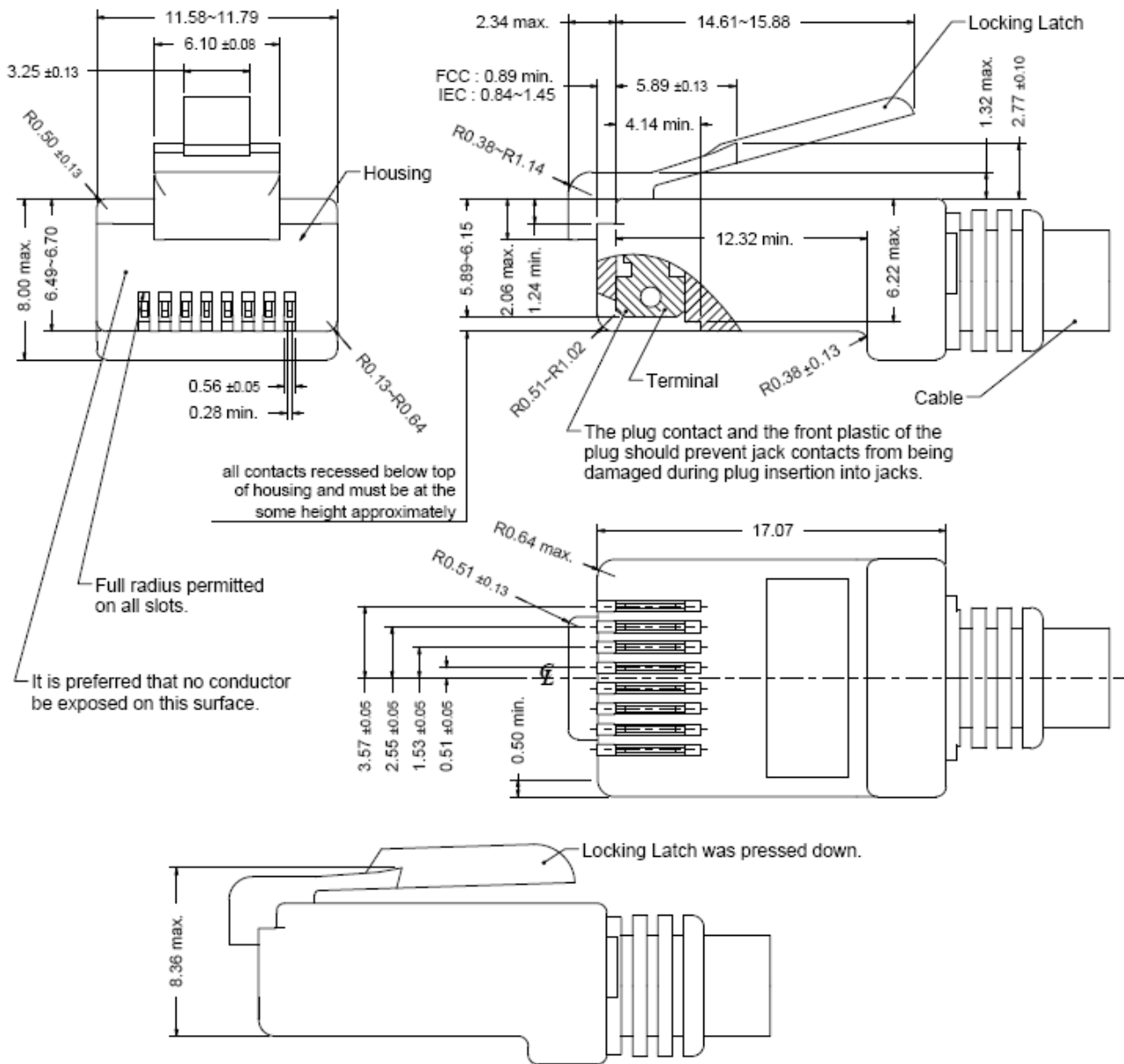
### 1.3 Packing Information

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

### 1.4 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

## 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 : 50 $\mu$ " min. Nickel overall )

2.2.1.1 RJ Terminal : Copper Titanium Alloy, YCUT-FX-H, Thickness=0.30mm

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

2.2.1.2 Input Terminal : Brass, C2680R-H, Thickness=0.35mm

