

Stacked 2x2 RJ45 Connector
with Integrated Magnetics and LED
for 10/100Base-T PoE application



HR872210HE

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 / -10dB Minimum @80MHz ~ 100MHz

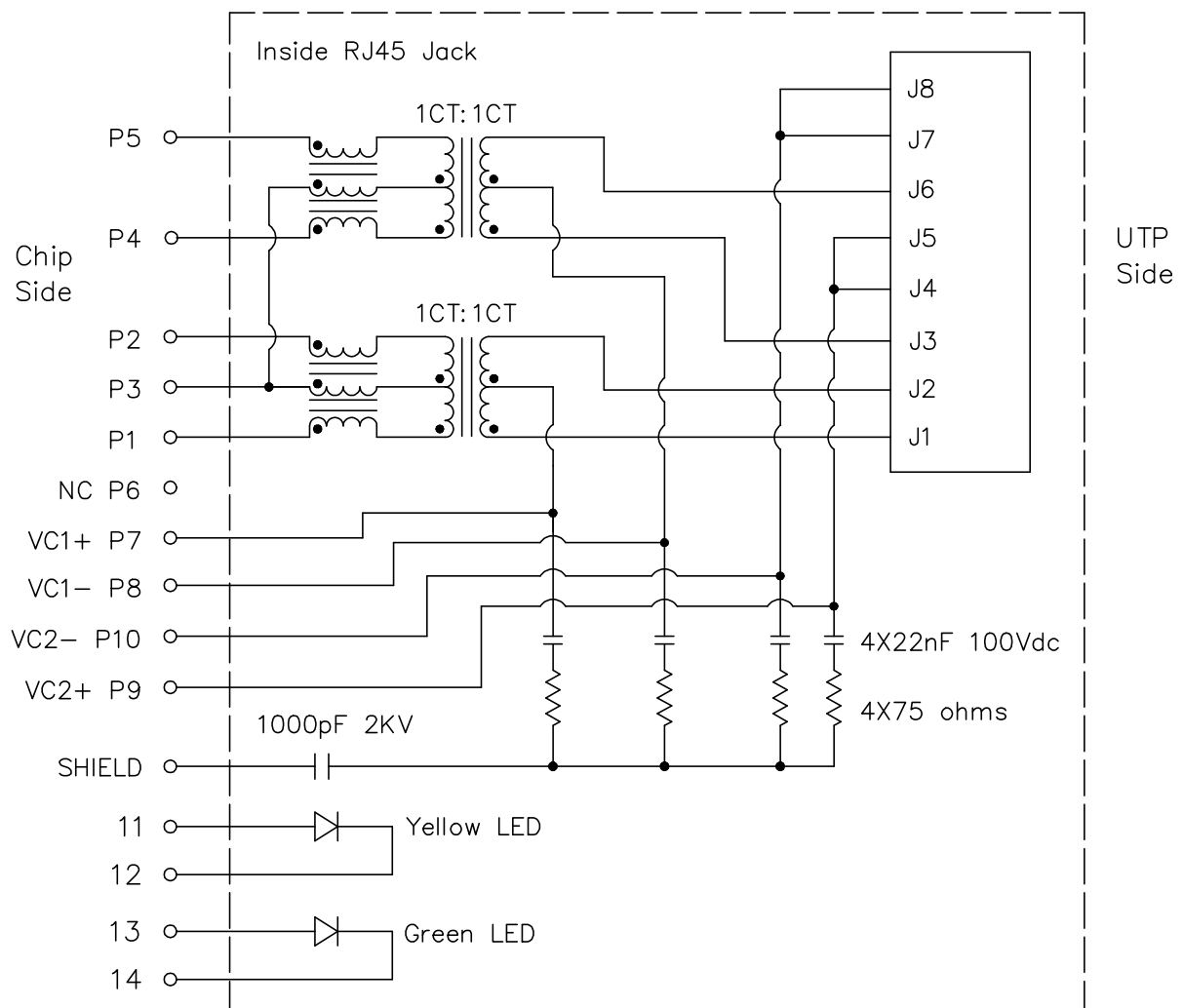
Common Mode Rejection: -30dB Minimum @1MHz ~ 100MHz

Crosstalk: -30dB Minimum @1MHz ~ 100MHz

Designed To Support 57VDC, 350mA per centre taps

(17.5W when using 2 centre taps; 35W when using 4 centre taps)

Schematics



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Commercial standards, specifications and Summary:

RoHS Compliant (Pb Free)

Meets or Exceeds IEEE802.3af 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

