

**MODEL:** CRJ007-MLG-TH | **DESCRIPTION:** MODULAR JACK**FEATURES**

- 8P10C (RJ45)
- integrated magnetics
- 10/100/1000 BaseT
- LED
- shielded

**SPECIFICATIONS**

| parameter                  | conditions/description                                                                            | min | typ   | max  | units  |
|----------------------------|---------------------------------------------------------------------------------------------------|-----|-------|------|--------|
| rated voltage              |                                                                                                   |     |       | 150  | Vac    |
| rated current              |                                                                                                   |     |       | 1.5  | A      |
| withstanding voltage       | for 1 minute                                                                                      |     | 1,500 |      | Vac    |
| contact resistance         |                                                                                                   |     |       | 40   | mΩ     |
| insulation resistance      |                                                                                                   | 500 |       |      | MΩ     |
| insertion/withdrawal force |                                                                                                   |     |       | 6.12 | kgf    |
| operating temperature      |                                                                                                   | 0   |       | 70   | °C     |
| storage temperature        |                                                                                                   | -40 |       | 80   | °C     |
| life                       |                                                                                                   |     | 1,000 |      | cycles |
| flammability rating        | UL94V-0                                                                                           |     |       |      |        |
| RoHS                       | yes                                                                                               |     |       |      |        |
| packaging                  | carton size: 400 x 303 x 258 mm<br>tray QTY: 120 pcs per tray<br>carton QTY: 1,200 pcs per carton |     |       |      |        |

**SOLDERABILITY**

| parameter      | conditions/description | min | typ | max | units |
|----------------|------------------------|-----|-----|-----|-------|
| wave soldering | for maximum 5 seconds  |     |     | 240 | °C    |

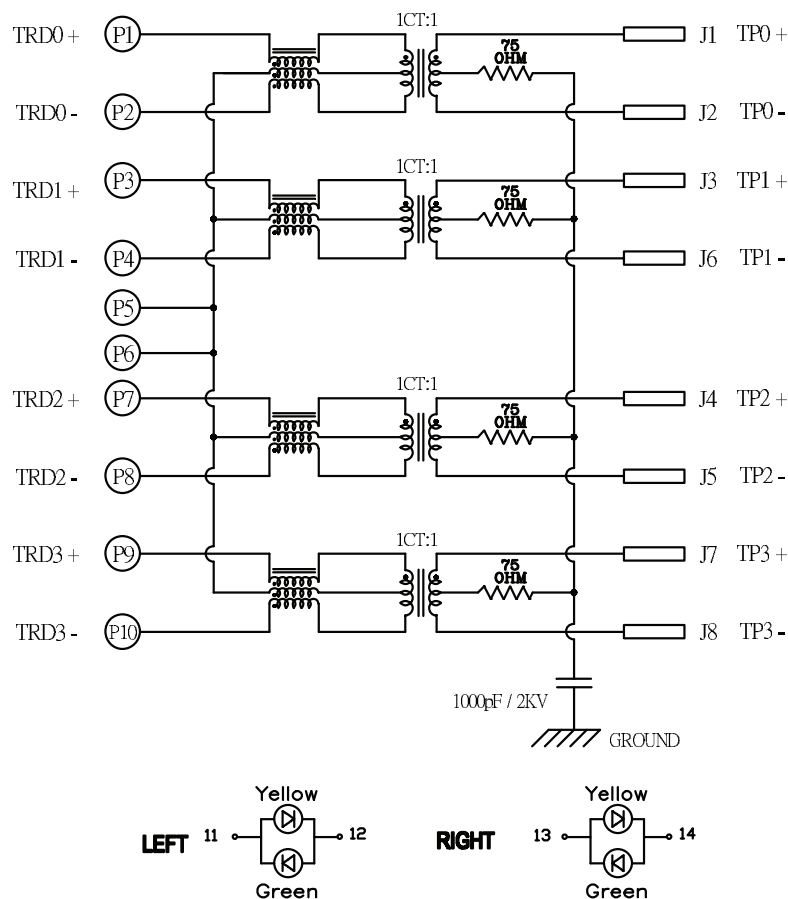
## MAGNETIC SPECIFICATIONS (AT 25°C)

