



TAOGLAS®



Datasheet

RJ45 ICM 1G Base-T Short Body

Part No:
TMJUTGW0121102420

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

Features:
Short Body
Transformer + CMC
Industrial grade
Shielded EMI Finger
Voltage/Current Drive
30μ" gold
RoHS Compliant

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1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJUTGW0121102420 is an RJ45 Integrated Connector 1G Base-T Single Port Tab Up with shielded EMI Finger and short body designed for industrial applications.

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 @ 0.1MHz-100MHz
Return Loss	-18 dB Min @ 1MHz-30MHz
	-14 dB Min @ 30MHz -60MHz
	-12 dB Min @ 60MHz -80MHz
	-10 dB Min @ 80MHz -100MHz
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)	2250V DC 6S 1mA PRI TO SEC

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

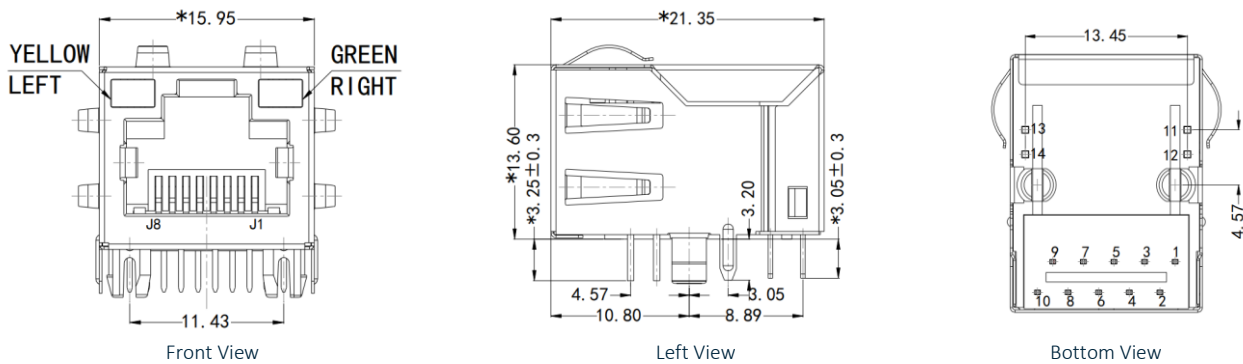
Material Specifications	
Housing	PBT, UL94 V-0, Black.
Terminals Bracket	PBT, UL94V-0, Black.
Shield	C2680, T=0.20mm, nickel plating on all area.
Terminal	Phosphor Bronze C5210, T=0.35mm. 30µ" gold plating on contact area.
Durability	750 cycles min.
Mating Force	23N Max.
Wave solder tip temperature	260°C Max, 5 Sec

Compliance	
	IEEE 802.3
	RoHS Compliant

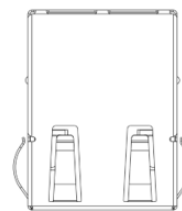
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

3.1 Mechanical Drawings



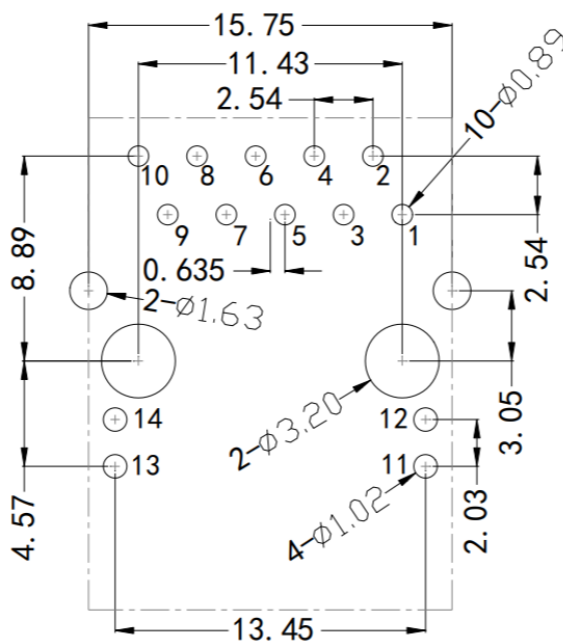
Mechanical Specifications	
Height	13.60mm
Width	15.95mm
Depth	21.35mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle



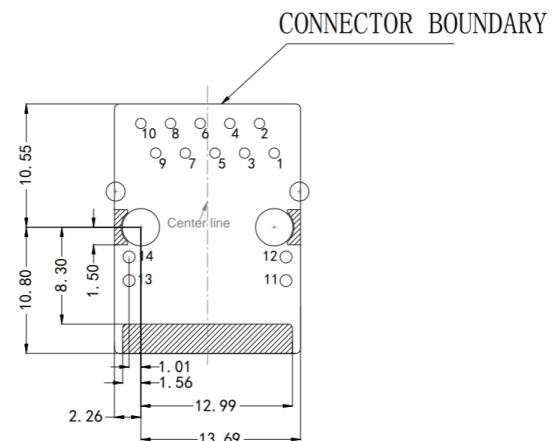
Top View

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

3.2 PCB Layout



Suggested PCB Layout (Top View)

