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| LED1 POLARITY |        |        | LED2 POLARITY |        |        |
|---------------|--------|--------|---------------|--------|--------|
| PIN 17        | PIN 18 | COLOR  | PIN 19        | PIN 20 | COLOR  |
| +             | -      | YELLOW | +             | -      | YELLOW |
| -             | +      | GREEN  | -             | +      | GREEN  |

# ELECTRICAL CHARACTERISTICS @ 25°C

## URNS RATIO

|     |           |
|-----|-----------|
| TP1 | 1CT : 1CT |
| TP2 | 1CT : 1CT |
| TP3 | 1CT : 1CT |
| TP4 | 1CT : 1CT |

## INS. LOSS (MAX)

|               |         |
|---------------|---------|
| 1MHz TO 20MHz | -0.8 dB |
| 50MHz         | -1.0 dB |
| 200MHz        | -1.2 dB |
| 400MHz        | -2.0 dB |
| 500MHz        | -3.0 dB |

## RET. LOSS (MIN)

|                  |                     |
|------------------|---------------------|
| 1MHz - 40MHz     | -16 dB              |
| 40MHz - 400 MHz  | -16+10LOG (F/40) dB |
| 400MHz - 500 MHz | -6+30LOG (F/400) dB |

## CM TO DM REJ

|               |            |
|---------------|------------|
| 1MHz - 500MHz | -30 dB MIN |
|---------------|------------|

## HIPOT (Isolation Voltage): 2250VDC

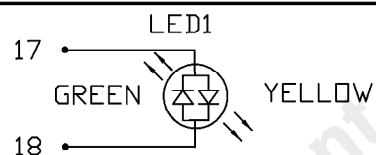
100% OF PRODUCTION TESTED TO COMPLY WITH IEEE 802.3 ISOLATION REQUIREMENTS.

BALANCED DC LINE CURRENT 600mA MAX. CONTINUOUS, 1.2A MAX. FOR 200 MILLISECONDS.

## LED1 AND LED2

|                                  |        |            |
|----------------------------------|--------|------------|
| VF (FORWARD VOLTAGE) IF=20mA     | GREEN  | 2.2V TYP.  |
| λD (DOMINANT WAVELENGTH) IF=20mA | YELLOW | 2.1V TYP.  |
|                                  | GREEN  | 570nm TYP. |
|                                  | YELLOW | 590nm TYP. |

OPERATING TEMPERATURE: -40°C TO +85°C.



PIN

TRD1+

8

TRCT1

7

TRD1-

9

TRD2+

2

TRCT2

1

TRD2-

3

TRD3+

4

TRCT3

6

TRD3-

5

TRD4+

10

TRCT4

12

TRD4-

11

VC78

16

VC45

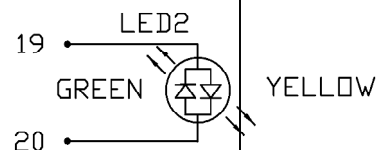
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VC36

