Stacked 2x1 RJ45 Connector
with Integrated Magnetics and LED
for 10/100Base-TX Applications

HanRun®
Electronics Company Limited

HR916103H

Electrical Specification @25°C

RoHS Compliant (PB Free)

Isolation: 2250VDC 0.5mA 60Sec (UTP Side to Chip Side)

OCL: 350uH Minimum @100KHz 100mV with 8mADC
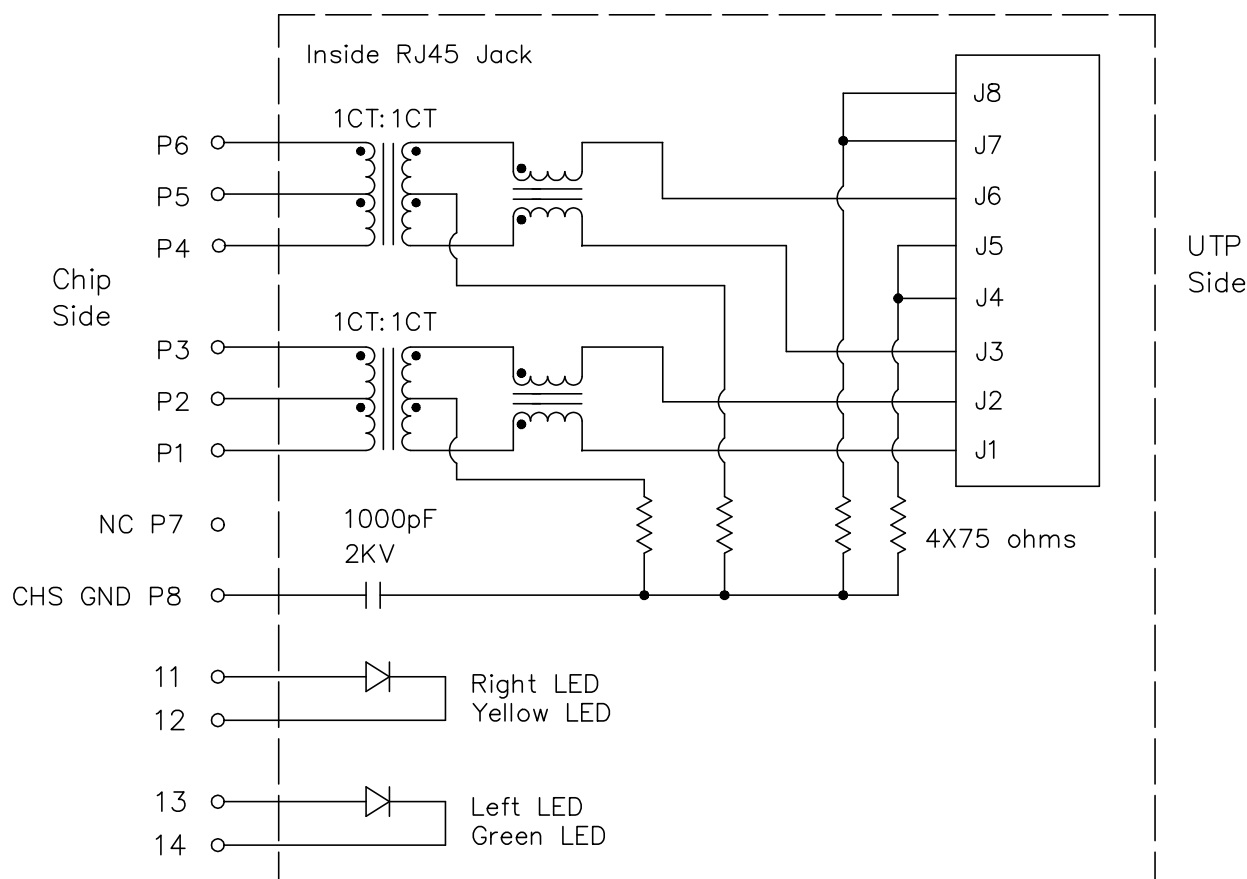
Insertion Loss: −1.0dB Maximum @1MHz ~ 100MHz

Return Loss: −18dB Minimum @1MHz ~ 30MHz / −13.5dB Minimum @30MHz ~ 60MHz
           −12dB Minimum @60MHz ~ 80MHz

Differential to Common Mode Rejection: −30dB Typical @1MHz ~ 50MHz
                                    −20dB Typical @50MHz ~ 150MHz

CMRR: −30dB Minimum @1MHz ~ 100MHz

Crosstalk: −35dB Minimum @30MHz / −30dB Minimum @60MHz
          −25dB Minimum @100MHz

Schematics

Notes: Connect CHS GND to PCB Ground

Specifications subject to change without notice . Refer to the approval sheet for lastly edition.

