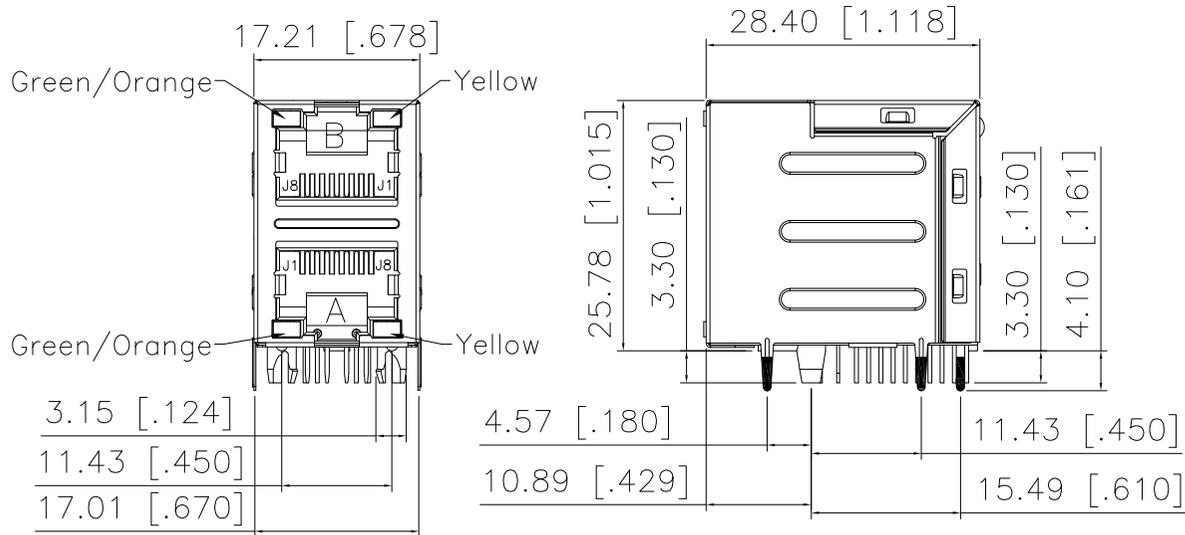


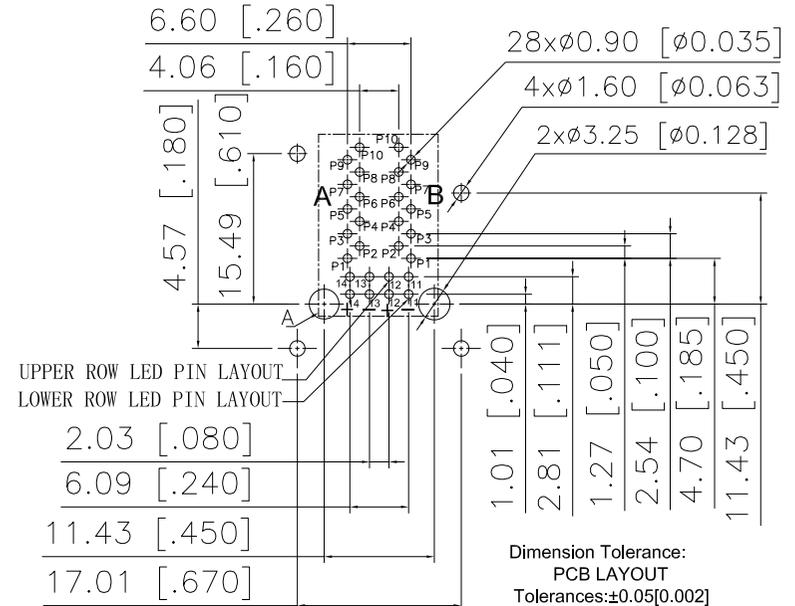
GP Component

REV.	ECN NO.	LOCATIONS	DESCRIPTION	DATE	DESIGN
AO			Initial	2021/07/12	Vince
AO.1			Modify Led Polarity	2024/12/18	Vince

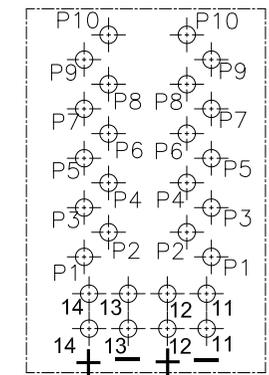
1. MECHANICAL DIMENSIONS:



2. PCB LAYOUT:



RECOMMENDED P.C.B LAYOUT TOP VIEW (COMPONENT SIDE)