UL Recognized Component: File # E330599

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

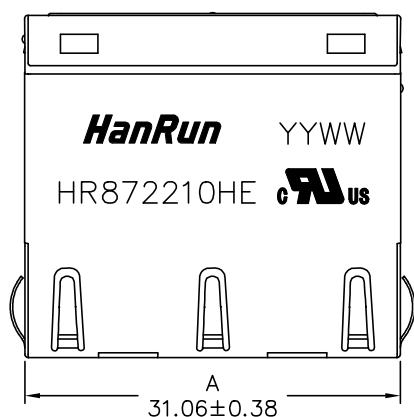
Operating and Storage Temperature:

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

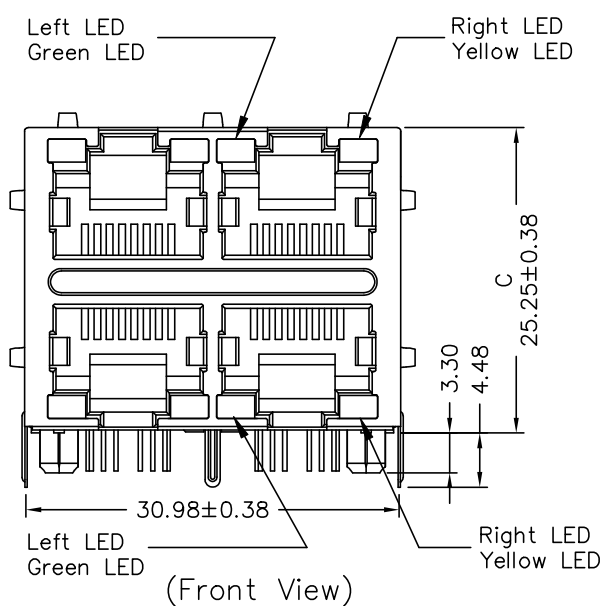
Storage Temperature Range: -40°C ~ +85°C

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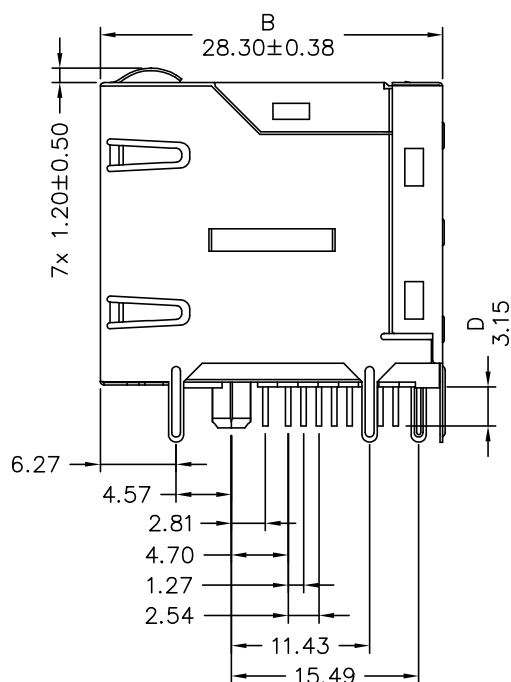
Mechanical Dimensions:



(Top View)



(Front View)



(Side View)