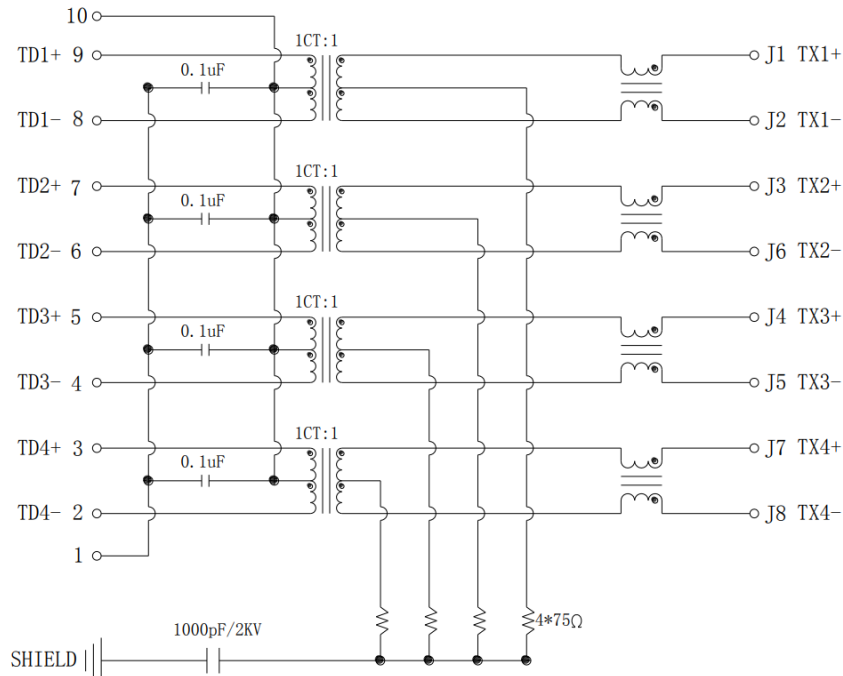


Keep-out Area (Component Side View)

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

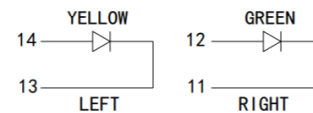
4. Electrical

4.1 Electrical Drawings

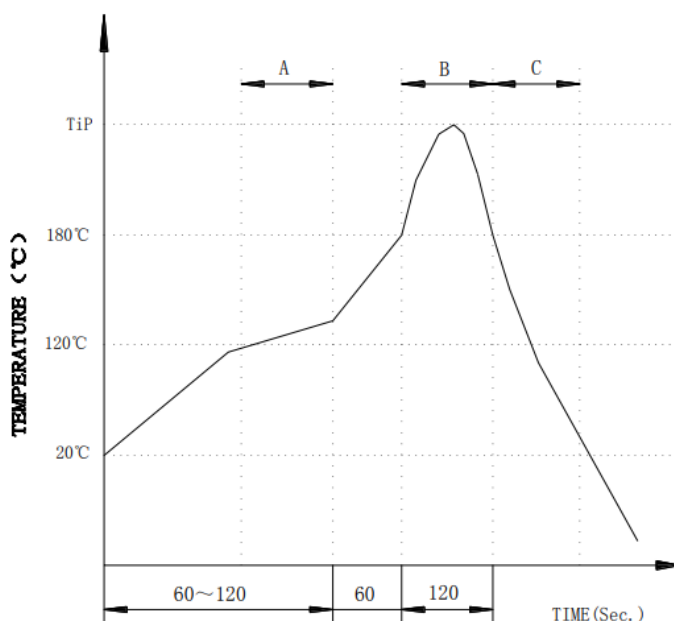


LED Electrical Specification

Standard LED	Wavelength (nm)	V _F	I _F
Green	568	1.85-2.45V	20 μA
Yellow	585	1.7-2.2V	20 μA



4.2 Profile of Wave Solder



A.Preheating B.Soldering C.Gradual Cooling
 Tip temperature:260±5 °C.
 Tip temperature time:5Sec Max.
 Tip melting point of Sn96.5/Ag3/Cu0.5:217 °C.

Remarks: after wave soldering, the plastic positioning columns of the product which under the PCB will be slightly melted, but it won't affect its function.

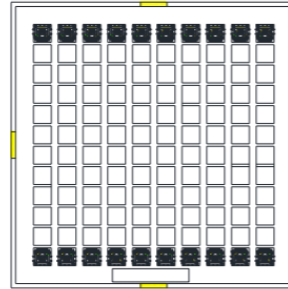
5. Packaging

5.1 SPQ

120 pcs/tray

Tray dimension: 305*300*21 mm

Tray Weight: 950g



1 Carton = 9 trays = 1080 pcs

Carton dimensions: 330*330*210mm

Carton Weight: 8.5kg



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-23-8-149 – TMJUTGW0121102420

Revision: A (Original First Release)

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

Previous Revisions



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