

# APPROVAL SHEET

To :

Customer P/N :

Singatron P/N : 2TJS14-AD-0001

Description : RJ45 1X1 Tab Down

Through Hole

10G Base-T

Contact Area : 15 $\mu$ " Min. Gold

LED : L-Yellow/Green; R-Green

Packing With Hard Tray



Spec No.  
S1421005-00

Update Date  
2021/2/22

Revision  
A

Approved	Checked	Prepared

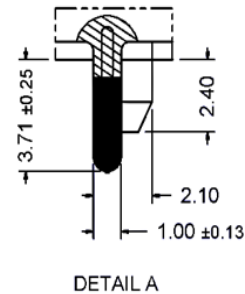
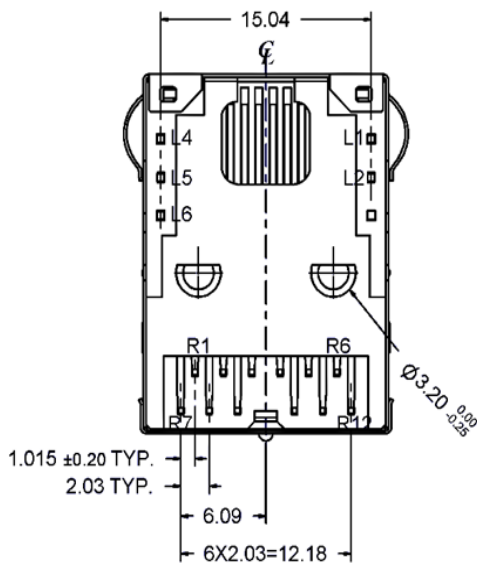
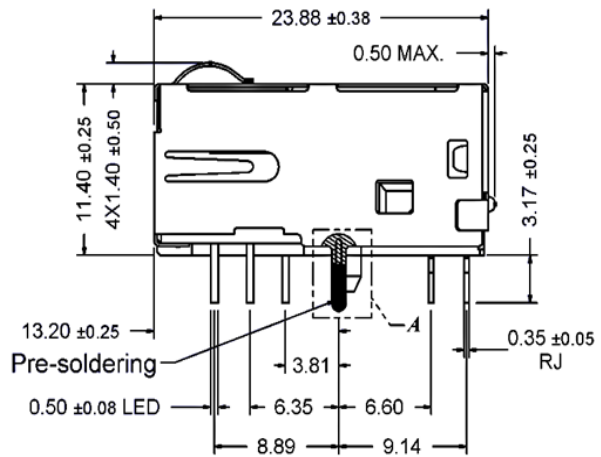
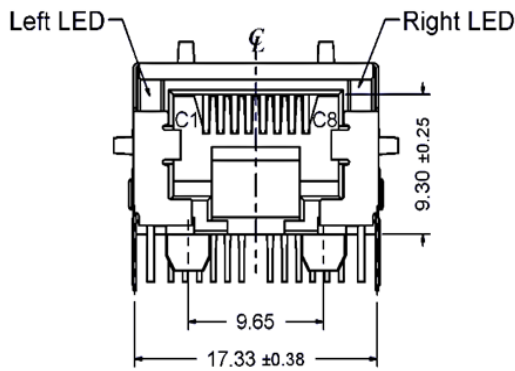
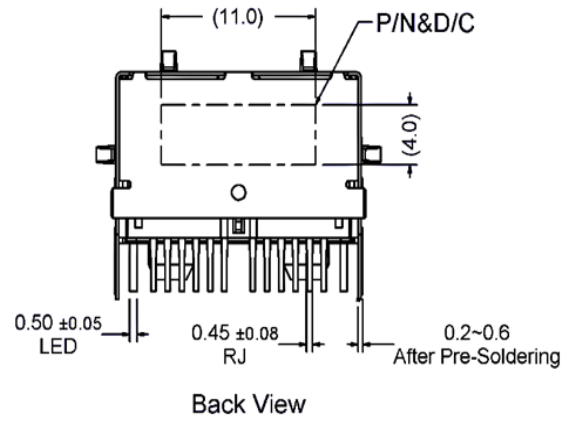
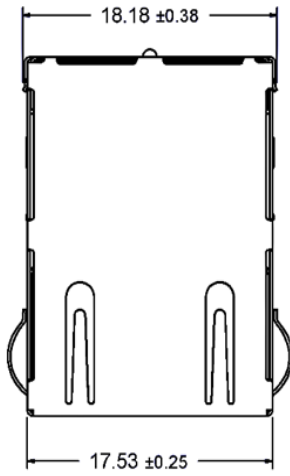
SINGATRON U.S.A.  
13925 MAGNOLIA AVE  
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1. MECHANICAL DIMENSION

