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WRITTEN APPROVAL OF BEL FUSE INC.

LED1 POLARITY			LED2 POLARITY		
PIN 13	PIN 14	COLOR	PIN 15	PIN 16	COLOR
-	+	GREEN	-	+	YELLOW

RoHS  
2002/95/EC



# ELECTRICAL CHARACTERISTICS @ 25°C

## TRANS RATIO

TP1	1CT : 1CT ±2%
TP2	1CT : 1CT ±2%
TP3	1CT : 1CT ±2%
TP4	1CT : 1CT ±2%

## OCL @ 100kHz/100mVRMS

8mA DC BIAS	350µH MIN.
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## INS. LOSS

0.1MHz TO 1MHz	-1.1 dB MAX
1MHz TO 65MHz	-0.5 dB MAX
65MHz TO 100MHz	-0.8 dB MAX
100MHz TO 125MHz	-1.2 dB MAX

## RET. LOSS (MIN)

0.5MHz-40MHz	-18 dB
40MHz-100MHz	-12+20LOG(f/80MHz) dB

## CROSS TALK

1MHz - 60MHz	-35 dB MIN.
60MHz - 100MHz	-25 dB MIN.

## CM TO CM REJ

100kHz - 100MHz	-30 dB MIN
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## CM TO DM REJ

100kHz - 100MHz	-35 dB MIN
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## HIPOT (Isolation Voltage): 1500 Vrms

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

## LED 1

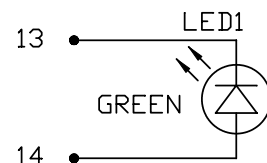
VF (FORWARD VOLTAGE) IF=20mA GREEN 2.2V TYP.  
λD (DOMINANT WAVELENGTH) IF=20mA GREEN 565nm TYP.

## LED 2

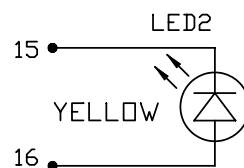
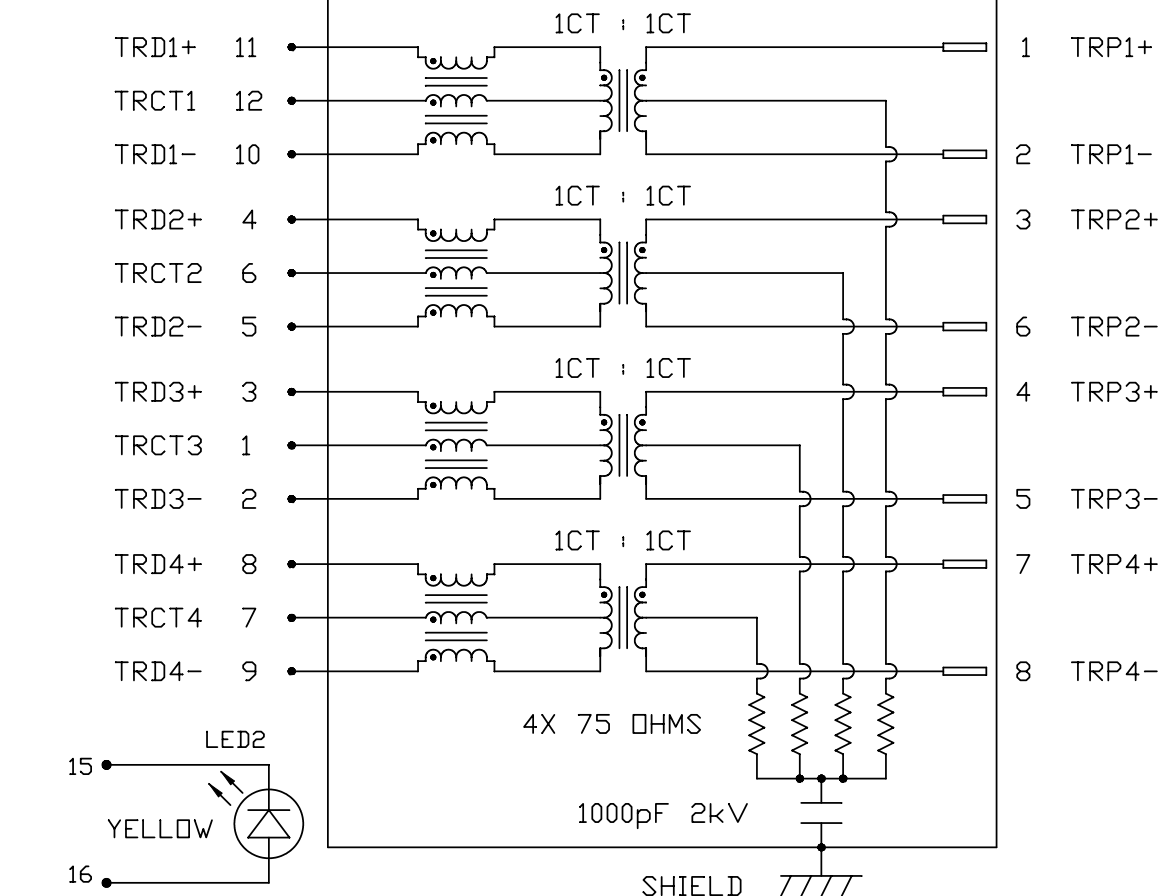
VF (FORWARD VOLTAGE) IF=20mA YELLOW 2.1V TYP.  
λD (DOMINANT WAVELENGTH) IF=20mA YELLOW 590nm TYP.

