



TAOGLAS®



Datasheet

RJ45 ICM 10/100 Base-T SMT

Part No:
TMJUCHW0021102420

Description:
RJ45 connector with integrated magnetics 10/100 Base-T
Single Port Tab-UP with right angle SMT mount and LEDs

Features:
Industrial grade
SMT
Transformer + CMC
Shielded EMI Finger
RoHS Compliant

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1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJUCHW0021102420 is an RJ45 Integrated Connector 10/100 Base-T Single Port Tab Up with shielded EMI Finger design for industrial environments.

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	
OCL	350uH MIN @100KHZ,0.1V 8mA DC BIAS
Turns Ratio (±2%)	1CT:1CT
Insertion Loss	-1.0 dB Max @ 1MHz-100MHz
Return Loss	-20 dB Min @ 1MHz-10MHz
	-16 dB Min @ 10MHz -30MHz
	-12 dB Min @ 30MHz -60MHz
	-10 dB Min @ 60MHz -80MHz
CMR	-30 dB Min @ 1MHz-100MHz
Cross Talk	-40 dB Min @ 1MHz-30MHz
	-35 dB Min @ 30MHz-60MHz
	-30 dB Min @ 60MHz-100MHz
Hipot (Isolation Voltage)	1500V AC & 2250V DC 6S 1mA PRI TO SEC

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

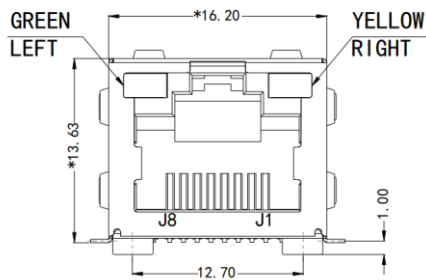
Material Specifications	
Housing	LCP BLACK UL94 V-0
Terminals Bracket	LCP BLACK UL94 V-0
Shield	C2680, T=0.20mm, nickel plating on all area.
Terminal	Phosphor Bronze C5210, T=0.35mm. 6U" gold plating on contact area.
Durability	750 cycles min.
Mating Force	23N Max.
Wave solder tip temperature	265°C Max, 5 Sec

Compliance	
	IEEE 802.3
	RoHS Compliant

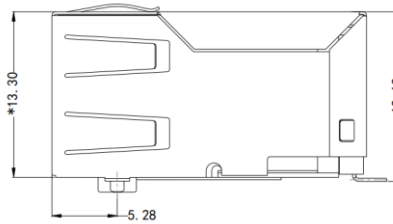
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

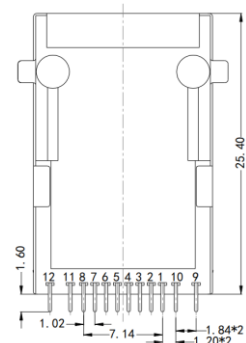
3.1 Mechanical Drawings



Front View



Left View

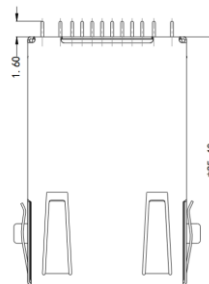


Bottom View

Mechanical Specifications

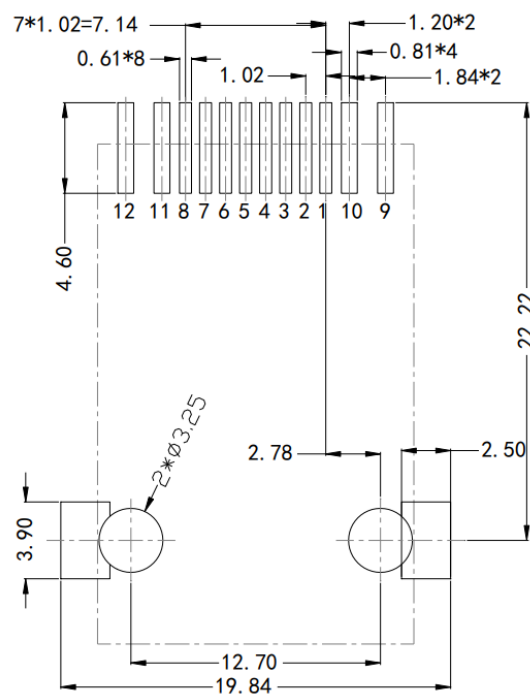
Height	13.30mm
Width	16.20mm
Depth	25.40mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