Product Dimension

Unit:mm	General Tolerance :	X.X : ± 0.38
		X.XX : ± 0.20



Recommended PCB Layout. Component side of board

All dimension units are "mm".

All dimension tolerances are ±0.05mm unless otherwise specified.

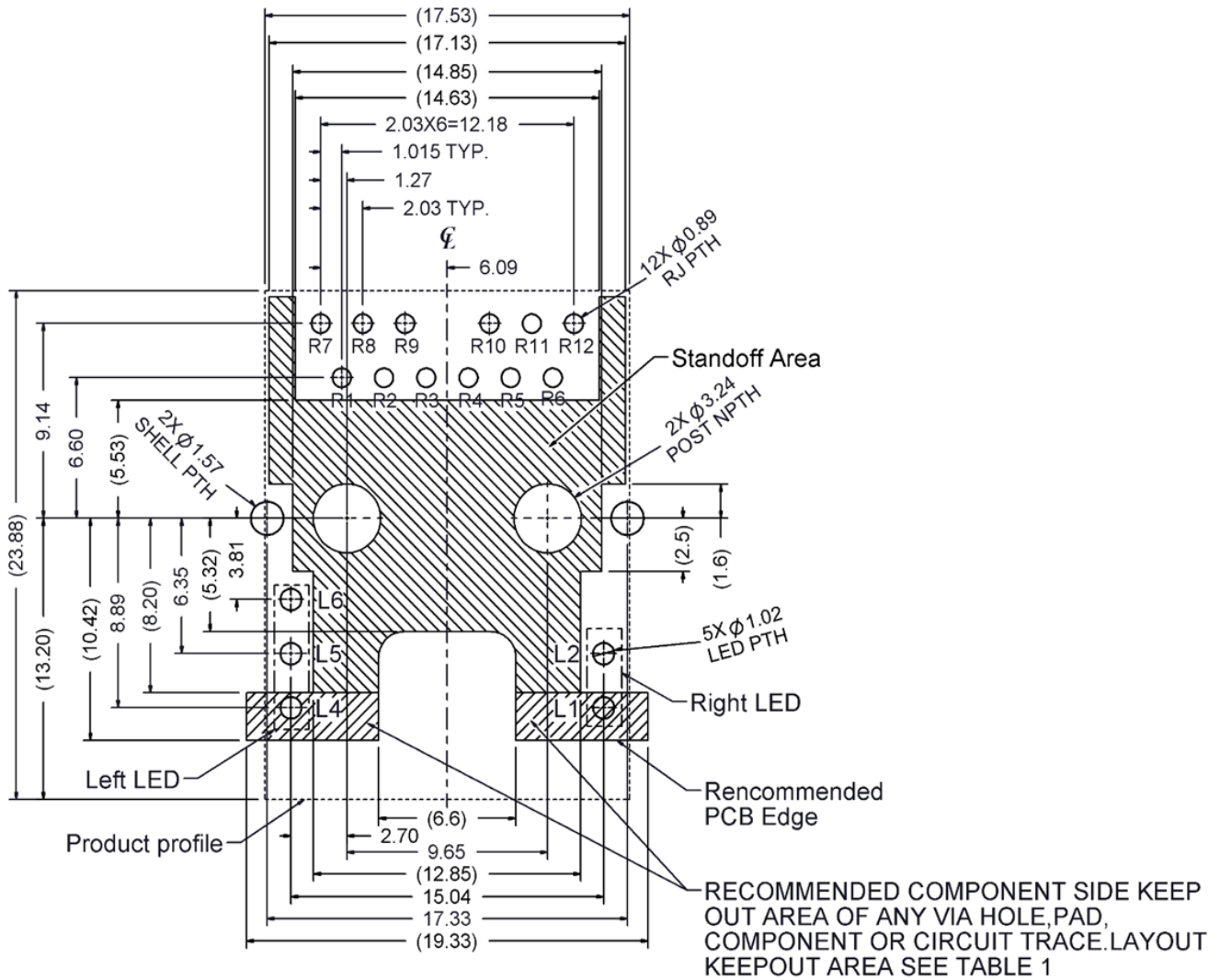
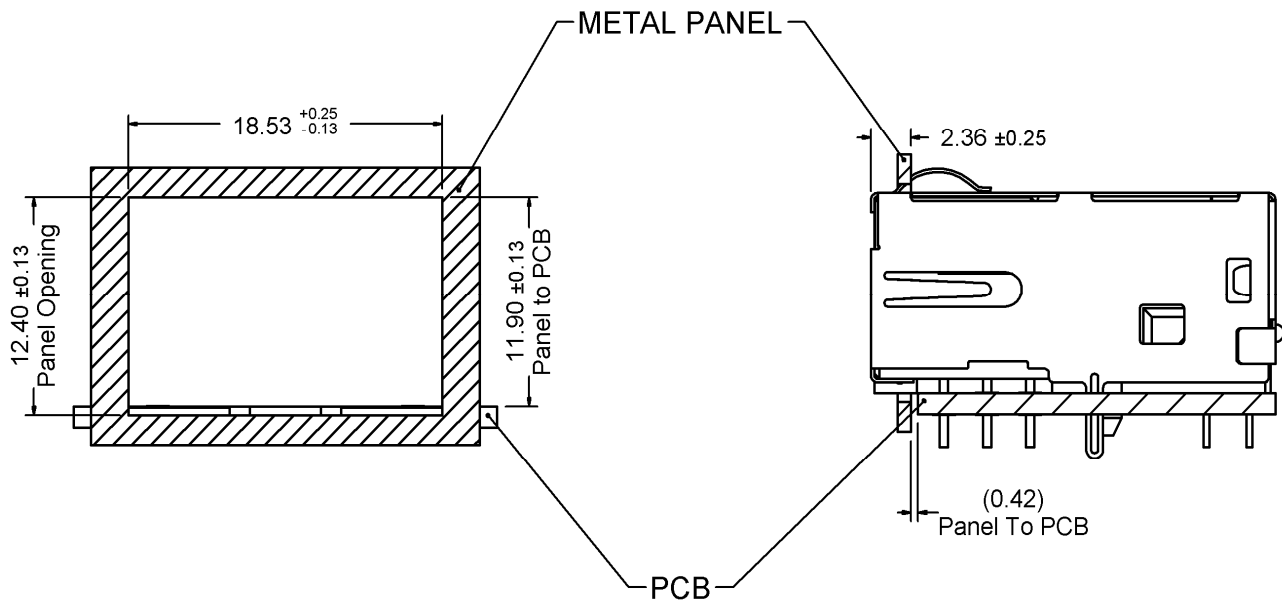