| parameter             | conditions/description                                                                                                                 | min   | typ | max  | units |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------|-----|------|-------|
| turns ratio           | at 100 kHz, 0.1 V<br>P1-P2 : J1-J2 = 1:1 (±5%)<br>P3-P4 : J3-J6 = 1:1 (±5%)<br>P7-P8 : J4-J5 = 1:1 (±5%)<br>P9-P10 : J7-J8 = 1:1 (±5%) |       |     |      |       |
| OCL                   | at 100 kHz, 0.1 V, 8 mA DC                                                                                                             | 350   |     |      | μH    |
| insertion loss        | at 1.0~100 MHz                                                                                                                         |       |     | -1.0 | dB    |
|                       | at 100~125 MHz                                                                                                                         |       |     | -1.2 | dB    |
| return loss           | at 1~30 MHz                                                                                                                            | -18   |     |      | dB    |
|                       | at 30~60 MHz                                                                                                                           | -16   |     |      | dB    |
|                       | at 60~80 MHz                                                                                                                           | -12   |     |      | dB    |
|                       | at 80~100 MHz                                                                                                                          | -10   |     |      | dB    |
| crosstalk             | at 1~100 MHz                                                                                                                           | -30   |     |      | dB    |
| common mode rejection | at 1~100 MHz                                                                                                                           | -30   |     |      | dB    |
| hipot                 | input to output for 1 minute, 1 mA                                                                                                     | 1,500 |     |      | Vac   |