MATRIX PART NO:
MRJ 2G-21 T 1412 T RS

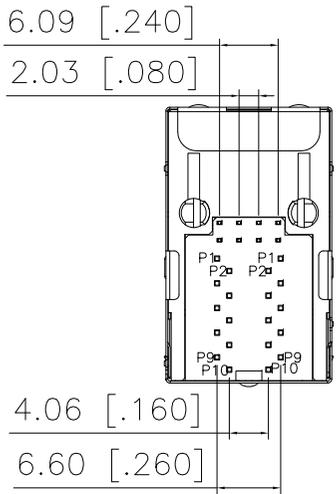
Matrix-RJ45

F:10/100
G:10/100/1G/2.5G
N:Pure Connector

11:1X1 ; 21:2X1
12:1X2 ; 22:2X2
14:1X4 ; 24:2X4
16:1X6 ; 26:2X6
18:1X8 ; 28:2X8
1U:RJ+USB

T: THT
S: SMD

RS: ROHS
HF: Halogen Free
Industrial Temperature



MATERIALS:

- HOUSING: GLASS FILLED PA46(BLACK) UL94V-0(ROHS)
- CONTACT: PHOSPHOR BRONZE, 50-100 MICRONS MIN. OVERALL DUCTILE NICKEL UNDERPLATE WITH SELECTED 6 MICRONS GOLD AT MATING INTERFACE.
- SHIELD: 0.2mm THICKNESS WITH STAINLESS.
- JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS PART 68 SUBPART F
- THE PART IS RECOMMENDED FOR WAVE SOLDERING PROCESS PEAK SOLDERING TEMPERATURE IS 260°C MAX, 10 SECS MAX.
- OPERATING TEMPERATURE: -40°C TO +85°C.
STORAGE TEMPERATURE: -40°C TO +85°C.