Table1

Layout Layer	Trace	component	Grounding	Test 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



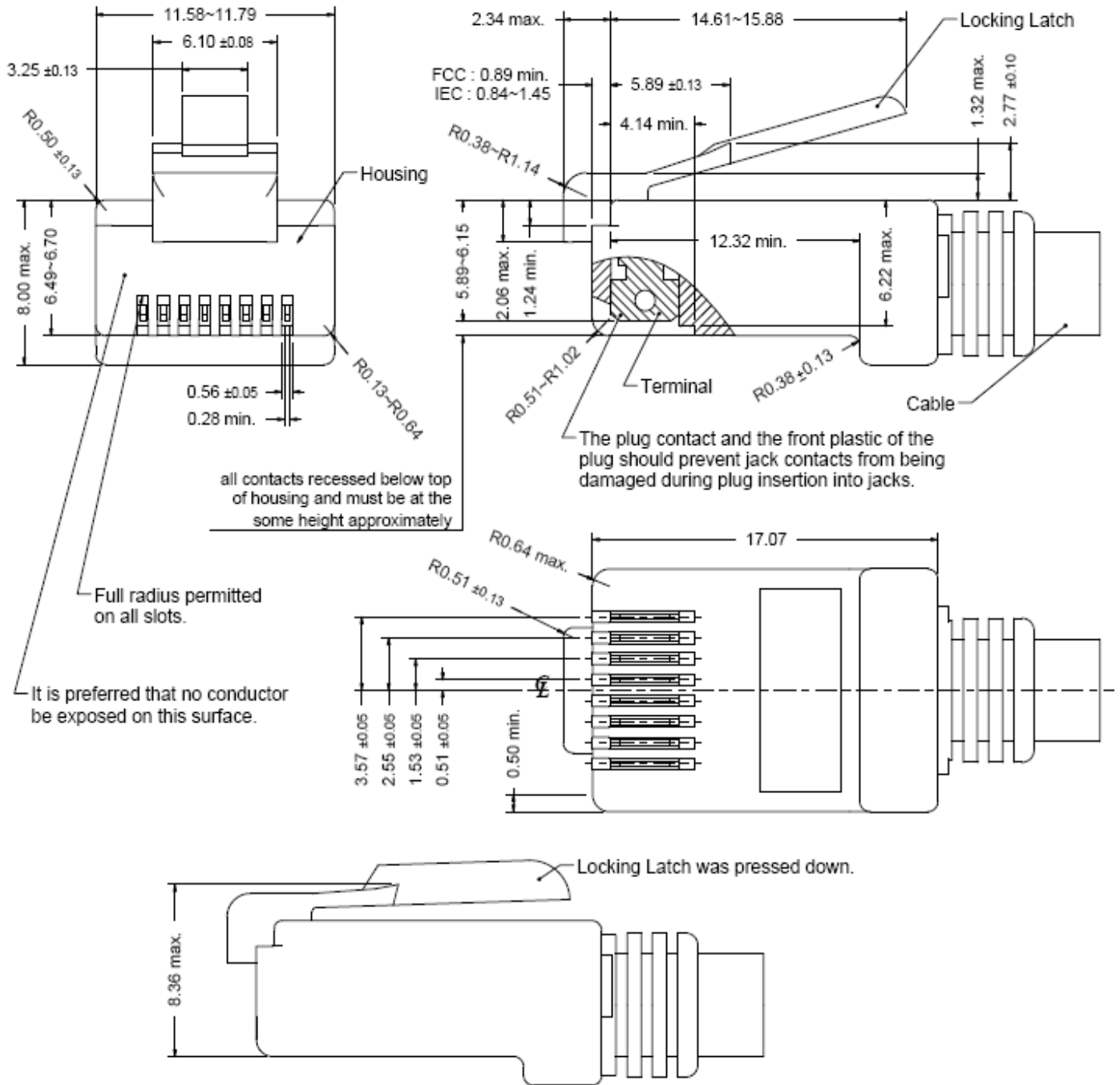
## 2. Packing Information

50 pcs finished goods per tray

8 trays(350 pcs finished goods) per inner box

4 Inner boxes(1400 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. 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 : 15 $\mu$ " Min. Gold