## USB ELECTRICAL:

INSULATION RESISTANCE:	1000 MEGAΩ (MIN)
CONTACT RESISTANCE:	25 MILLIΩ (MAX)
DIELECTRIC WITHSTANDING:	750 VAC



## SCHEMATIC



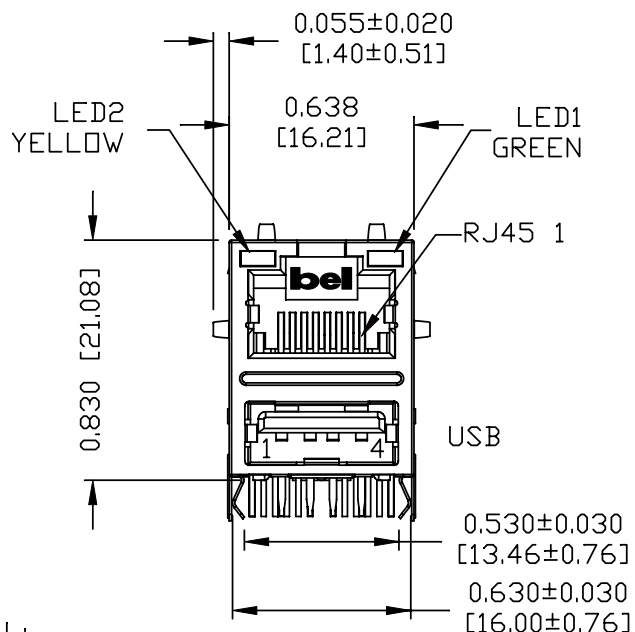
ORIGINATED BY	DATE	TITLE	PART NO. / DRAWING NO.	STANDARD DIM.		[ ] METRIC DIM. AS REFERENCE	
				TOL. IN INCH		UNIT : INCH [mm]	REV. : B
CHOW WANGCHUNG	07-08-09	gigabit MagJack® Combo (single USB, 8 cores) 0821-1D1T-43-F PATENTED	08211D1T43-F FILE NAME 08211D1T43-F_B.DWG	.X		SCALE : N/A	SIZE : A4
DRAWN BY	DATE			.XX			PAGE : 2
LEE WEIDE	07-08-09			.XXX			