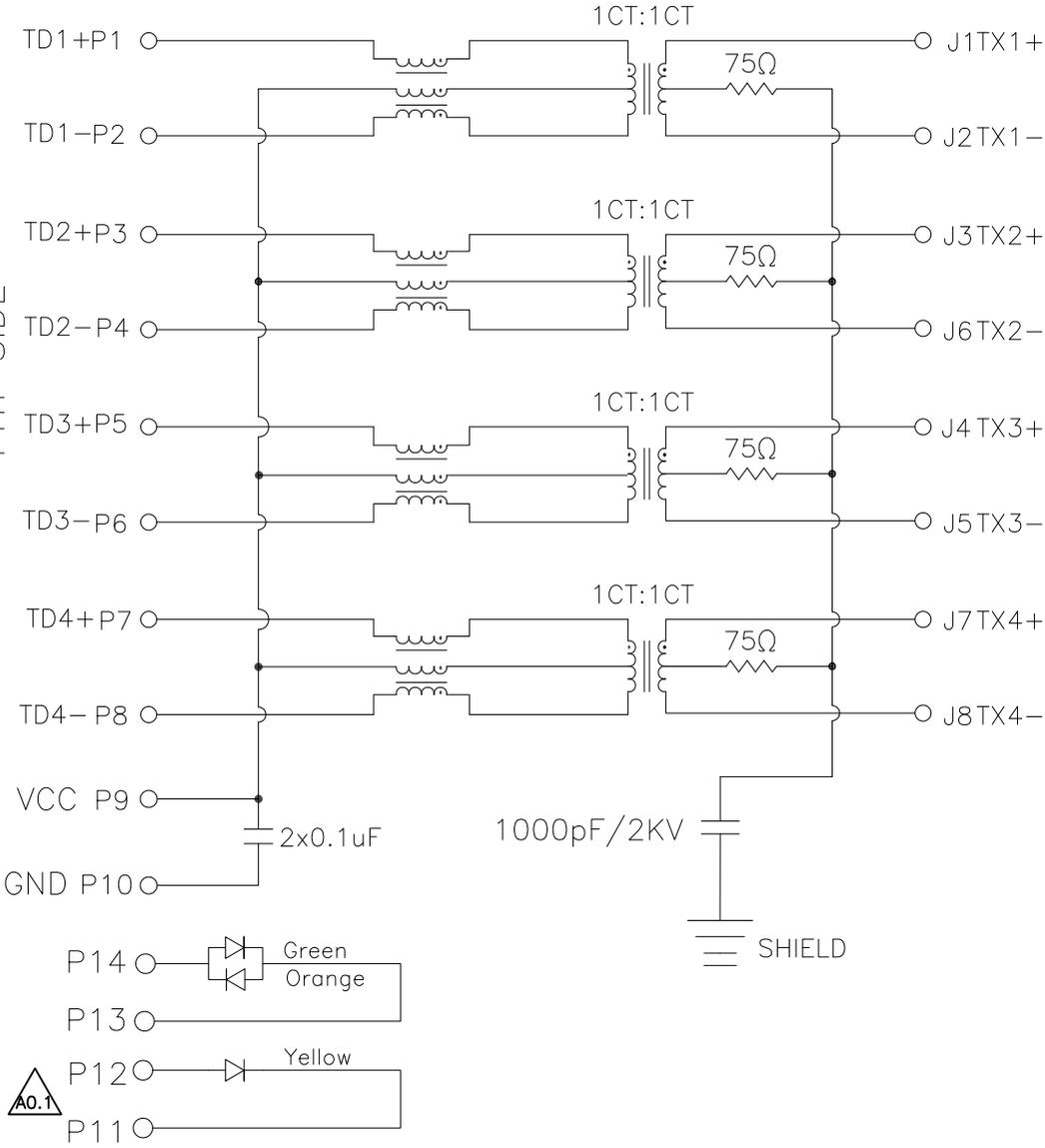
Matrix Electronics Co., Ltd

TOLERANCE: X.X ±0.38 X.XX ±0.25 X.XXX ±0.13 X \pm 2°	DESIGN BY : Vince Chen	DATE : 2024/12/18	PART NAME: RJ45 2X1 CONN.W/LED 2.5G BASE FILTER
	CHECKED BY: Hanson Huang	DATE : 2024/12/18	PART NO. MRJ2G-21T1412TRS
	APPROVED BY1: Richard Hsieh	DATE : 2024/12/18	MOLD NO. NA
UNIT: mm [inch]	APPROVED BY2: Richard Hsieh	DATE : 2024/12/18	DRAW NO.
SCALE: 1:1 SIZE: A4			SHEET NO. 1 OF 3

GP Component

REV.	ECN NO.	LOCATIONS	DESCRIPTION	DATE	DESIGN
A0			Initial	2021/07/12	Vince
A0.1			Modify Led Polarity	2024/12/18	Vince

3. SCHEMATIC:



4. Electrical Specification @25°C:

PARAMETER	SPECIFICATIONS
OPERATING TEMPERATURE	-40°C To +85°C
TURNS RATIO	1:1±2%
OPEN CIRCUIT INDUCTANCE(OCL)	180uH MIN@100KHz/100mV With 8mA DC Bias For(CHANNEL1,2,3,4)
INSERTION LOSS(IL)	-1.0dB MAX@1MHz-50MHz; -1.0dB MAX@50MHz-125MHz;
RETURN LOSS(RL) (Z out=100 OHM)	-20dB MIN@1MHz-40MHz; -20+15LOG (f/40MHz)dB MIN@40MHz-250MHz;
CROSSTALK (ADJACENT CHANNELS)	-35dB MIN@1MHz-40MHz; -35+15LOG (f/40MHz)dB MIN@40MHz-125MHz;
COMMON MODE REJECTION RATIO(CMRR)	-30dB MIN@1MHz-250MHz;
COMMON TO DIFFERENTIAL MODE REJECTION(REF)	-35dB MIN@1MHz-125MHz;
DIFFERENTIAL TO COMMON MODE REJECTION(REF)	-40dB MIN@1MHz-10MHz; -28dB MIN@40MHz-100MHz; -23dB MIN@250MHz;
HI-POT	2250 VDC@60 SECONDS

LED SPECIFICATION			
STANDARD LED	WAVELENGTH	Farward V(max)	TYP
GREEN/ORANGE	570/605nm	2.6V/2.6V	2.1/2.2V
YELLOW	590nm	2.6V	2.2V