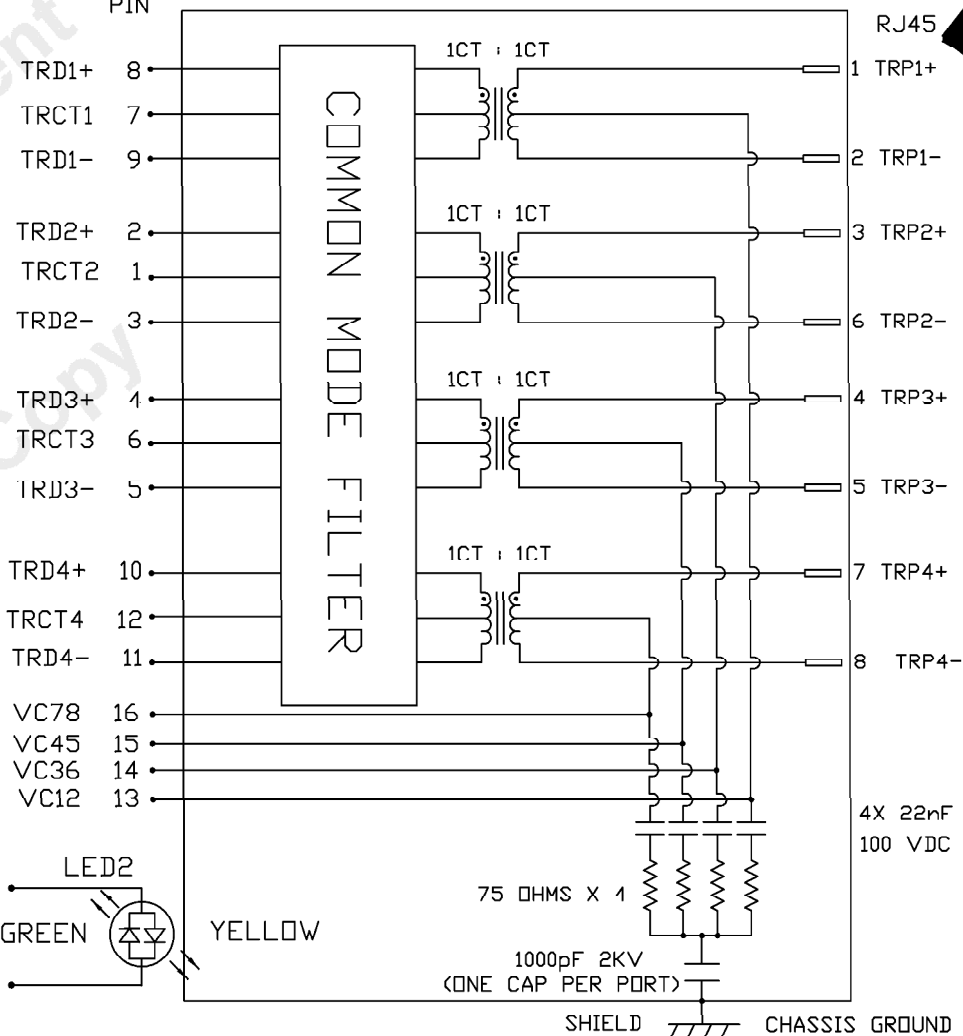
14

VC12

13



## SCHEMATIC



RJ45

1 TRP1+

2 TRP1-

3 TRP2+

6 TRP2-

4 TRP3+

5 TRP3-

7 TRP4+

8 TRP4-

4X 22nF  
100 VDC

75 OHMS X 4

1000pF 2KV  
(ONE CAP PER PORT)

SHIELD CHASSIS GROUND

RoHS



Additional Resources: [Product Page](#) [3D Model](#) [Technical Documentation](#)

|                                                   |  |                                                       |                                            |  |                                                                                       |  |                                                                                                                                |  |
|---------------------------------------------------|--|-------------------------------------------------------|--------------------------------------------|--|---------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------|--|
| ORIGINATED BY<br>CHOW WANCHUNG<br>DATE 2020-03-06 |  | TITLE<br><br>10 Gigabit MagJack®<br>4PPoE<br>PATENTED | PART NO. / DRAWING NO.<br><br>G27-122T-015 |  | STANDARD DIM.<br>TOL. IN INCH                                                         |  | [ ] METRIC DIM.<br>AS REF.                                                                                                     |  |
| DRAWN BY<br>XIE YIMING<br>DATE 2020-03-06         |  |                                                       | FILE NAME<br><br>G27-122T-015_B.DWG        |  | .X                                                                                    |  | UNIT : INCH [mm]                                                                                                               |  |
|                                                   |  |                                                       |                                            |  | .XX                                                                                   |  | SCALE : N/A                                                                                                                    |  |
|                                                   |  |                                                       |                                            |  | .XXX                                                                                  |  | SIZE : A4                                                                                                                      |  |
|                                                   |  |                                                       |                                            |  |  |  |  <b>MAGNETIC SOLUTIONS</b><br>a bel group |  |