**bel**  
COMPONENTS FOR A  
CONNECTED  
PLANET

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# MECHANICAL SPECIFICATION

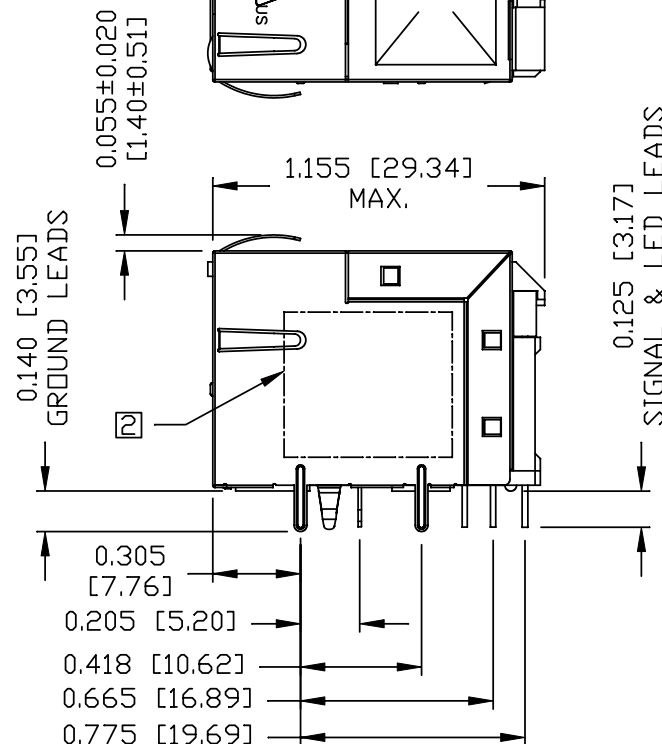


## RJ45 MECHANICAL:

PLASTIC HOUSING: THERMOPLASTIC PBT  
 FLAMMABILITY RATING UL 94V-0  
 CONTACT PLATING: 30 MICRO-INCH HARD GOLD PLATING  
 PINS: TIN-COATED COPPER WIRE, DIA 0.018 INCH.  
 METAL SHIELD: NICKEL PLATED ON COPPER ALLOY.  
 (ALL GROUND LEADS ARE SOLDER DIPPED)

- ① MARK PART WITH MFG. LOGO, MFG. NAME, PART NUMBER AND DATE CODE.
- ② MARKING "PATENTED".
3. JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS.

UL US UL RECOGNIZED - FILE #E196366 AND E169987.

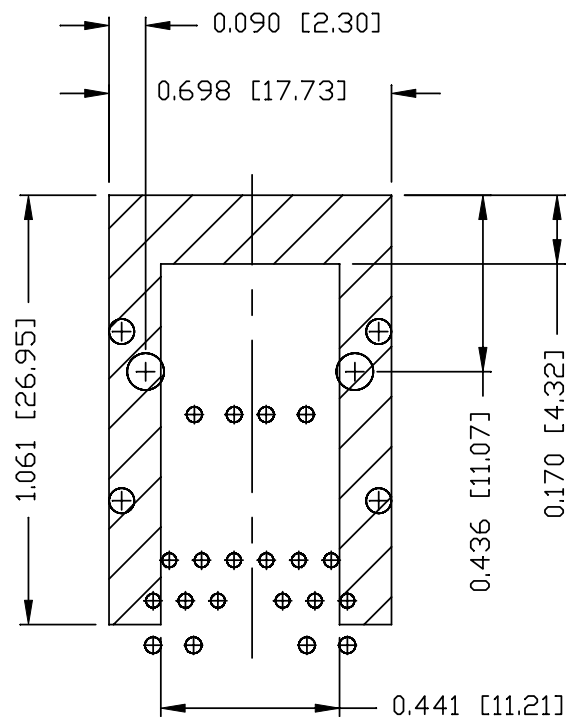


## USB MECHANICAL:

MATING FORCE: 35 NEWTONS MAXIMUM  
 UNMATING FORCE: 10 NEWTONS MINIMUM  
 CONTACT: PROSPHER BRONZE,  
 30 MICRO-INCH GOLD PLATING ON CONTACT AREA  
 AND LEAD-FREE TIN ON SOLDER TAIL.  
 4. RoHS COMPLIANCE, PER EU DIRECTIVE 2002/95/EC.  
 5. THE PRODUCT IS PATENTED, THE PATENT NUMBER IS  
 U.S. PAT. 5,736,910.

ORIGINATED BY	DATE	TITLE	PART NO. / DRAWING NO.	STANDARD DIM.		[ ] METRIC DIM. AS REFERENCE	
				TOL. IN INCH		UNIT : INCH [mm]	REV. : B
LIU QIN	07-08-09	gigabit MagJack® Combo (single USB, 8 cores) 0821-1D1T-43-F PATENTED	08211D1T43-F  FILE NAME 08211D1T43-F_B.DWG	.X		SCALE : N/A	SIZE : A4
DRAWN BY	DATE			.XX			PAGE : 3
XIAN JIAXIN	07-08-09			.XXX	±0.010		





NOTES:

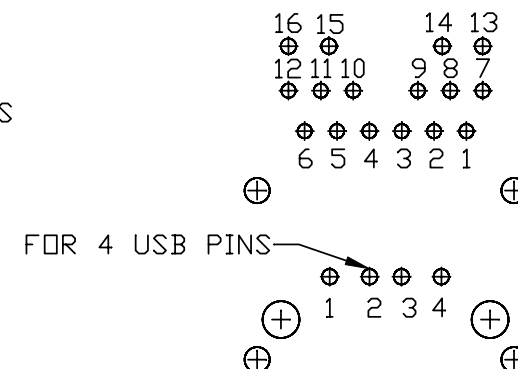
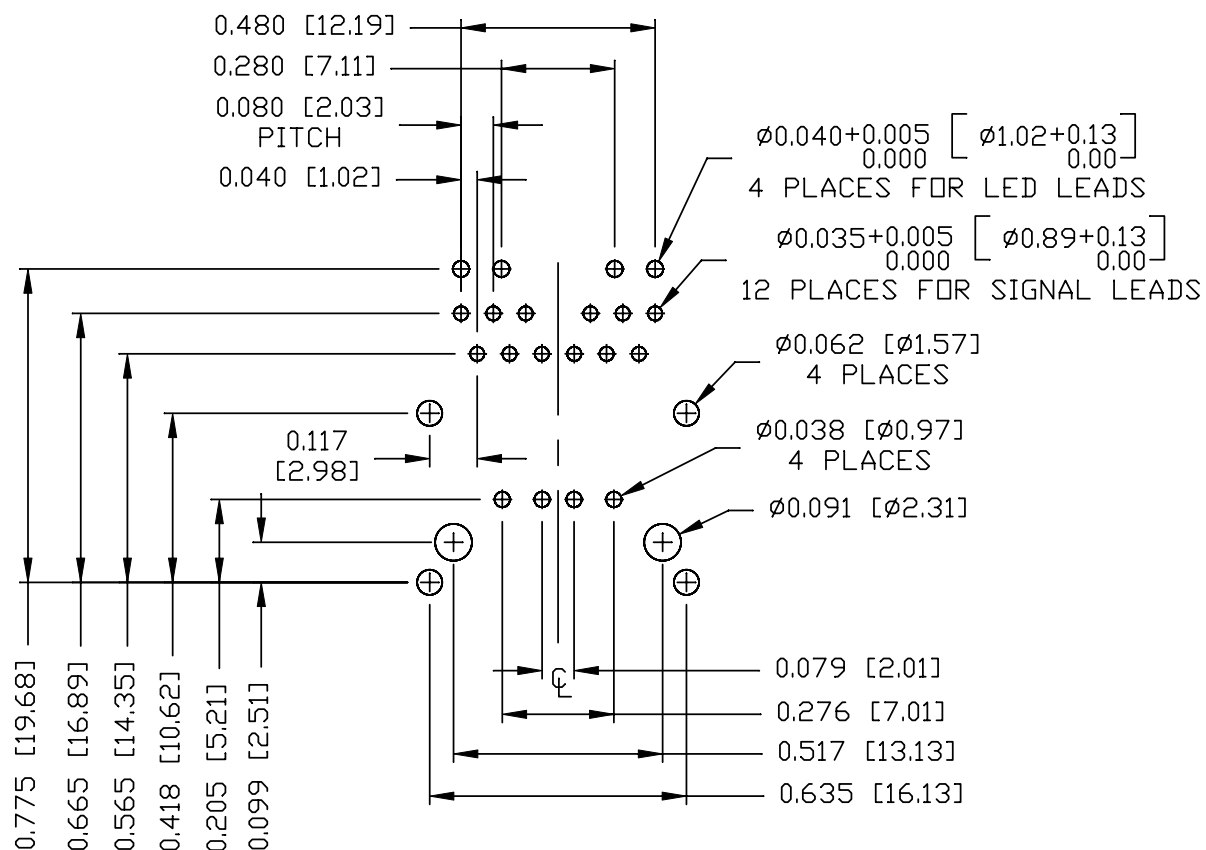
THE SHADED AREA ON THE CUSTOMER BOARD ARE  
 RECOMMENDED TO BE CLEAR OFF ANY VIA HOLE OR  
 COMPONENT PAD.