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Commercial standards, specifications and Summary:

RoHS Compliant (Pb Free)
Meets or Exceeds IEEE802.3 standards including 350uH Min OCL with 8mADC
High performance for EMI suppression, Crosstalk, Return Loss and Consistent Electrical
Minimum 2250Vdc isolation per IEEE802.3 requirement
Minimize PCB space and Simplify PCB Layout
Less magnetic components to place on PCB, Higher reliability and yields

Material Specification:

Housing: PBT GF Black UL94V−0
Shield: 50u" Nickel over 0.20mm Thickness Brass
Insert: PA66 GF Black UL94V−0
       Phosphor Bronze 0.35mm Thickness
       Plating Area, 30u" gold over 50u" nickel
       Solder Area, 100u" tin over 50u" nickel
RJ45 Contact pin: PA66 GF Black UL94V−0
               Brass; 100u" Tinning
LED Conductor: PC Transparent UL94V−0

Mechanical Performance:

Contact resistance: 30 mΩ Maximum
Mating force: 5 lbs Maximum
Unmating force: 5 lbs Maximum
Operating life: 750 Cycles Minimum

Operating and Storage Temperature:

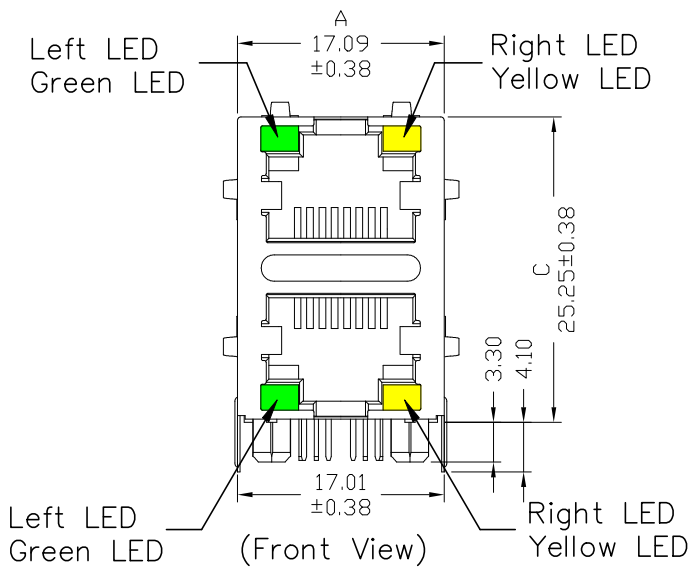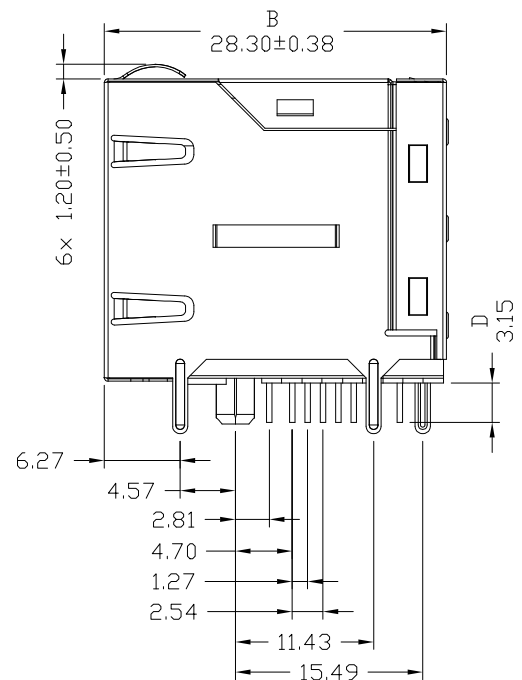Operating Temperature Range: 0℃ ～ +70℃
Storage Temperature Range: −40℃ ～ +85℃

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Mechanical Dimensions:

(Top View)

Left LED
Green LED

A
17.09
±0.38

Right LED
Yellow LED

C
25.25±0.38

3.30
4.10

Left LED
Green LED

17.01
±0.38

(Front View)

Right LED
Yellow LED

B
28.30±0.38

6× 1.20±0.50

D
3.15

6.27
4.57
2.81
4.70
1.27
2.54
11.43
15.49

(Side View)

Standard LED	Wavelength	Forward V (Min/Max)	Forward A	Type
Green	568nm	1.8V/2.8V	20mA	squareness
Yellow	586nm	1.8V/2.8V	20mA	squareness

