



TAOGLAS®



Datasheet

RJ45 ICM 1G Base-T Low Profile

Part No:
TMJK7003A98NL

Description:

RJ45 connector with integrated magnetics 1G Base-T
Single Port Tab-UP with right angle THT mount and LEDs

Features:

- AutoMDIX
- 3Wire CMC/Cable
- Low profile
- RoHS & REACH Compliant

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1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJK7003A98NL is an RJ45 Integrated Connector 1G Base-T Single Port Tab Up with EMI Finger and 3Wire Common Mode Choke on the cable side that enables AutoMDIX feature.

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 (±3%)	1CT: 1CT
Insertion Loss	-1.0dB MAX @ 1-100Mhz
Return Loss	-18dB MIN @ 1-30Mhz
	-15dB MIN @ 30-60Mhz
	-12dB MIN @ 60-100Mhz
Cross talk	-40dB MIN @ 1-30Mhz
	-35dB MIN @ 20-60Mhz
	-30dB MIN @ 60-100Mhz
Common Mode Rejection	-30dB MIN @ 1-125Mhz
Hi-Pot	1500Vrms

Environmental Specifications	
Operating Temperature	0°C TO +70°C

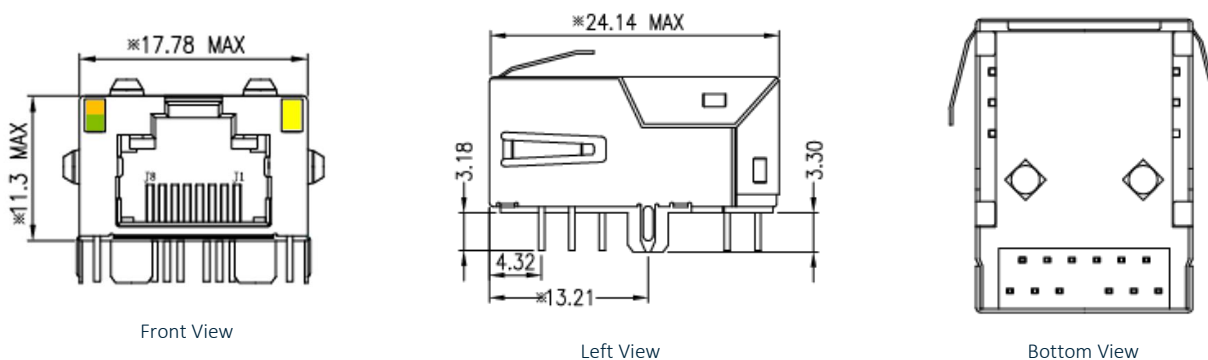
Material Specifications	
Housing	Thermoplastic UL94V-0
Contact / Shield	Copper alloy
Contact Plating	Gold Thickness = 6μ" min in contact area
Shield Finishing	Nickel

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

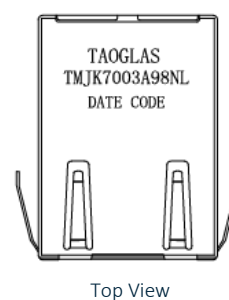
Storage requirements	
Humidity	Storage Temperature
MSL - 1	-40°C TO +85°C

3. Mechanical

3.1 Mechanical Drawings

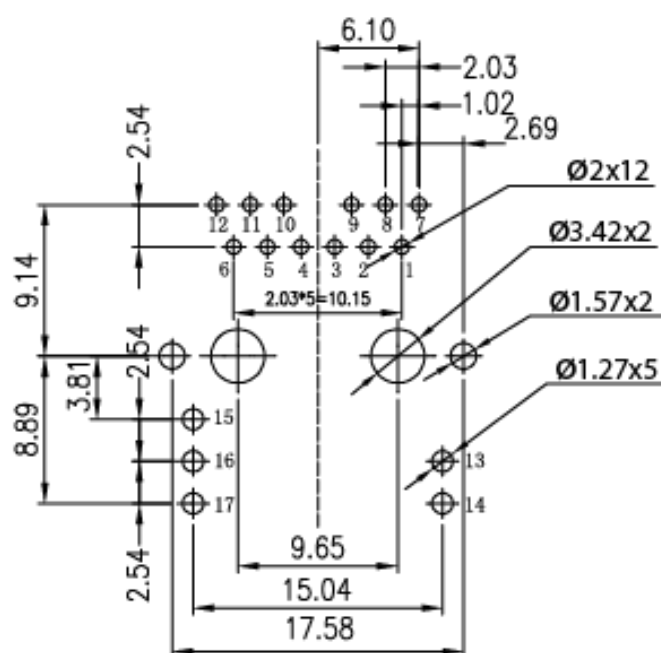


Mechanical Specifications	
Height Above Board	0.445" (11.3mm)
Width	0.7" (17.78mm)
Depth	0.95" (24.14mm)
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle



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

3.2 PCB Layout

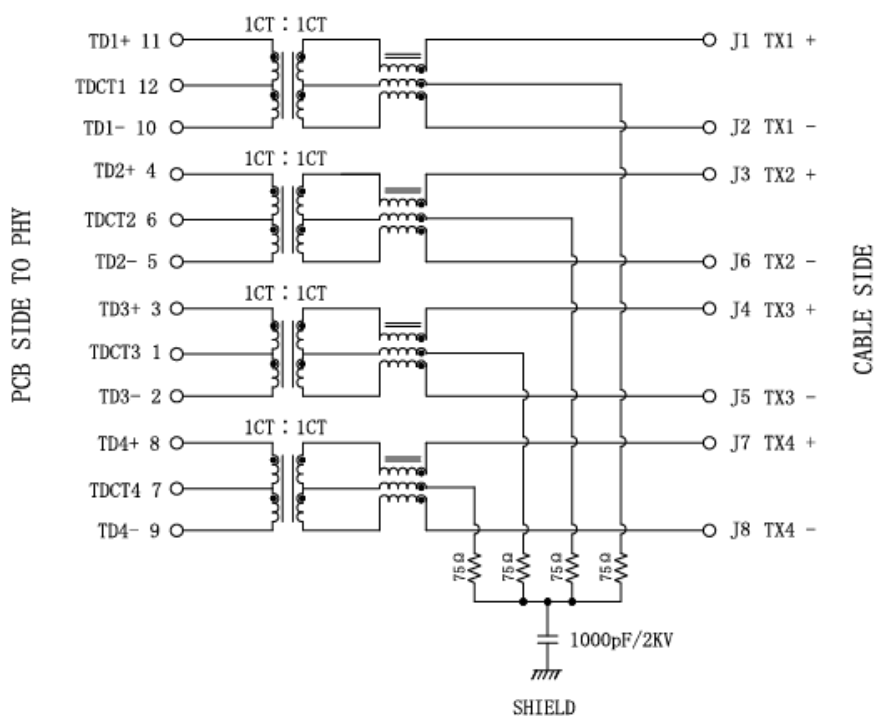


Suggested PCB Layout (Top View)

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

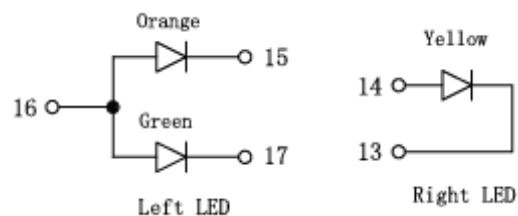
4. Electrical

4.1 Electrical Drawings

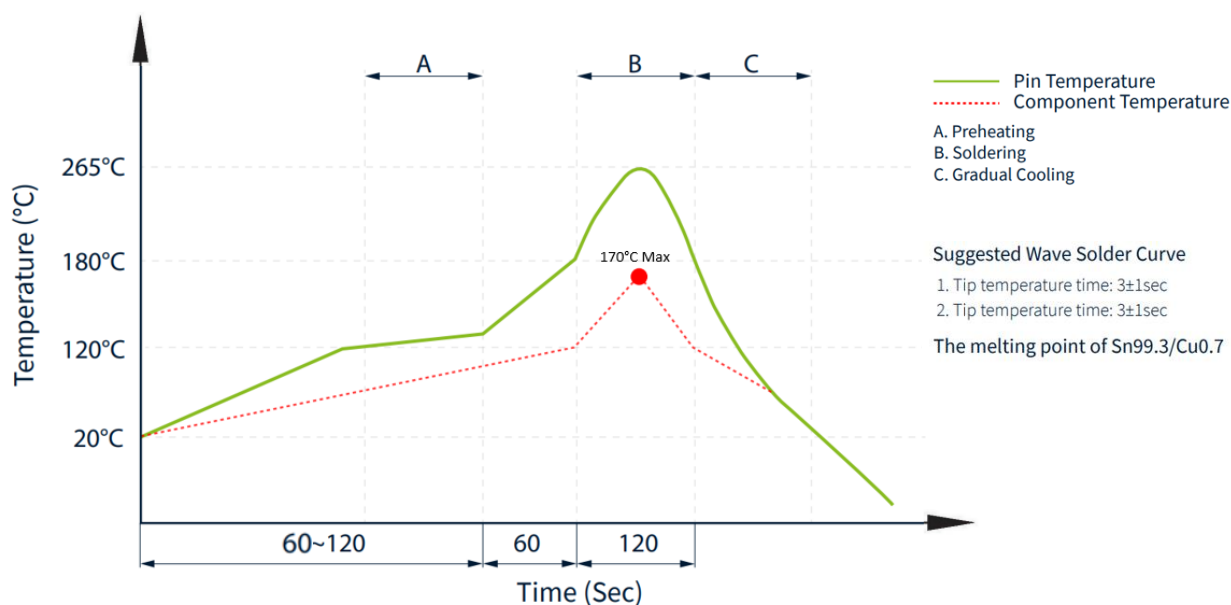


LED Electrical Specification

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
Orange	610	1.8~2.6v	10 μA Max



4.2 Profile of Wave Solder



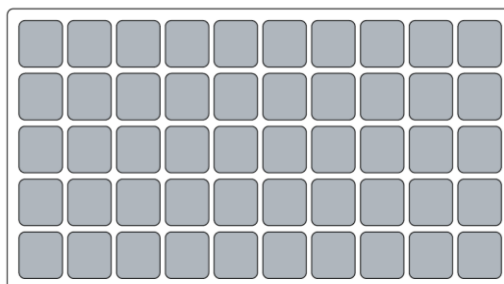
5. Packaging and Storage

5.1 SPQ

50 pcs/tray

Tray dimension: 299*163*23 mm

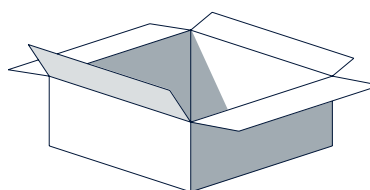
Tray Weight: 393g



1 CTN = 20 trays = 1000 pcs

Carton dimensions: 320*300*300mm

Carton Weight: 8.4kg



Changelog

Changelog for the datasheet

SPE-22-8-052 – TMJK7003A98NL

Revision: C

Date:	2025-04-07
Notes:	Shield information updated
Author:	Paul Liu

Previous Revisions

Revision: B

Date:	2024-10-29
Notes:	CMR value updated
Author:	Javier Vasena

Revision: A (Original First Release)

Date:	2022-11-08
Notes:	
Author:	Javier Vasena



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