

## 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

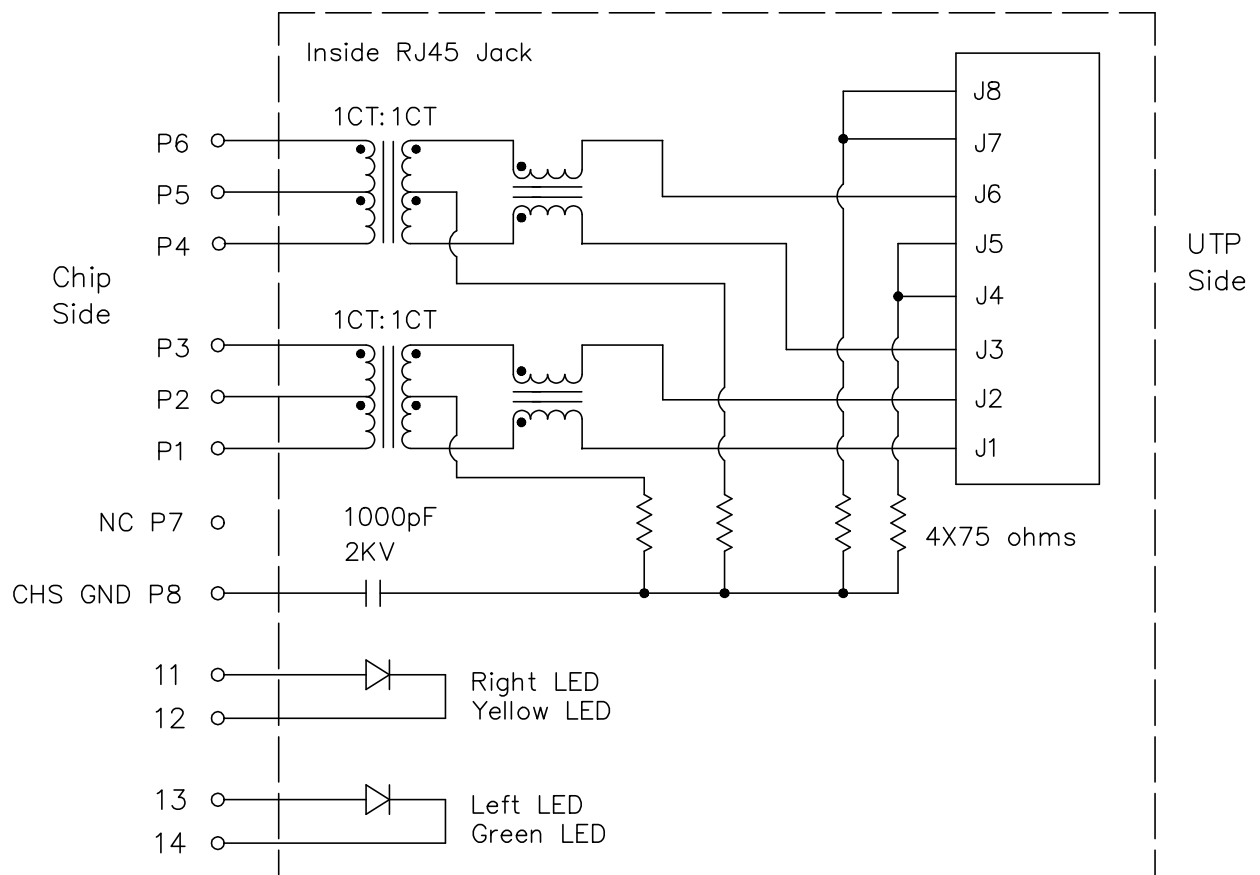
Return Loss: -18dB Minimum @1MHz ~ 30MHz / -13.5dB Minimum @30MHz ~ 60MHz  
-12dB Minimum @60MHz ~ 80MHz