Input Terminal : Brass, Thickness=0.35mm

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

Case Terminal : Brass, Thickness=0.30mm

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

Capacitance Terminal : Phosphor Bronze, Thickness=0.35mm

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

Plastic Parts <UL94V-0>

Housing :PA6T,Black

Case : PA6T, Black

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

## 5. Operating and Storage Temperature

Operating Temperature : 0°C to +70°C

Storage Temperature : -40°C to +85°C

## 6. 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

## 7. Performance and Test Description

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

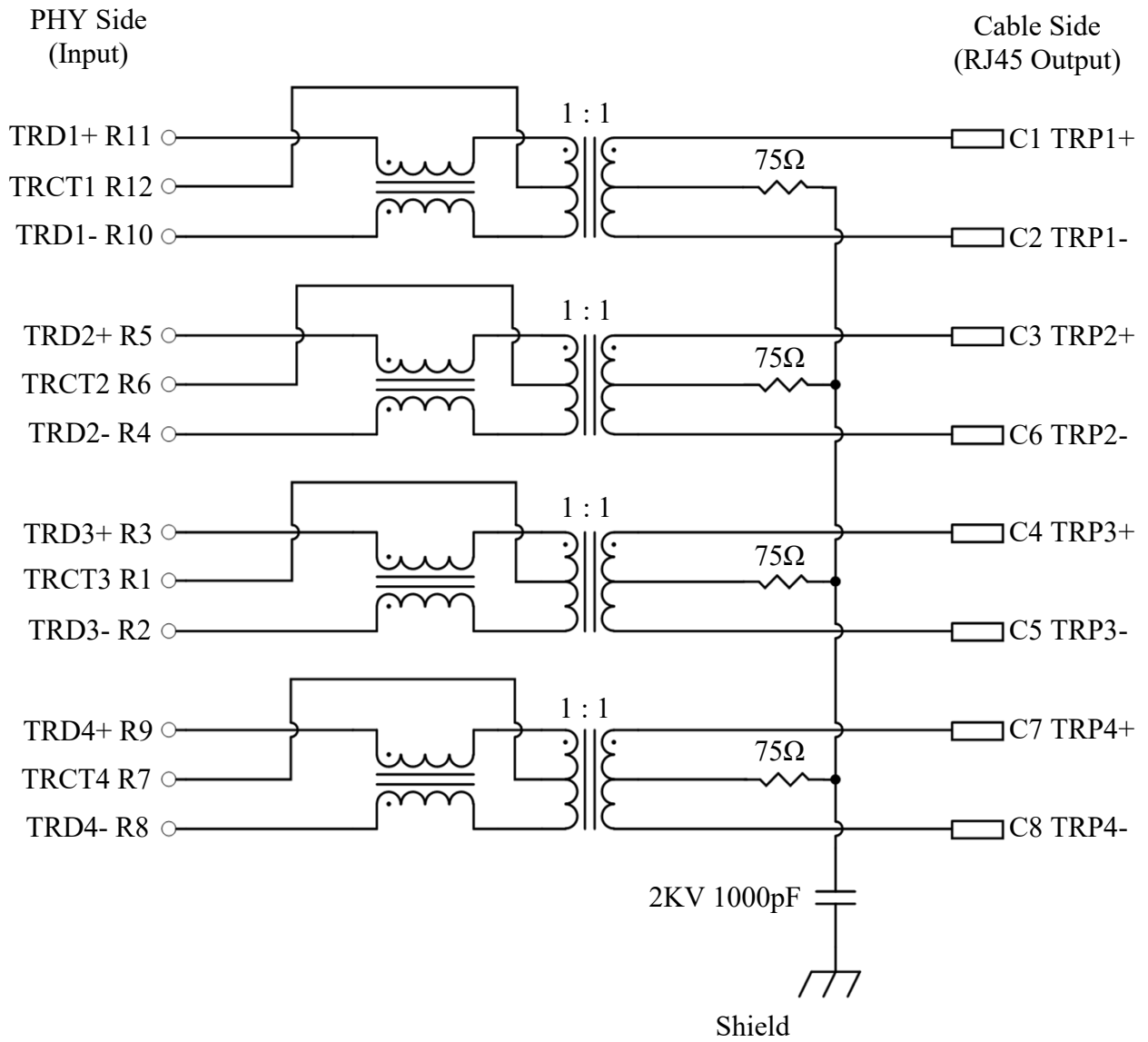
All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

## 8. Packaging and Packing

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



9. ELECTRICAL CHARACTERISTICS @25°C



Emitting Color	$\lambda_p$ (nm)	$V_f @ I_f=20mA$	$I_r @ V_r=5V$
Green	570	1.7 ~2.6 V	10 $\mu$ A max.
Yellow	588	1.7 ~2.6 V	10 $\mu$ A max.

## Transmitter filter &amp; Receiver filter

Type : Balance low pass 100Ω impedance

Insertion loss :	1~5MHZ	-0.575+(0.025*Freq MHz)-0.5 dB Max.
	5~200MHZ	-0.4425-(0.001645*Freq MHz)-0.5 dB Max.
	200~400MHZ	-0.1315-(0.0032*Freq MHz)-0.5 dB Max.

Return loss :	1~40MHZ	-18 dB Min.
	40~400MHZ	-18+10*log(Freq MHz/40MHz) dB Min.
	400~500MHZ	-8+30*log(Freq MHz/400MHz) dB Min.

## 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-): 120uH Min.

## HiPot Test

PHY Side(Input) To Cable Side(Output) : 1500Vac 60s or 2250Vdc 60s

## 10. WAVE SOLDERING TEMPERATURE PROFILE

Note :

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