ORIGINATED BY	DATE	TITLE	PART NO. / DRAWING NO.	STANDARD DIM. TOL. IN INCH	[ ] METRIC DIM. AS REFERENCE
LIU QIN	07-08-09	gigabit MagJack® Combo (single USB, 8 cores) 0821-1D1T-43-F PATENTED	08211D1T43-F FILE NAME 08211D1T43-F_B.DWG	.X	UNIT : INCH [mm] REV. : B
DRAWN BY	DATE			.XX	SCALE : N/A SIZE : A4
XIAN JIAXIN	07-08-09			.XXX ±0.004	PAGE : 4

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RECOMMENDED PCB FOOTPRINT  
COMPONENT SIDE VIEW

RoHS  
2002/95/EC

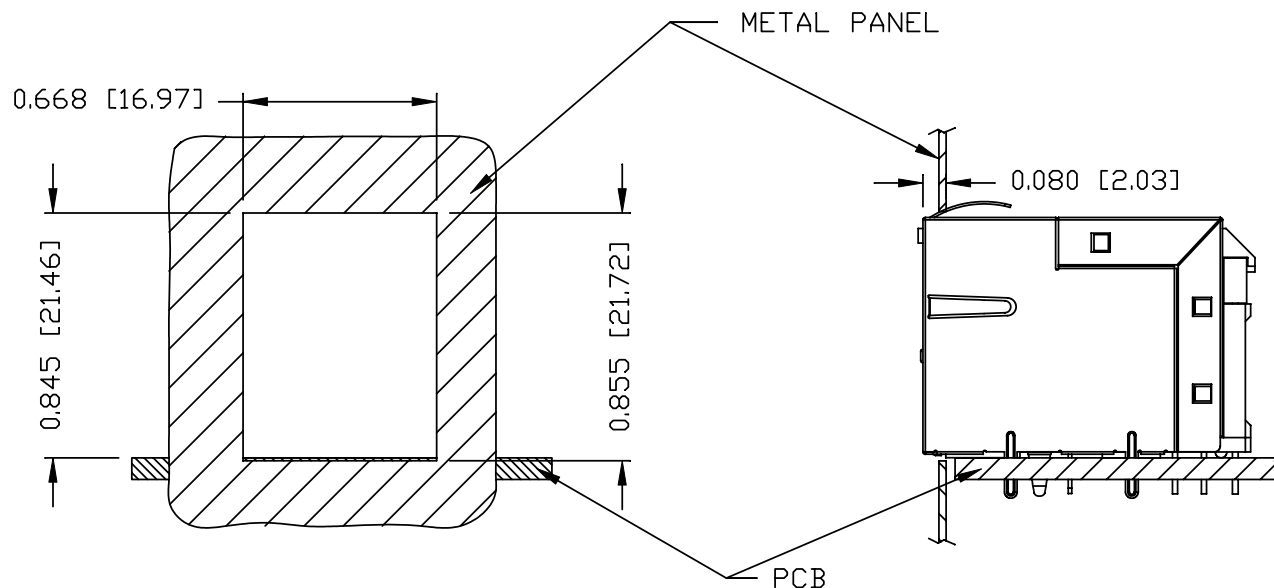


ORIGINATED BY LIU QIN	DATE 07-08-09	TITLE gigabit MagJack® Combo (single USB, 8 cores) 0821-1D1T-43-F PATENTED	PART NO. / DRAWING NO. 08211D1T43-F	STANDARD DIM. TOL. IN INCH		[ ] METRIC DIM. AS REFERENCE	
				.X		UNIT : INCH [mm]	REV. : B
DRAWN BY XIAN JIAXIN	DATE 07-08-09		FILE NAME 08211D1T43-F_B.DWG	.XX		SCALE : N/A	SIZE : A4
				.XXX	±0.004		PAGE : 5

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# SUGGESTED PANEL OPENING



## NOTES:

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 : 0200-0148-48 (TOP)

0200-0148-49 (BOTTOM)

PACKING QUANTITY : 60 PCS FINISHED GOODS PER TRAY

8 TRAYS (480 PCS FINISHED GOODS) PER CARTON BOX

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

ORIGINATED BY	DATE	TITLE	PART NO. / DRAWING NO.	STANDARD DIM.		[ ] METRIC DIM. AS REFERENCE	
				TOL. IN INCH		UNIT : INCH [mm]	REV. : B
LIU QIN	07-08-09	gigabit MagJack® Combo (single USB, 8 cores) 0821-1D1T-43-F PATENTED	08211D1T43-F	.X		SCALE : N/A	SIZE : A4
DRAWN BY	DATE			.XX			
XIAN JIAXIN	07-08-09			.XXX	±0.004		PAGE : 6

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bel:

[0821-1D1T-43-F](#)