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

## HR916103H

### 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

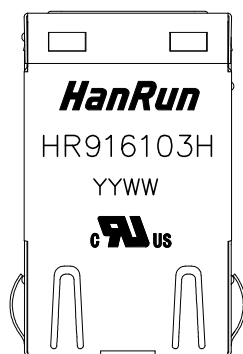
### Operating and Storage Temperature:

Operating Temperature Range: 0°C ~ +70°C

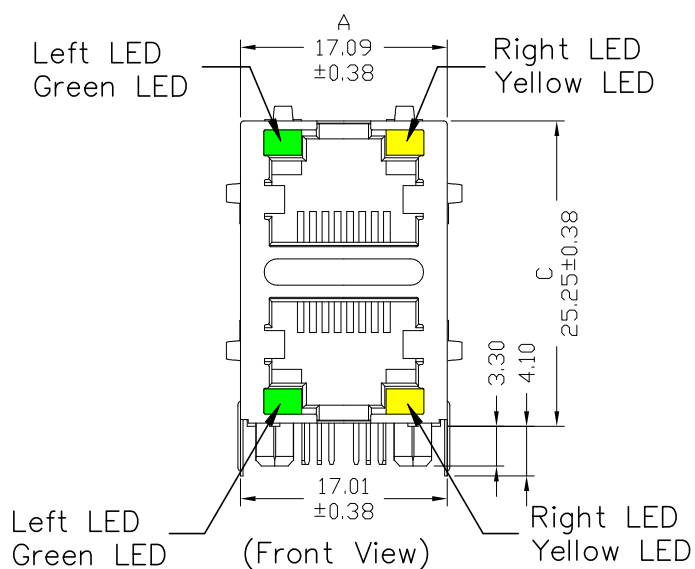
Storage Temperature Range: -40°C ~ +85°C

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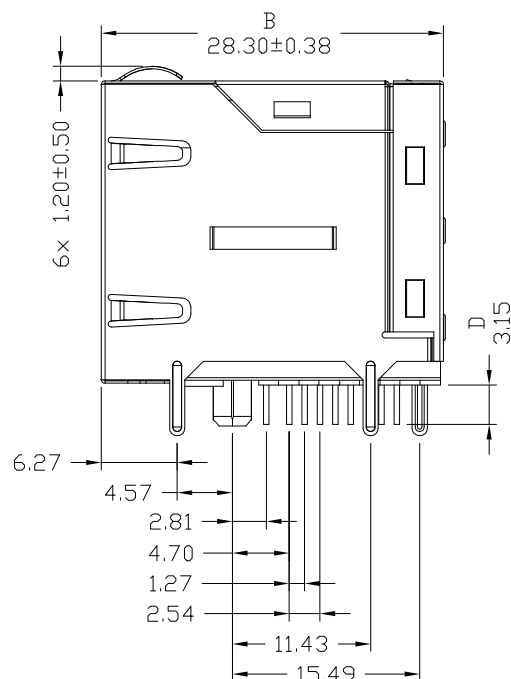
### Mechanical Dimensions:



(Top View)



(Front View)



(Side View)

