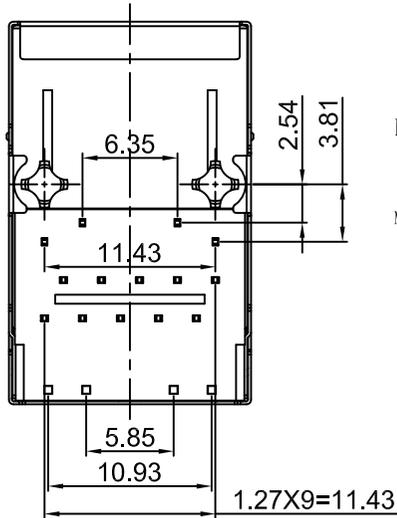
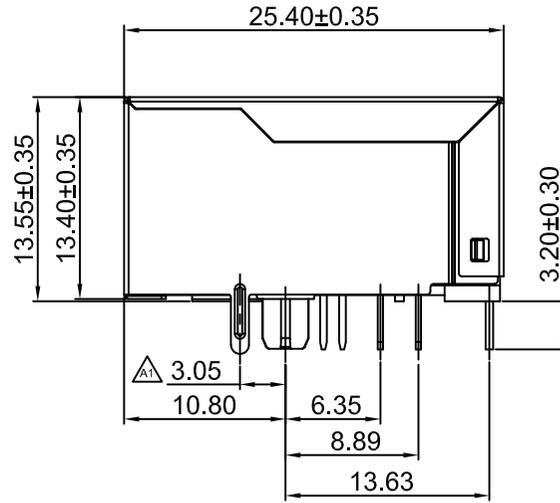
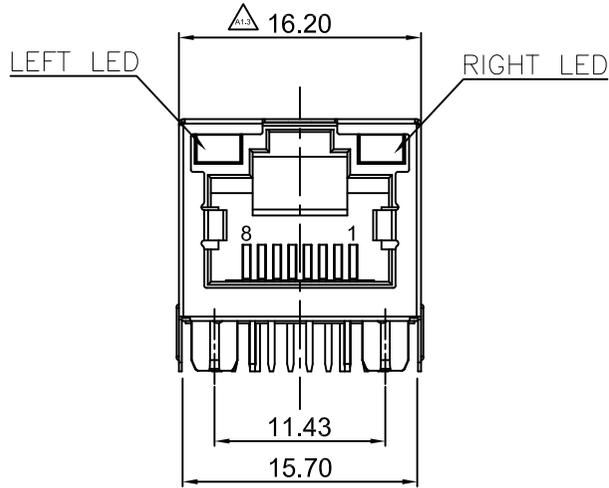


GP Component

1. MECHANICAL DIMENSIONS :



MATRIX PART NO:

MRJ G-11 T 1688 T RS

Matrix-RJ45

F : 10/100

G : 10/100/1000

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

S: SMD

T: THT

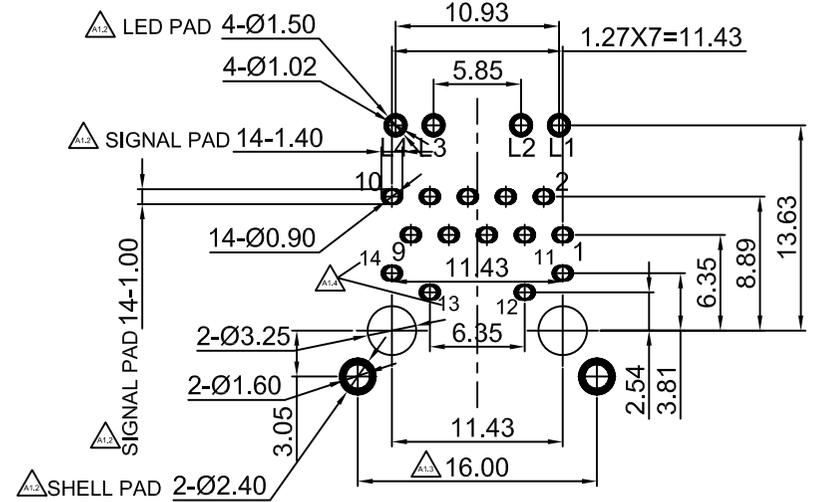
RS : ROHS

HF : Halogen Free

Industrial temperature

Series Number

| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------|------------|--------|
| A1.5 | | | Modify Material | 2023/12/28 | Vince |
| A1.6 | | | Modify Schematic | 2024/02/26 | Vince |
| A1.7 | | | Modify Capacitor Spec | 2024/04/01 | Vince |
| A1.8 | | | Modify Electrical Specification | 2025/02/07 | Vince |



Suggested PCB Layout(Top View)
(Tolerance:±0.05)

1.Material:

1.1 Housing: PBT UL94V-0 Black.

1.2 Contact :T=0.35x0.45mm,Phosphor Bronze,Gold plated on contact area 6u".

1.3 Input Terminal : Brass.

1.4 Metal shielding:C2680 T=0.2mm,Copper alloy with Nickel plated.

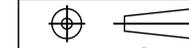
2.Environmental requirements:

2.1 Lead-free process,compliant RoHS.



Matrix Electronics Co., Ltd

| TOLERANCE: | | DESIGN BY : | DATE : | PART NAME: | |
|------------|-------|---------------|------------|-------------------------|-----------------|
| X | | Vince Chen | 2025/02/07 | RJ45, CONNECTORS, W/LED | |
| X.X | ±0.38 | | | 10/100/1000MBPS, FILTER | |
| X.XX | ±0.25 | CHECKED BY: | DATE : | PART NO. | MRJG-11T1688TRS |
| X.XXX | ±0.13 | Hanson Huang | 2025/02/07 | MOLD NO. | NA |
| ANGLE: ±3° | | APPROVED BY1: | DATE : | DRAW NO. | |
| | | Richard Hsieh | 2025/02/07 | SHEET NO. | 1 OF 3 |
| | | APPROVED BY2: | DATE : | | |
| | | Richard Hsieh | 2025/02/07 | | |

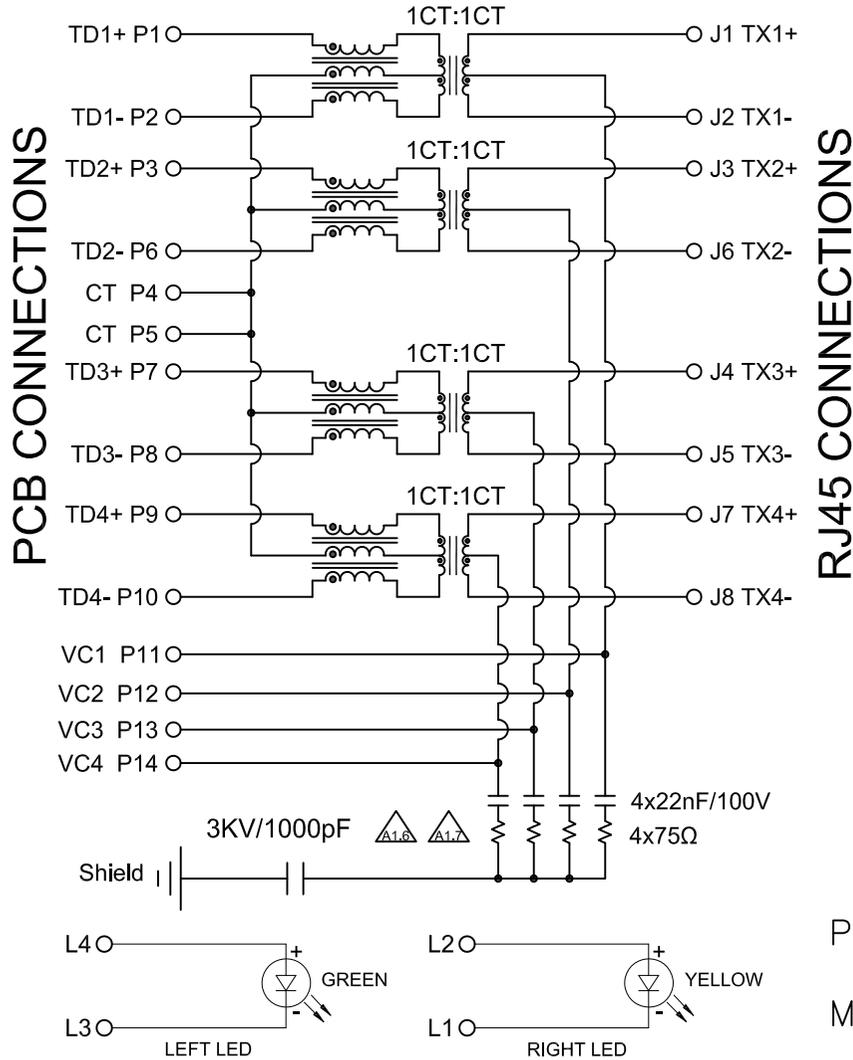


UNIT: mm [inch]

SCALE:1:1 SIZE:A4

GP Component

2. SCHEMATIC:



| Emitting Color | λ p(nm) | $V_f@I_f=20mA$ |
|----------------|-----------------|----------------|
| GREEN | 565 | 1.8-2.5V |
| YELLOW | 585 | 1.8-2.5V |

| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------|------------|--------|
| A1.5 | | | Modify Material | 2023/12/28 | Vince |
| A1.6 | | | Modify Schematic | 2024/02/26 | Vince |
| A1.7 | | | Modify Capacitor Spec | 2024/04/01 | Vince |
| A1.8 | | | Modify Electrical Specification | 2025/02/07 | Vince |

3. Electrical Specification @25°C:

- 3.1 Inductance: 350uH Min With 8mA DC bias.
- 3.2 Hi-Pot Test: Input to Output 2250VDC/1mA.
- 3.3 Insertion loss : 1-100MHZ -1dB max.
- 3.4 Return loss : 1-30MHZ -18dB min.
30-60MHZ -16dB min.
60-80MHZ -12dB min.
80-100MHZ -10dB min.