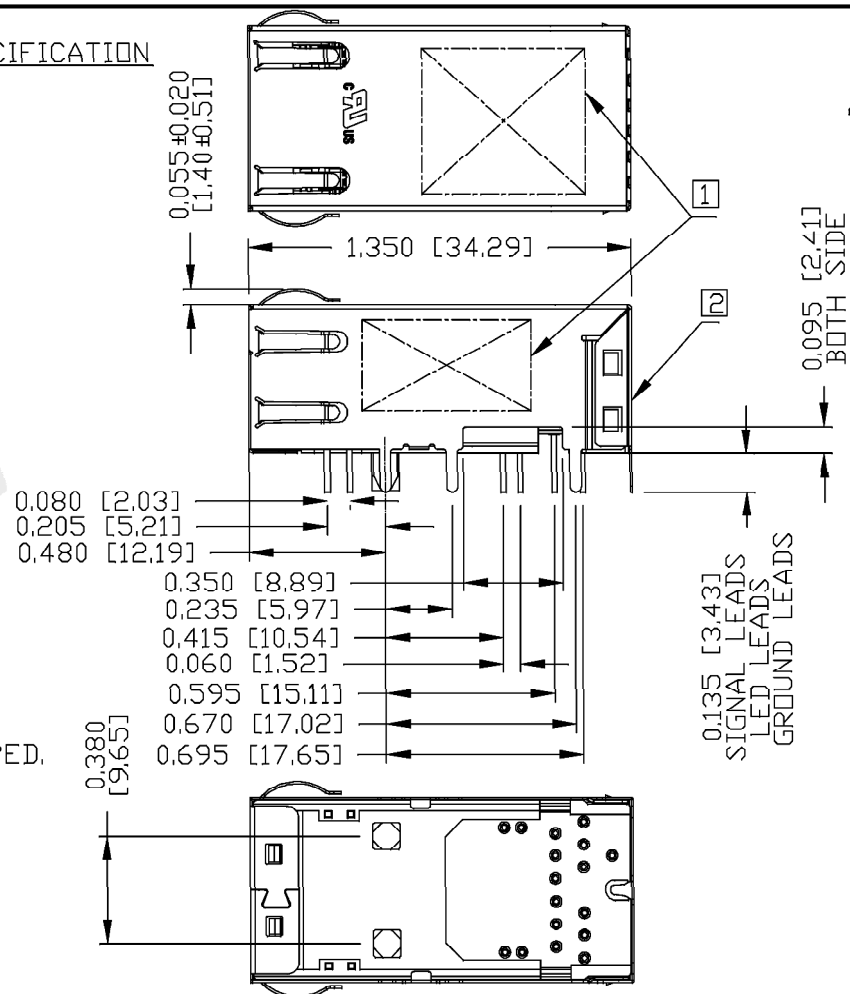
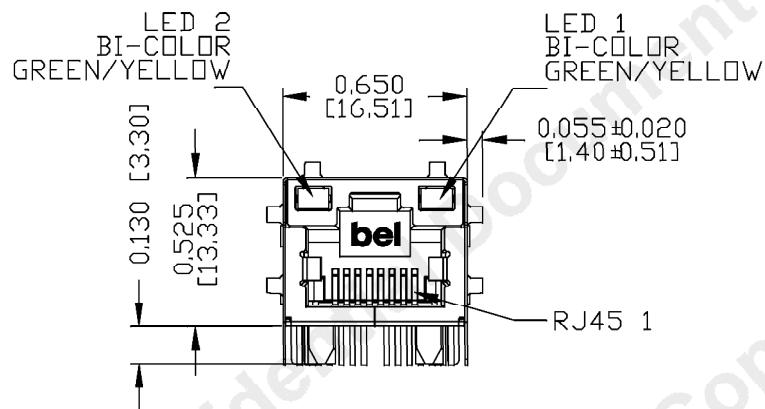


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## MECHANICAL SPECIFICATION

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### NOTES:

PLASTIC HOUSING: THERMOPLASTIC PA, BLACK  
FLAMMABILITY RATING UL 94V-0  
CONTACTS: 50 MICRO-INCH HARD GOLD PLATING OR EQUIVALENT  
OUTPUT PINS: LEAD FREE COPPER WIRES, DIA 0.018 INCH.  
METAL SHIELD: 100 MICRO-INCH MIN MATTE TIN, PINS ARE SOLDER DIPPED.  
(ALL GROUND LEADS ARE SOLDER DIPPED)

UL RECOGNIZED - FILE #E169987.