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

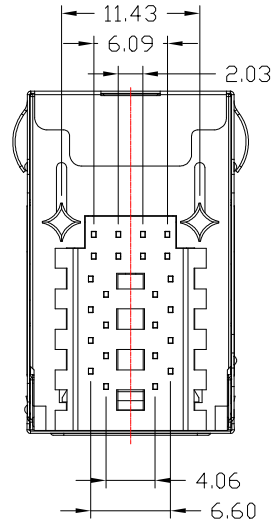
Dimensions in mm

Unless otherwise specified, Tolerance: .xx ±0.25

REV.: 01

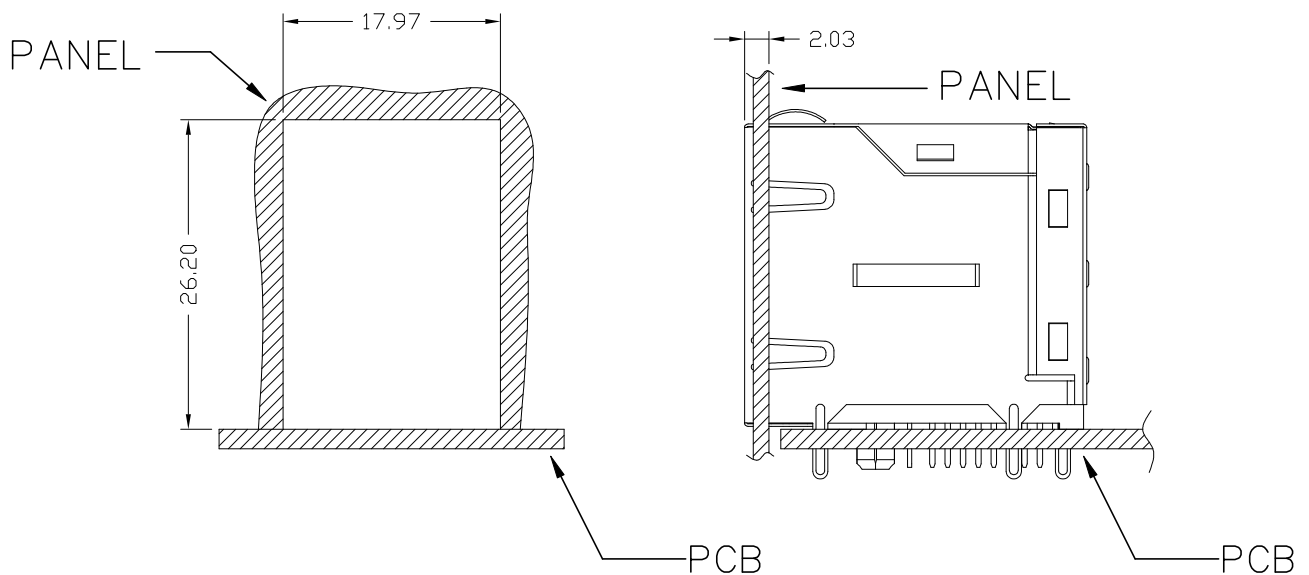
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(Bottom View)

Suggested Panel Cutout:



SUGGESTED PANEL CUTOUT

Dimensions in mm

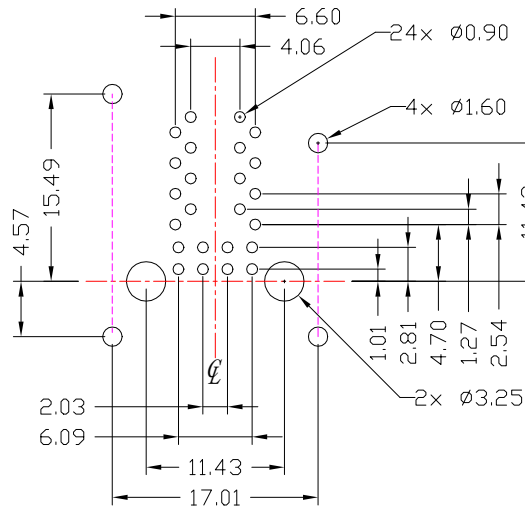
Unless otherwise specified, Tolerance: .xx ±0.25

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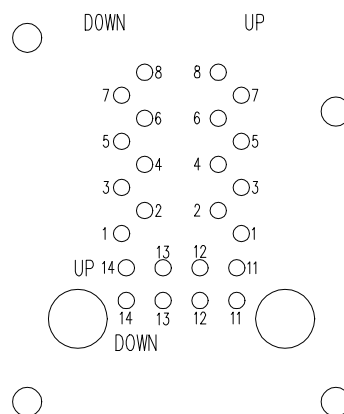
### PCB Layout:



(Recommended PCB layout)

All dimension tolerance are  $\pm 0.08$  unless otherwise specified

### Pin Assignments:



Dimensions in mm

Unless otherwise specified, Tolerance: .xx  $\pm 0.25$

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