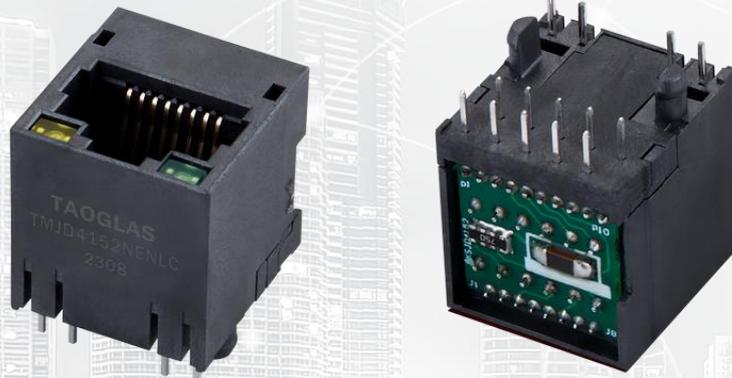




TAOGLAS®



Datasheet

RJ45 ICM 10/100 Base-T Unshielded Vertical PoE

Part No:
TMJD4152NENLC

Description:

RJ45 connector with integrated magnetics 10/100 Base-T.
Vertical Single Port with THT mount, LEDs and PoE.

Features:

- Vertical
- Transformer + CMC
- Unshielded
- PoE (350 mA)
- Reflow solder
- Board lock
- Industrial grade

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1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJD4152NENLC is an RJ45 Integrated Connector 10/100 Base-T Vertical with Unshielded body design and with PoE technology of 350mA.

Typical Applications Include:

- Industrial Automation
- Hubs
- Routers
- Switches
- Wireless Access Points

Taoglas Magnetics offer an extensive product line of RJ45 Integrated Connectors designed for commercial and industrial grade applications, supporting 10/100 Base-T (Atmos100 Series) and 1G Base-T (Atmos1000 series). These surface mount or through-hole components provide reliable performance and maintain signal integrity that meets IEEE 802.3 standards, and they are UL certified. The Power over Ethernet options are also available including PoE, PoE+ and PoE++.

The majority of Taoglas RJ45 ICMs are manufactured with fully automated winding, assembly & testing to ensure consistent performance, quality and reliability while ensuring cost competitiveness for its customers. These products are fully compliant with the REACH and RoHS directive, and compatible with all major PHY vendors.

For customized products or support with integration, contact your regional Taoglas customer support team for further information.

2. Specifications

Electrical Performance @25°C	
Inductance OCL	350μH MIN @ 100KHz 0.1V 8mA DC Bias
Turns Ratio (±5%)	1CT: 1CT
Insertion Loss	-1.2dB MAX @ 1-100Mhz
Return Loss	-16dB MIN @ 1-30Mhz
	-12dB MIN @ 30-60Mhz
	-10dB MIN @ 60-80Mhz
Cross talk	-30dB MIN @ 1-100Mhz
Common to Common Mode Attenuation	-30dB MIN @ 1-100Mhz
Current capability for power lines	350mA MAX
Hi-Pot	1500Vrms

Environmental Specifications	
Operating Temperature	-40°C TO +85°C

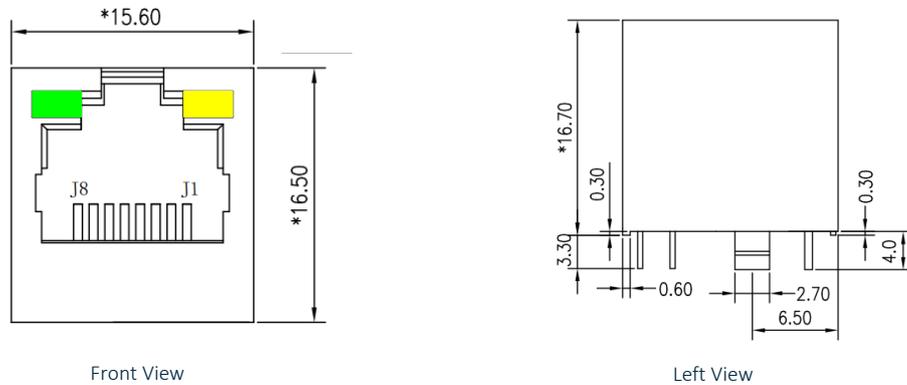
Material Specifications	
Housing	LCP UL94V-0, Black
Contact/Shield	Copper alloy
Contact Plating	Gold in contact area
	Thickness = 6μ" min.