- MARK PART WITH MFG. LOGO, MFG. NAME, PART NUMBER AND DATE CODE.
- MARKING "PATENTED" IN BACK VIEW.
- THE PRODUCT IS RoHS COMPLIANT.
- JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS.
- THE PRODUCT IS PATENTED, THE PATENT NUMBER ARE U.S. PAT. 7,924,130 AND U.S. PAT. 7,429,195 AND U.S. PAT. 6,840,817.
- THE AXIAL RETENTION FORCE OF RJ PORT IS 15LBS MIN.

7. THE PART IS COMPLIANT WITH WAVE SOLDERING AND IR REFLOW. FOR WAVE SOLDERING, THE SUGGESTED PEAK WAVE SOLDERING CONDITION IS 260°C MAX. AND 10 SECONDS MAX. FOR IR REFLOW, THE SUGGESTED PEAK IR REFLOW CONDITION IS 245°C MAX AND 30 SECONDS MAX.

ORIGINATED BY  
LI QUANKUN  
DATE 2020-03-06

DRAWN BY  
OLIVER ZHANG  
DATE 2020-03-06

TITLE  
10 gigabit MagJack®  
4PPoE  
PATENTED

PART NO. / DRAWING NO.  
G27-122T-015  
FILE NAME  
G27-122T-015\_B.DWG

| STANDARD DIM.<br>TOL. IN INCH |        | [ ] METRIC DIM.<br>AS REF. |
|-------------------------------|--------|----------------------------|
| .X                            |        | UNIT : INCH [mm]           |
| .XX                           |        | SCALE : N/A                |
| .XXX                          | ±0.010 | SIZE : A4                  |