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



Top View

3.2 PCB Layout

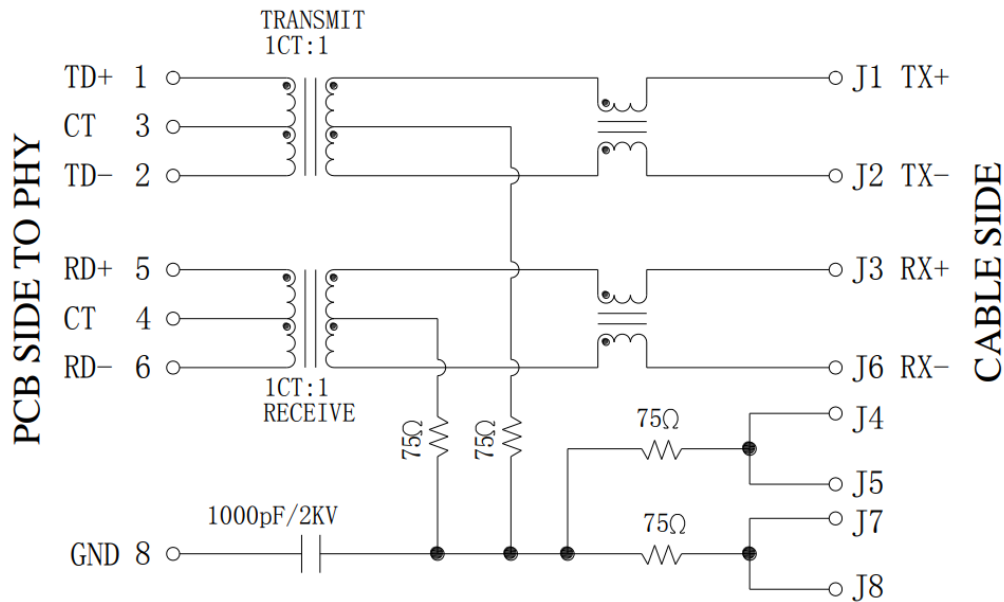


Suggested PCB Layout (Top View)

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

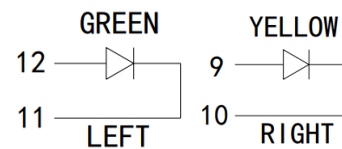
4. Electrical

4.1 Electrical Drawings

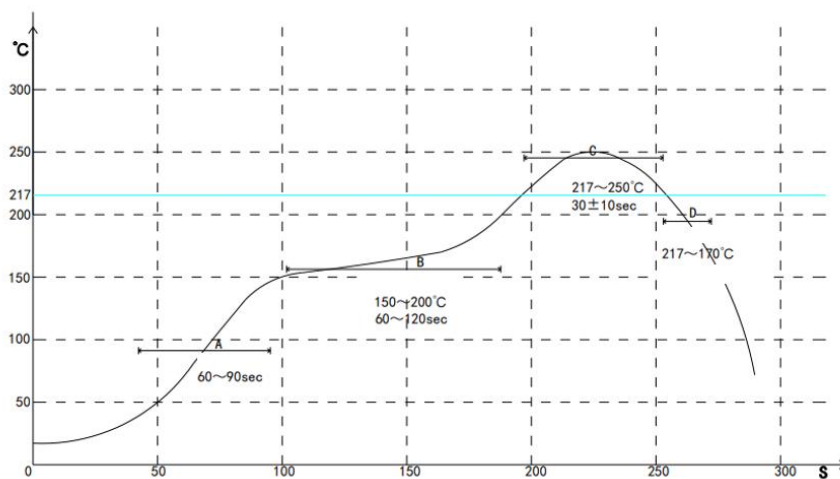


LED Electrical Specification

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.

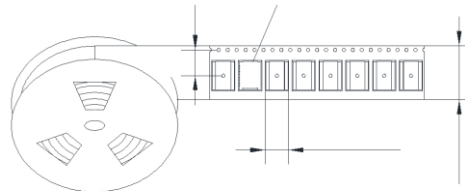
5. Packaging

5.1 SPQ

110 pcs/reel

Reel dimension: 44*28.6*16 mm

Tray Weight: 1250g



1 Carton = 5 reels = 550 pcs

Carton dimensions: 345*345*270mm

Carton Weight: 6.6kg



5.2 Label

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-23-8-188 – TMJUCHW0021102420

Revision: B

Date:	2023-10-18
Notes:	PSD change
Author:	Javier Vasena

Previous Revisions

Revision: A (Original First Release)

Date:	2023-07-01
Notes:	
Author:	Javier Vasena



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