## SCHEMATIC

PCB Side

Cable Side

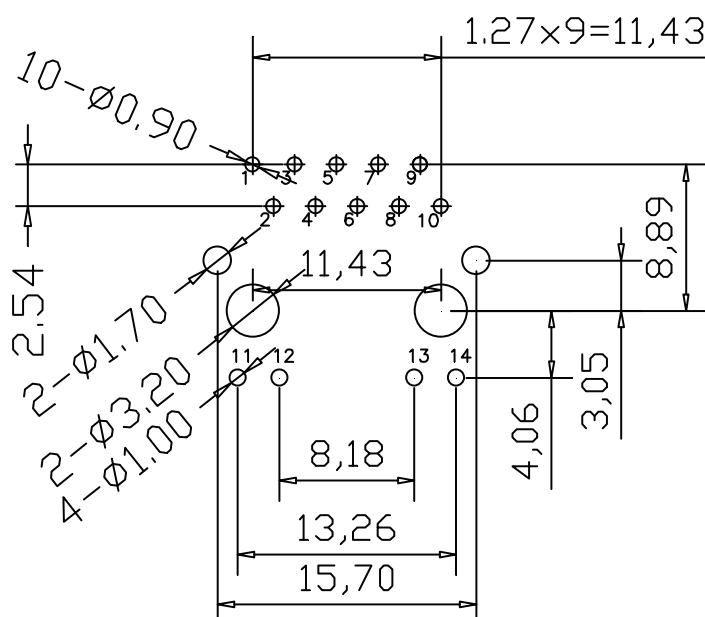
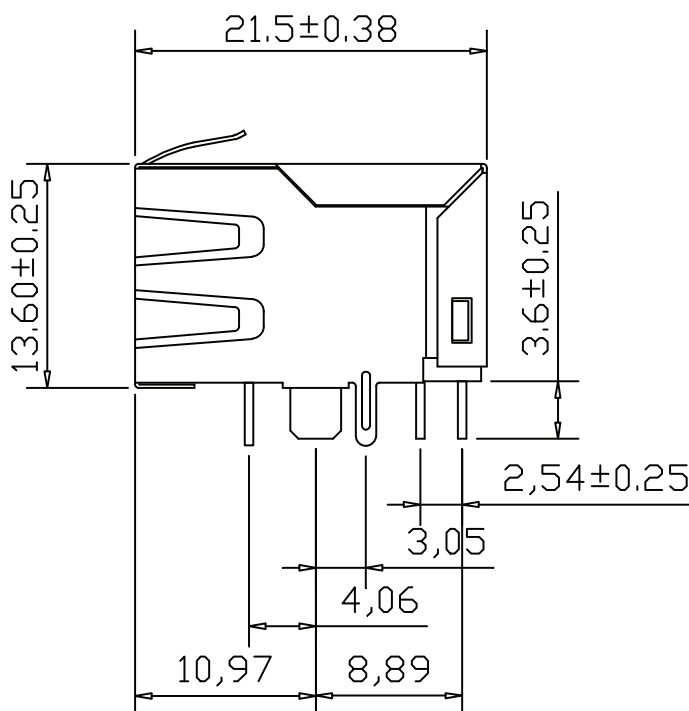
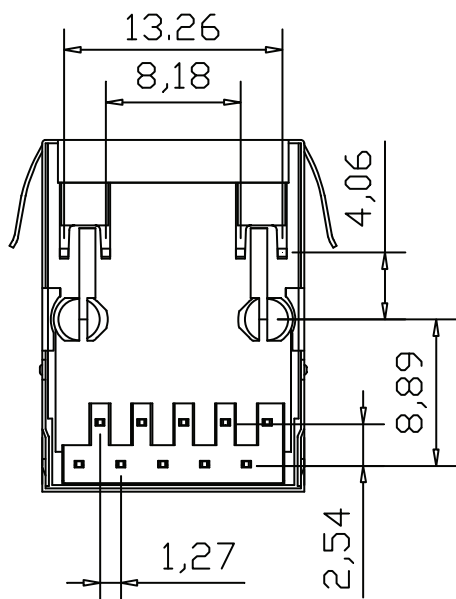
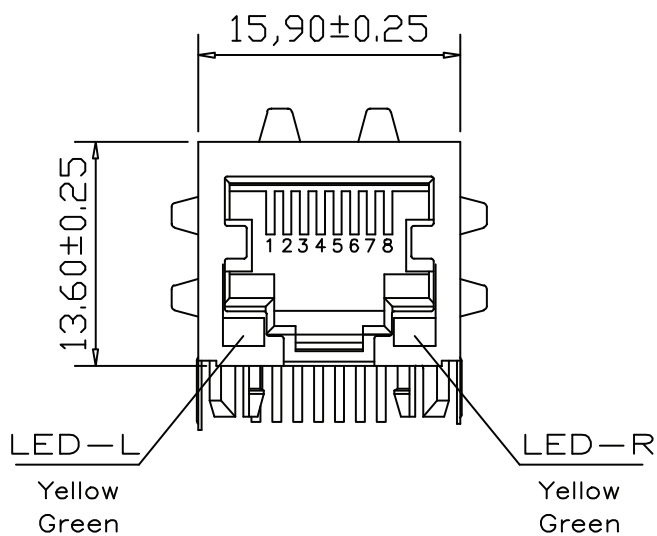


| LED COLOR | WAVELENGTH | FORWARD VOLTAGE at IF 20 mA |
|-----------|------------|-----------------------------|
| Green     | 565~575 nm | 2.5 V max                   |
| Yellow    | 585~595 nm | 2.5 V max                   |

## MECHANICAL DRAWING

units: mm  
tolerance:  
X  $\pm 0.5$  mm  
X.X  $\pm 0.38$  mm  
X.XX  $\pm 0.25$  mm  
X.XXX  $\pm 0.10$  mm  
PCB:  $\pm 0.05$  mm  
PCB thickness: 1.6 mm  
unless otherwise noted

| ITEM | DESCRIPTION       | MATERIAL        | PLATING/COLOR                                                        |
|------|-------------------|-----------------|----------------------------------------------------------------------|
| 1    | insulator         | PBT (UL94V-0)   | black                                                                |
| 2    | contact terminals | phosphor bronze | contact area: gold flash over nickel<br>solder area: tin over nickel |
| 3    | shield            | brass           | nickel alloy                                                         |



Recommended PCB Layout  
Top View

## REVISION HISTORY

| rev. | description                  | date       |
|------|------------------------------|------------|
| 1.0  | initial release              | 03/31/2021 |
| 1.01 | logo, datasheet style update | 08/05/2022 |

The revision history provided is for informational purposes only and is believed to be accurate.



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