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

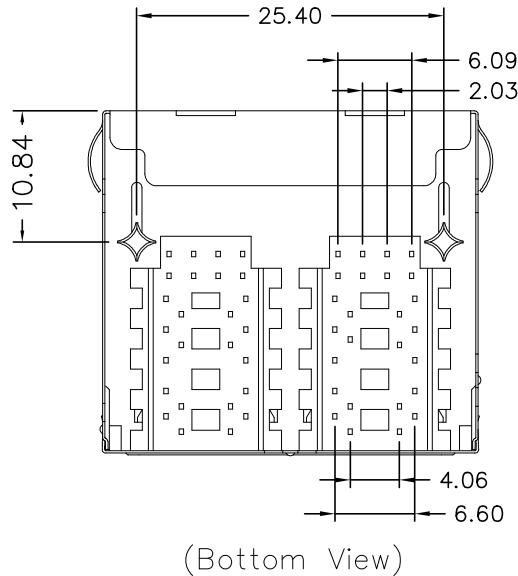
Dimensions in mm

Unless otherwise specified, Tolerance: .xx ± 0.25

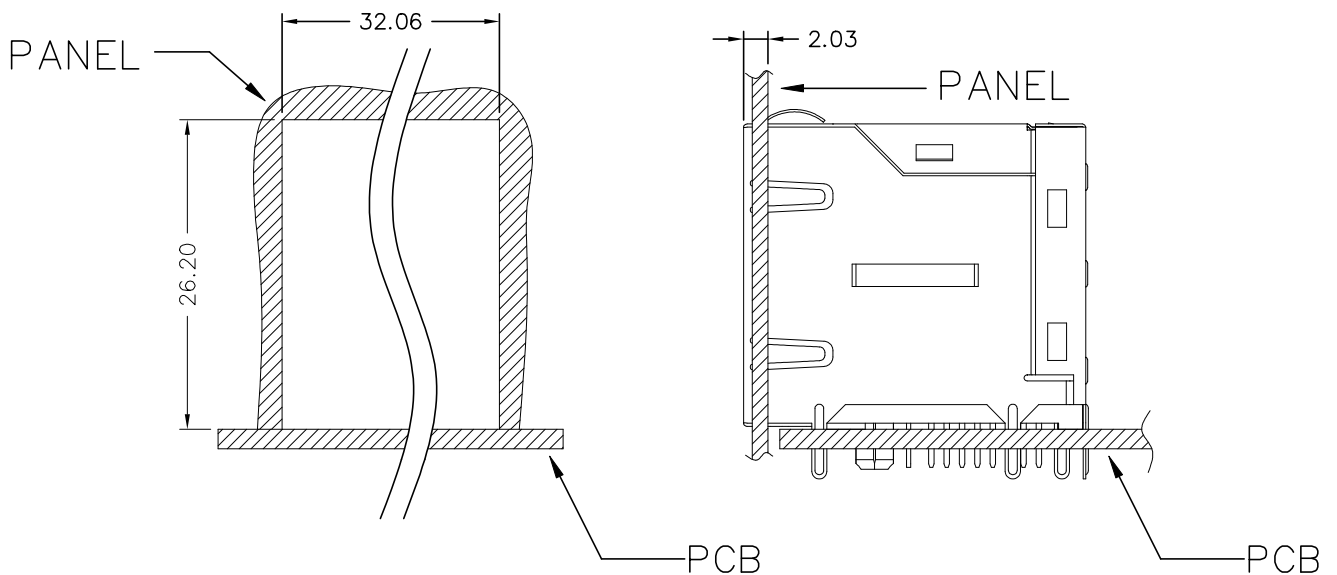
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Suggested Panel Cutout:



SUGGESTED PANEL CUTOUT

Dimensions in mm

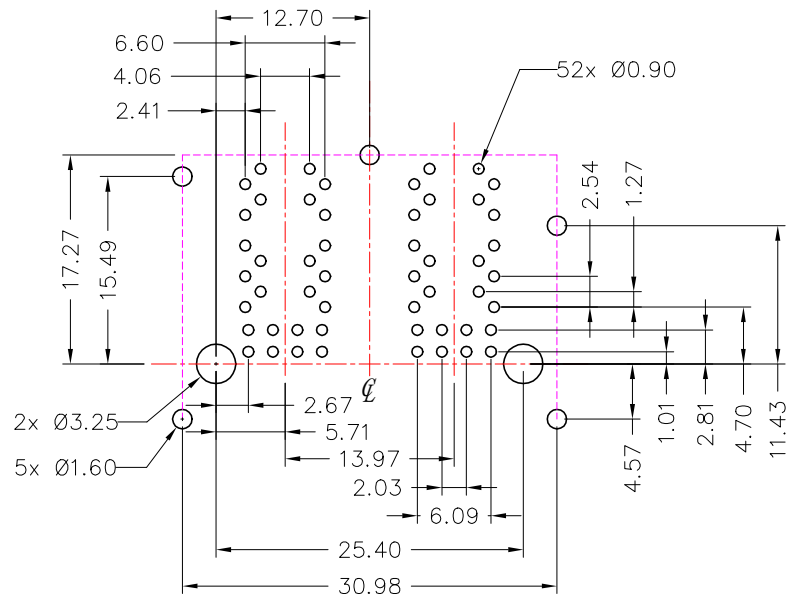
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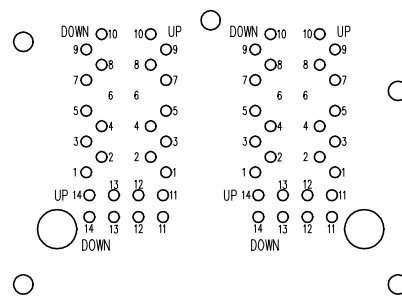
PCB Layout:



Recommended PCB layout (Component Side View)

All dimension tolerance are ± 0.08 unless otherwise specified

Pin Assignments:



Remark: Remove Pin#6
(Component Side View)

Dimensions in mm

Unless otherwise specified, Tolerance: .xx ± 0.25

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