Finish : 100 $\mu$ " min. Tin

2.2.1.3 Case Terminal : Brass, C2680R-SH, Thickness=0.30mm

Finish : 100 $\mu$ " min. Tin

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

2.2.2.1 Housing : PA6T, Black, 30%, G.F.

2.2.2.2 Case : PA6T, Black, 30%, G.F.

2.2.2.3 Spacer : PA6T, Black, 30%, G.F.

2.2.2.4 Terminal Cover : PA6T, Black, 30%, G.F.

2.2.2.5 Terminal Base : PA6T, Black, 30%, G.F.

2.2.2.6 Insert : PA6T, Black, 30%, G.F.

2.2.2.7 Light Pipe : PC, Transparent.

#### 2.2.3 Shield Parts

2.2.3.1 Front Shield : Stainless, SUS 304R-1/2H, Thickness=0.20mm, unplating

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

### 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 Performance and Test Description

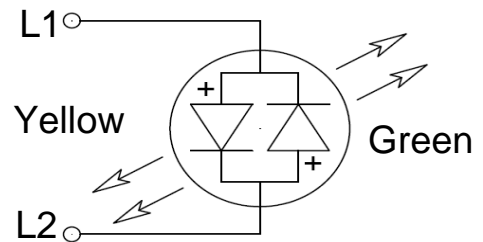
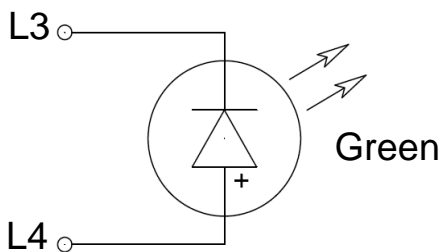
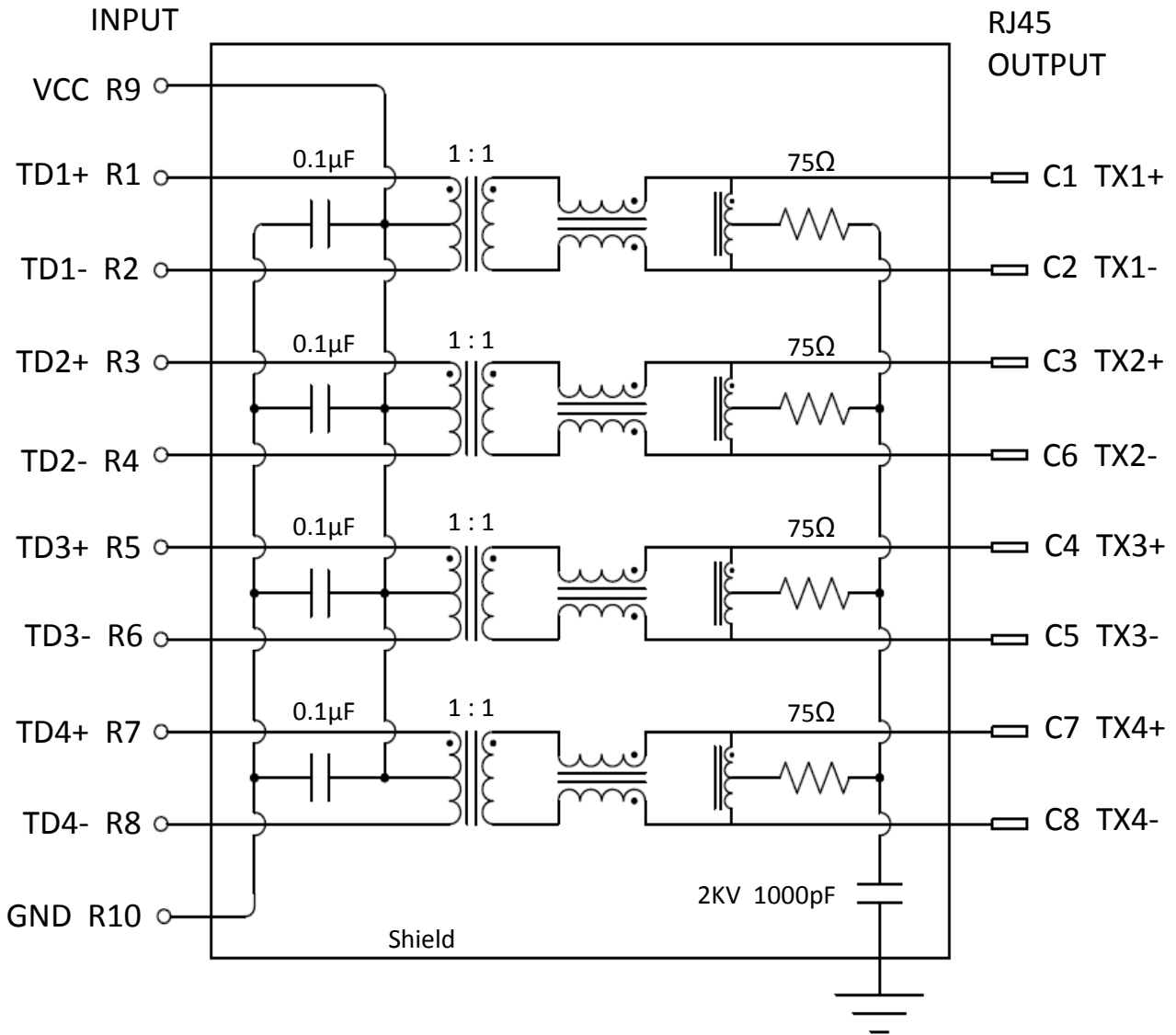
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