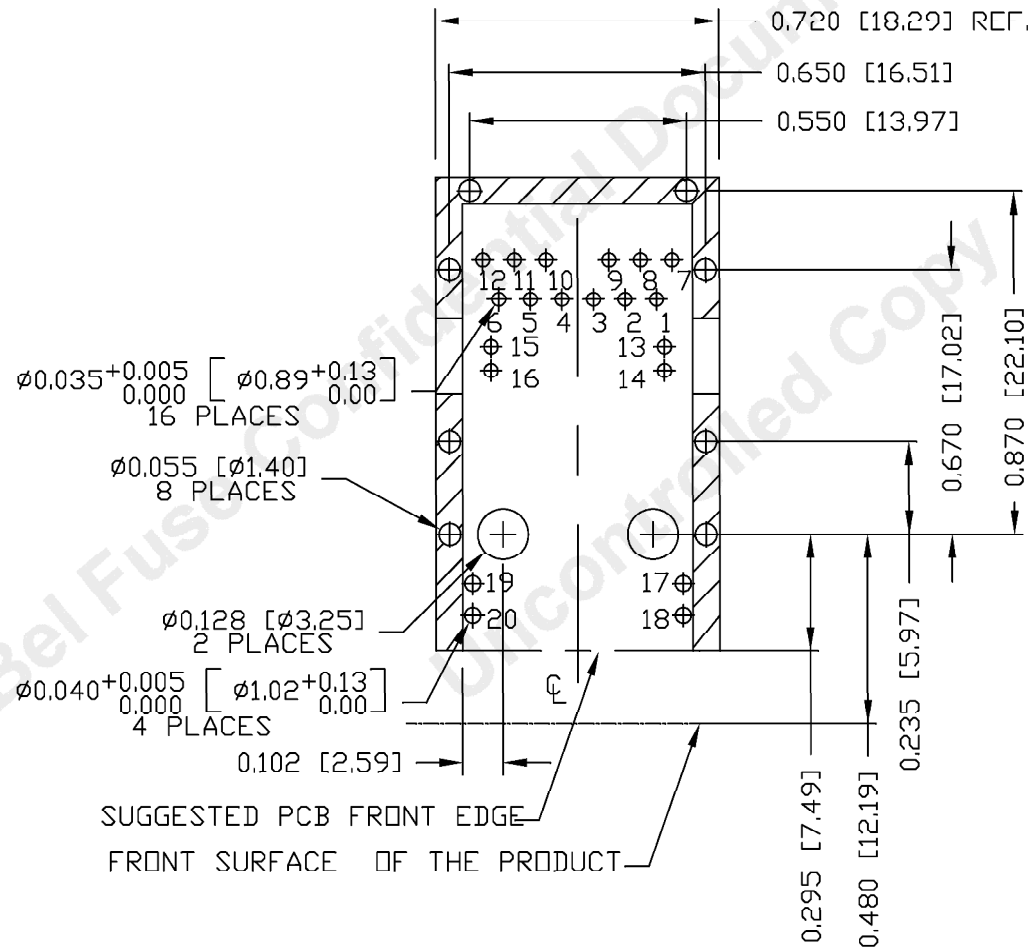
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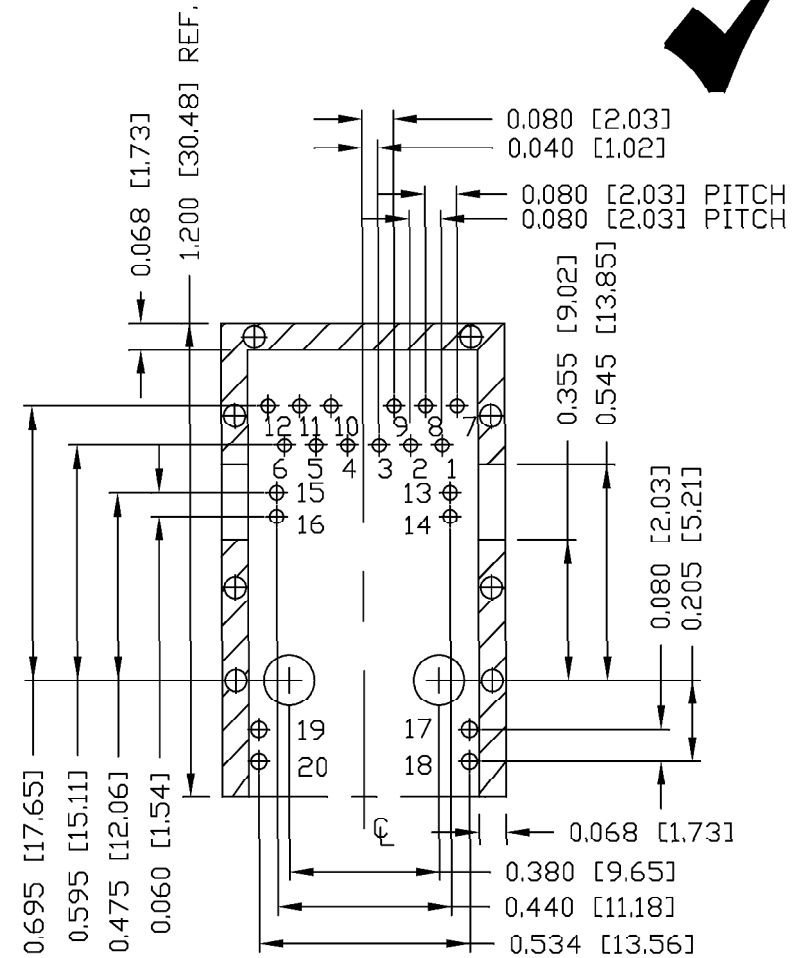
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## RECOMMENDED PCB FOOTPRINT

### COMPONENT SIDE VIEW



SUGGESTED PCB FRONT EDGE  
FRONT SURFACE OF THE PRODUCT



### NOTES:

THE SHADED AREA ON THE CUSTOMER BOARD ARE RECOMMENDED TO BE CLEAR OFF ANY VIA HOLE OR COMPONENT PAD.