***WITH A FORWARD CURRENT OF 20mA**

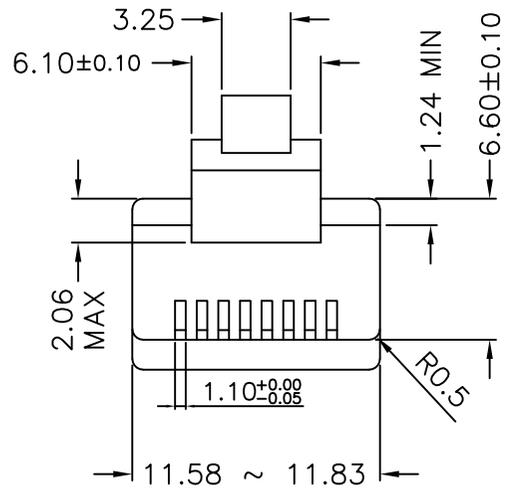


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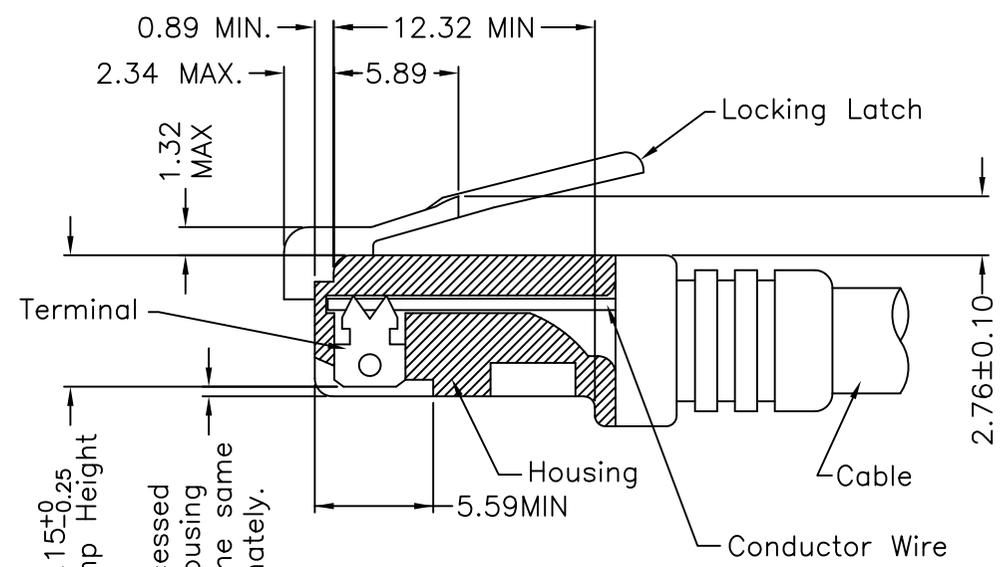
TOLERANCE: X:X ±0.38 X:XX ±0.25 X:XXX ±0.13 X±2*	DESIGN BY :	DATE :	PART NAME:	
	Vince Chen	2024/12/18	RJ45 2X1 CONN,W/LED 2.5G BASE FILTER	
 UNIT: mm [inch] SCALE:1:1 SIZE:A4	CHECKED BY:	DATE :	PART NO.	MRJ2G-21T1412TRS
	Hanson Huang	2024/12/18	MOLD NO.	NA
 UNIT: mm [inch] SCALE:1:1 SIZE:A4	APPROVED BY1:	DATE :	DRAW NO.	
	Richard Hsieh	2024/12/18	SHEET NO.	2 OF 3
	APPROVED BY2:	DATE :		
	Richard Hsieh	2024/12/18		

GP Component

REV.	ECN NO.	LOCATIONS	DESCRIPTION	DATE	DESIGN
A0			Initial	2021/07/12	Vince
A0.1			Modify Led Polarity	2024/12/18	Vince



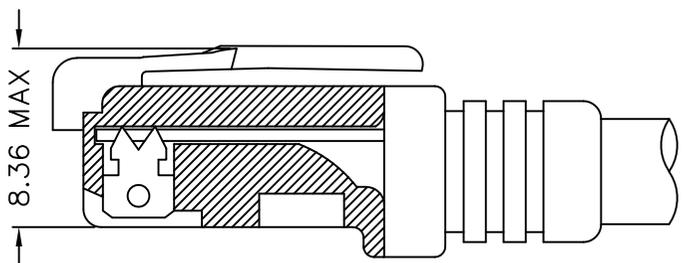
- * There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
- * Durability : 750 cycles generally



All contacts recessed below top of housing and must be at the same height approximately.

FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(i) AND IEC 603-7 FIGURE 23 & 24

STANDARD MODULAR PLUG ASSEMBLY



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(ii)

 Matrix Electronics Co.,Ltd					
TOLERANCE: X:X ±0.38 X:XX ±0.25 X:XXX ±0.13 X±2*		DESIGN BY : Vince Chen	DATE : 2024/12/18	PART NAME: RJ45 2X1 CONN.W/LED 2.5G BASE FILTER	
		CHECKED BY: Hanson Huang	DATE : 2024/12/18	PART NO.	MRJ2G-21T1412TRS
		APPROVED BY1: Richard Hsieh	DATE : 2024/12/18	MOLD NO.	NA
		APPROVED BY2: Richard Hsieh	DATE : 2024/12/18	DRAW NO.	
UNIT: mm [inch]	SCALE: 1:1	SIZE: A4	SHEET NO.	3 OF 3	