### 2.6 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)	$V_f$ @ $I_f=20mA$	$I_r$ @ $V_r=5V$
Green	565	1.7 ~2.6 V	10µA max.
Yellow	585	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 (R1-R2), Input(R3-R4), Input (R5-R6), Input(R7-R8): 350 μH min.

### 3.6 HiPot Test

Input(R1-R2) To Output(C1-C2): 1500Vac 60s or 2250Vdc 60s

Input(R3-R4) To Output(C3-C6): 1500Vac 60s or 2250Vdc 60s

Input(R5-R6) To Output(C4-C5): 1500Vac 60s or 2250Vdc 60s

Input(R7-R8) To Output(C7-C8): 1500Vac 60s or 2250Vdc 60s



## 4. ORDER INFORMATION

R M 3 - 1 3 8A 9V1 F  
 A B C D

## A. LED Code :

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

## B. Mechanical Code :

w/ UDE Logo, w/ Top & Side Spring

## C. Schematics Code :

9V1 : 9V1 circuit

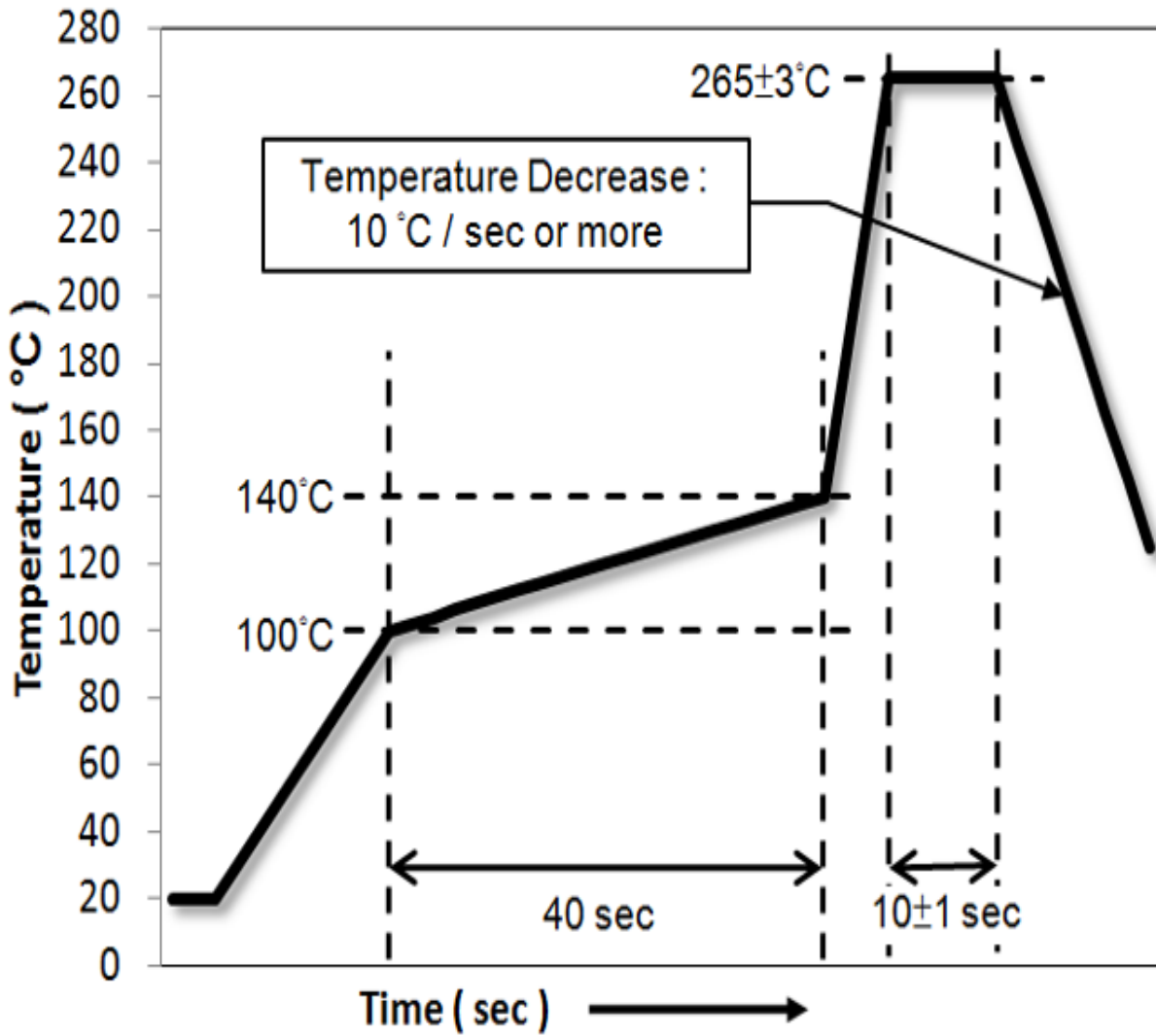
## D. Plating Code :

Underplating	50μ " min. Nickel overall	
Solder Tail	100μ " min. Bright Tin	100μ " min. Matted Tin
Contact Area	A : Gold Flash C : 6μ " gold B : 10μ " gold D : 15μ " gold <b><u>F : 30μ " gold</u></b> G : 50μ " gold	1 : Gold Flash 6 : 6μ " gold  2 : 15μ " gold 3 : 30μ " gold 4 : 50μ " gold

### 5. DIPPING TEMPERATURE PROFILE

Note :

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



6. Revision History			
Issue Date	Revision	Comments	Operator
2011/4/17	A	Initial Release .	Leaf
2015/11/4	B	Update Product Dimension .	Wujie
2015/12/25	C	Update Product Dimension .	Bunny