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

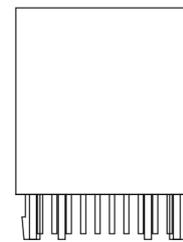
3. Mechanical

3.1 Mechanical Drawings



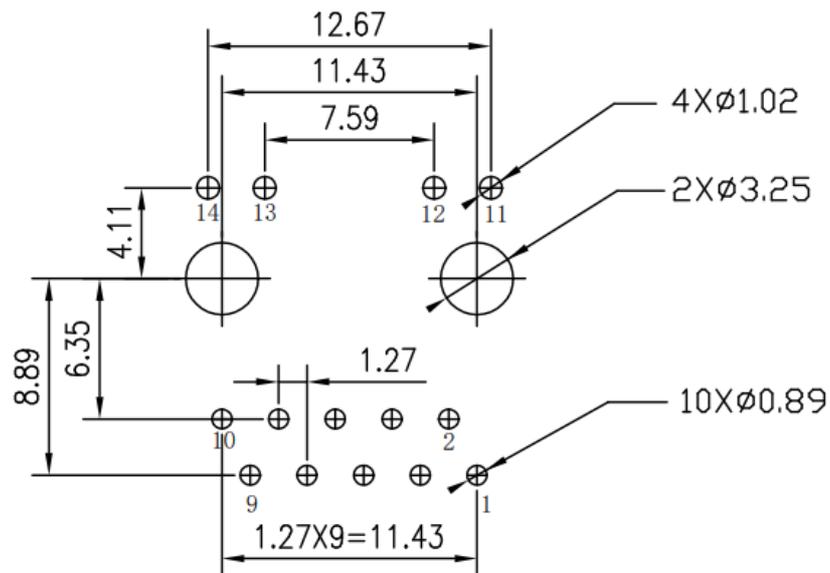
Mechanical Specifications	
Height	16.7 mm
Width	15.6 mm
Depth	16.5 mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

Dimensions are in millimeters with the following tolerances: X.XX = ± 0.25



Top Side View

3.2 PCB Layout

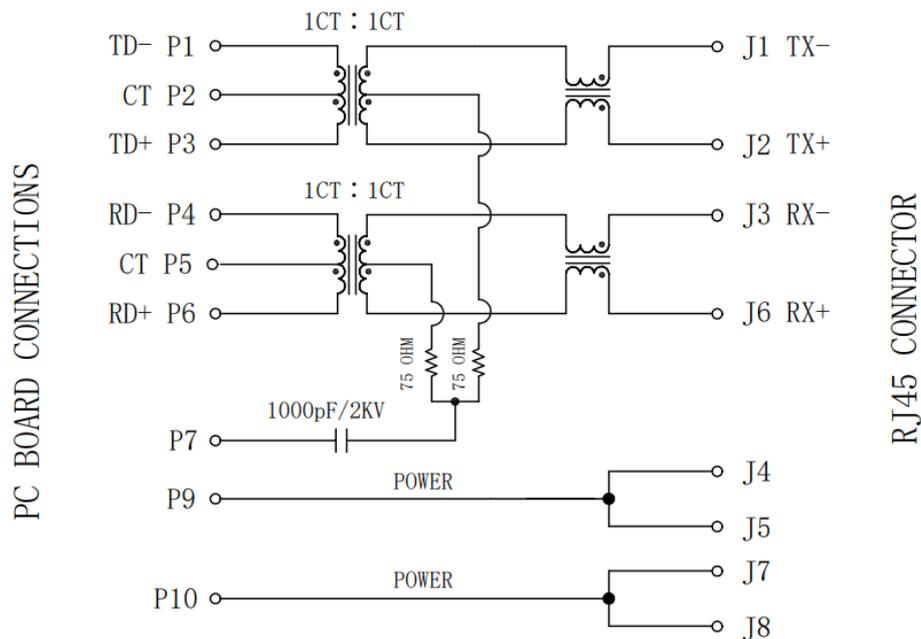


Suggested PCB Layout (Top View)