Dimensions in mm

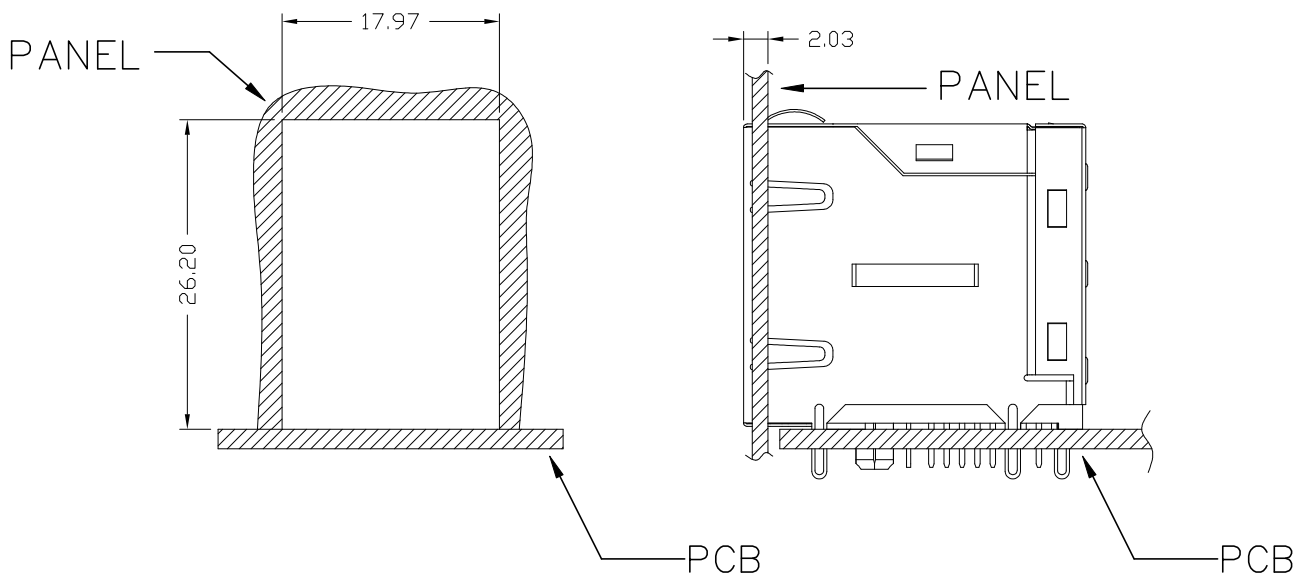Unless otherwise specified, Tolerance: .xx ±0.25

REV.: 00

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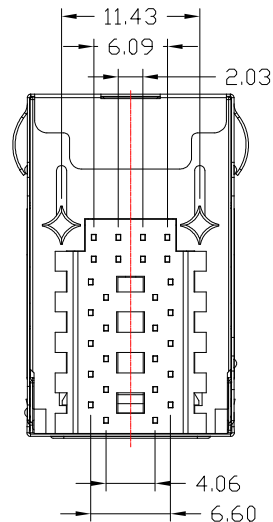
(Bottom View)

Suggested Panel Cutout:

PANEL

PANEL

PCB

PCB

SUGGESTED PANEL CUTOUT

Dimensions in mm

Unless otherwise specified, Tolerance: .xx ±0.25

REV.: 00

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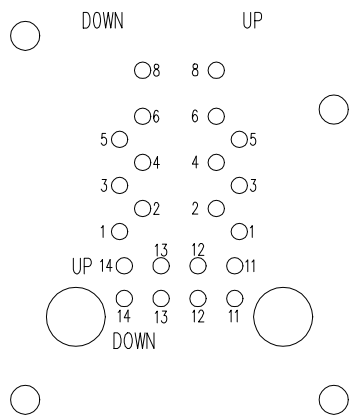
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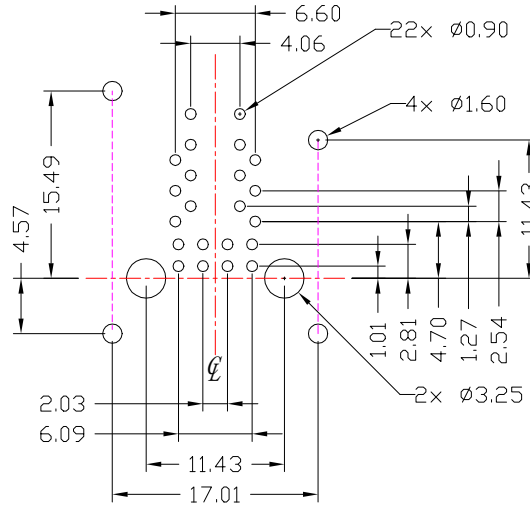
PCB Layout:

(Recommended PCB layout)
All dimension tolerance are ±0.08 unless otherwise specified

Pin Assignments:

Dimensions in mm
Unless otherwise specified, Tolerance: .xx ±0.25
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