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|          |          |
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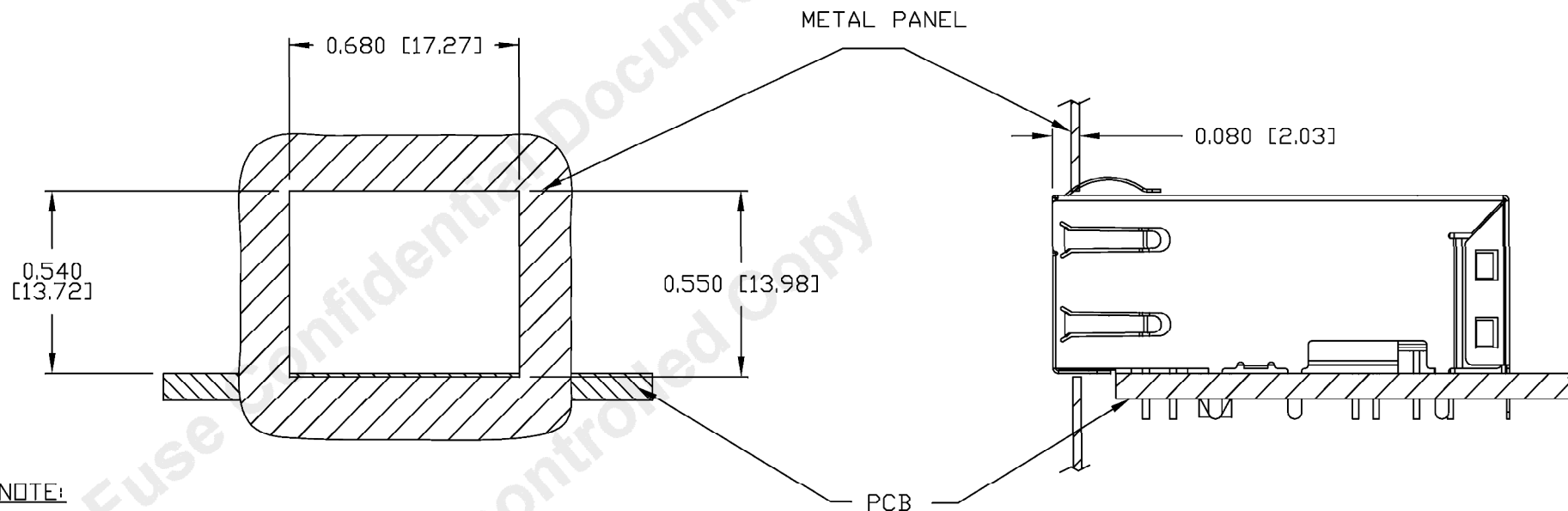
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### SUGGESTED PANEL OPENING



### NOTE:

THE DISTANCE OF PANEL INSIDE SURFACE RELATIVE TO FRONT SURFACE OF PART IS ONLY A SUGGESTION. IN CASE THIS DISTANCE IS DIFFERENT, THE REQUIRED PANEL OPENING DIMENSIONS CHANGE ACCORDINGLY.

### PACKING INFORMATION

PACKING TRAY: 0200M9999-K8 (TOP)

0200M9999-K7 (BOTTOM)

PACKING QUANTITY: 48 PCS FINISHED GOODS PER TRAY

9 TRAYS (432 PCS FINISHED GOODS) PER CARTON BOX

NOTE: CARDBOARDS ARE PLACED BETWEEN LAYERS OF PACKING TRAY INSIDE CARTON BOX  
(INCLUDE THE UPPERMOST AND LOWERMOST TRAY)

REV. : B PAGE : 5

|                                                |                                                       |                                            |                               |                                              |                                                                                                                                    |
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| DRAWN BY<br>OLIVER ZHANG<br>DATE 2020-03-06    |                                                       | FILE NAME<br><br>G27-122T-015_B.DWG        | .X<br>.XX<br>.XXX             | UNIT : INCH [mm]<br>SCALE : N/A<br>SIZE : A4 |                                                                                                                                    |
|                                                |                                                       |                                            | ±0.005                        |                                              |                                                                                                                                    |
|                                                |                                                       |                                            |                               |                                              |                                                                                                                                    |