Dimensions are in millimeters with the following tolerances: X.XX = ± 0.10

4. Electrical

4.1 Electrical Drawings

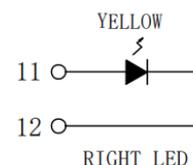
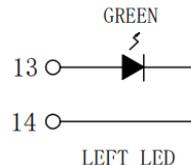


PC BOARD CONNECTIONS

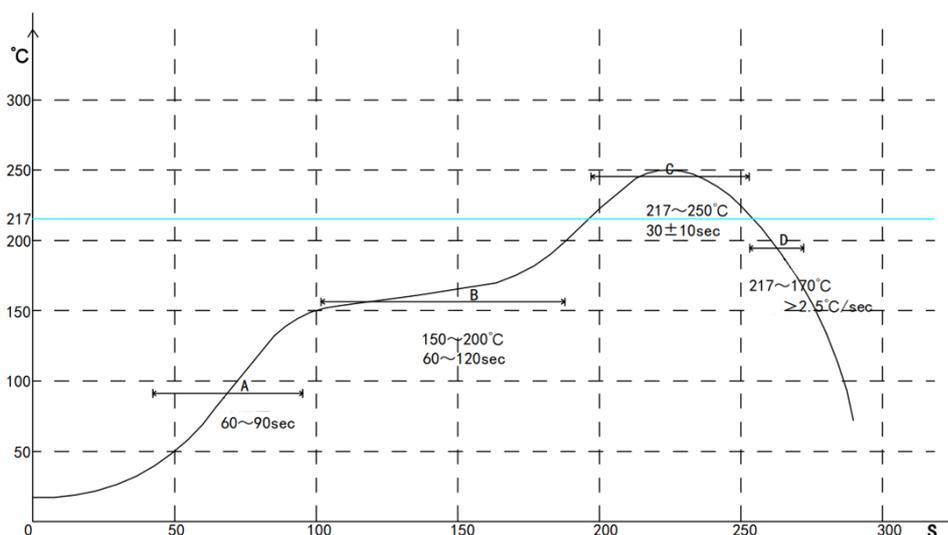
RJ45 CONNECTOR

LED Electrical Specification

Standard LED	Wavelength (nm)	V_F ($I_F=20\text{mA}$)	I_R ($V_R=5\text{v}$)
Green	565	1.8~2.6v	10 μA Max
Yellow	585	1.8~2.6v	10 μA Max



4.2 Profile of Reflow Solder

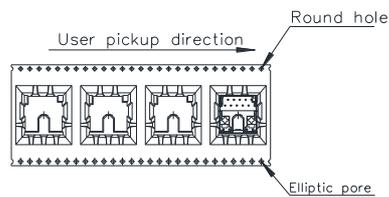
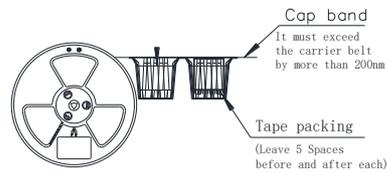


A. Temperature range of open
 B. Preheat temperature zone
 C. The welding zone
 D. The cooling zone
 Tip temperature: $265 \pm 5^\circ\text{C}$.
 Tip temperature time: $30 \pm 10\text{Sec}$.
 Tip melting point of Sn96.5/Ag3/Cu0.5.

5. Packaging

5.1 SPQ

100 pcs/reel
 Reel (mm): 16.1x7.4x8.8
 Weight: 960gr
 1 PCS/ Vacuum bag



1 Carton = 5 reels = 500 pcs
 Carton dimensions: 350*350*260mm
 Carton Weight: 5.2kg



5.2 Label

Taoglas Limited	
P/N NO: XXXXXXXX	
QYT: XXX PCS	DC: XXXX
DATE: XXXX-XX-XX	

SPQ Label (8x4cm)

Taoglas Limited	
P/N NO: XXXXXXXX	
PO: XXXXXXXX	B/N: XXXXXXXX
QYT: XXX PCS	DC: XXXX
DATE: XXXX-XX-XX	

Carton Label (8x4cm)

Changelog

Changelog for the datasheet

SPE-23-8-023 – TMJD4152NENLC

Revision: B

Date:	2023-07-21
Notes:	PoE current update.
Author:	Javier Vasena

Previous Revisions

Revision: A (Original First Release)

Date:	2023-03-30
Notes:	
Author:	Javier Vasena



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