- 3.5 Common Mode Rejection: 1-100MHZ -30dB min.
- 3.6 Cross Talk: 1-100MHZ -30dB min.

4. Operating and Storage Temperature:

- 4.1 Operating Temperature : -40°C to +85°C.
- 4.2 Storage Temperature : -40°C to +85°C.

5. Wave soldering peak temperature: 260°C.

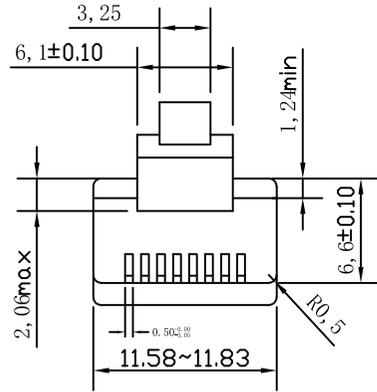
- 6. DC current: Meeting IEEE802.3bt Type3 Standards.
600mA MAX @57VDC Continuous.
Supports 2 pairs of twisted pair cables, with a maximum PSE power of 30W.
Supports 4 pairs of twisted pair cables, with a maximum PSE power of 60W.

Printing:
MATRIX
MRJG-11T1688TRS
YYWW

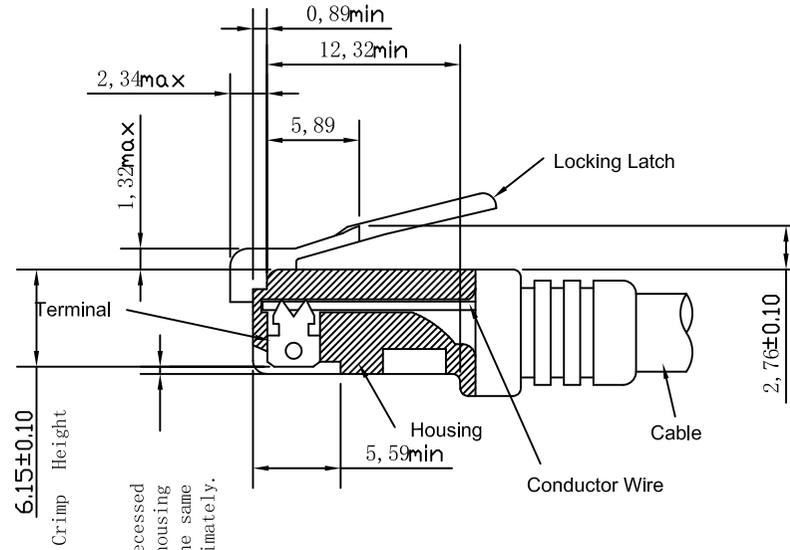
|  Matrix Electronics Co., Ltd | | | |
|---|--------------------------------|----------------------|--|
| TOLERANCE: X: X X.X ±0.38 X.XX ±0.25 X.XXX ±0.13 ANGLE: ±3° | DESIGN BY : Vince Chen | DATE : 2025/02/07 | PART NAME: RJ45, CONNECTORS, W/LED 10/100/1000MBPS, FILTER |
|  UNIT: mm [inch] SCALE: 1:1 SIZE: A4 | CHECKED BY: Hanson Huang | DATE : 2025/02/07 | PART NO. MRJG-11T1688TRS |
| | APPROVED BY1: Richard Hsieh | DATE : 2025/02/07 | MOLD NO. NA |
| | APPROVED BY2: Richard Hsieh | DATE : 2025/02/07 | DRAW NO. SHEET NO. 2 OF 3 |

GP Component

| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------|------------|--------|
| A1.5 | | | Modify Material | 2023/12/28 | Vince |
| A1.6 | | | Modify Schematic | 2024/02/26 | Vince |
| A1.7 | | | Modify Capacitor Spec | 2024/04/01 | Vince |
| A1.8 | | | Modify Electrical Specification | 2025/02/07 | Vince |



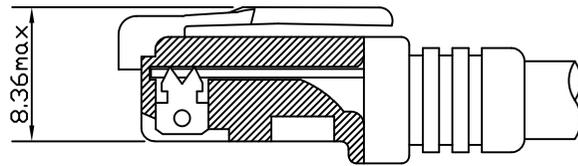
- * There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
- * Durability : 750 cycles generally



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.X ±0.38 X.XX ±0.25 X.XXX ±0.13 ANGLE: ±3° | DESIGN BY : Vince Chen | DATE : 2025/02/07 | PART NAME: RJ45, CONNECTORS, W/LED 10/100/1000MBPS, FILTER |
| | CHECKED BY: Hanson Huang | DATE : 2025/02/07 | |
|   UNIT: mm [inch] | APPROVED BY1: Richard Hsieh | DATE : 2025/02/07 | MOLD NO. NA |
| | APPROVED BY2: Richard Hsieh | DATE : 2025/02/07 | DRAW NO. SHEET NO. 3 OF 3 |
| SCALE:1:1 | SIZE:A4 | | |