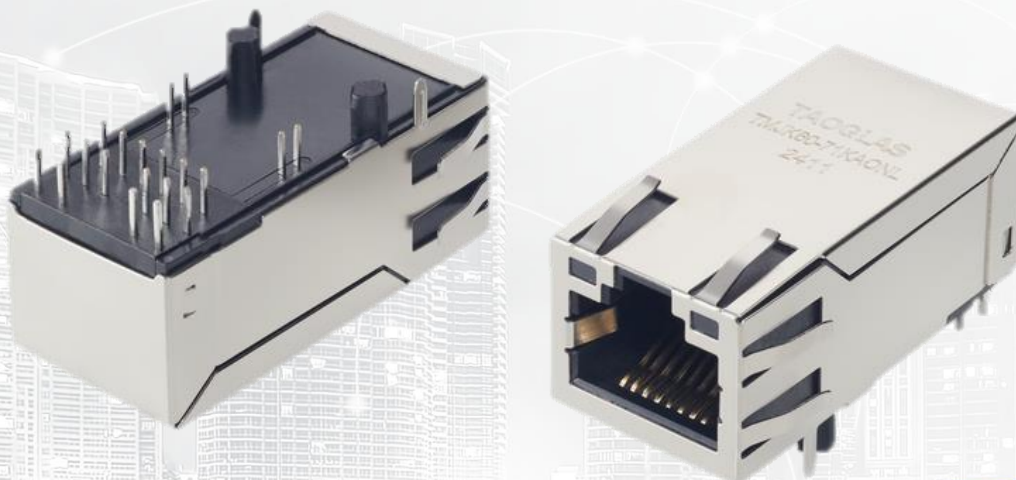




TAOGLAS®



Datasheet

RJ45 ICM 1G Base-T PoE++

Part No:
TMJK60-71KA0NL

Description:

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

Features:

Long Body
Shielded EMI Finger
PoE++ (720mA)
3 Wire + Transformer
Industrial grade

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1. Introduction



The Taoglas TMJK60-71KAONL is a single-port, tab-up RJ45 Integrated Connector with a shielded EMI Finger long body design. It features a widely recognized footprint and a compatible package that aligns with industry standards for RJ45 Integrated Connectors, making it popular among users. This connector supports 1G Base-T connection and PoE++ 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	
Inductance	350uH Min @ 100KHz,0.1V,8mA DC BIAS
Turns Ratio (±2%)	1CT:1CT
Insertion Loss	1-100MHz: -1.0dB Max
Return Loss (load 100Ω)	1-30MHz: -18dB Min
	30-60MHz: -16dB Min
	60-80MHz: -12dB Min
	80-100MHz: -10dB Min
Crosstalk	1-100MHz: -30dB Min
Common Mode Rejection	1-100MHz: -30dB Min
Balanced DC Line Current	720mA Max @57VDC continuous 1.2A Max @57VDC For 200 Milliseconds
Hi-Pot	1500Vrms Min @60Hz

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

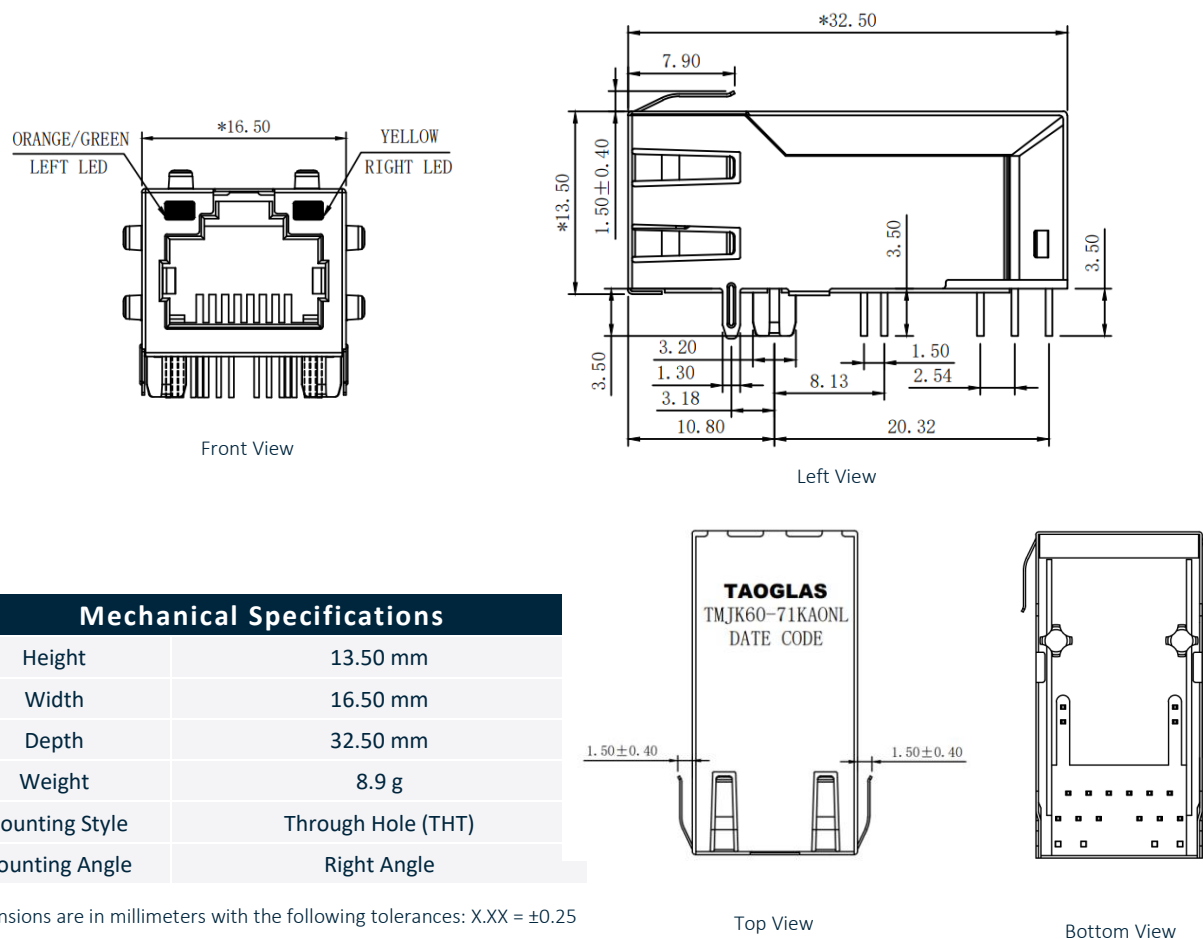
Material Specifications	
Housing	Thermoplastic PBT+30%G. F UL94V-0
Shield	SUS 304 1/2EH Thickness=0.2mm
Contact Material	Phosphor Bonze C5210R-EH Thickness=0.35mm
Contact plating	Gold 6 micro-inches min. in contact area
Pins	Brass C2680R-H Thickness=0.35mm
Wave solder tip temperature	250°C, 5 Sec

Compliance	
	IEEE 802.3af
	RoHS Compliant

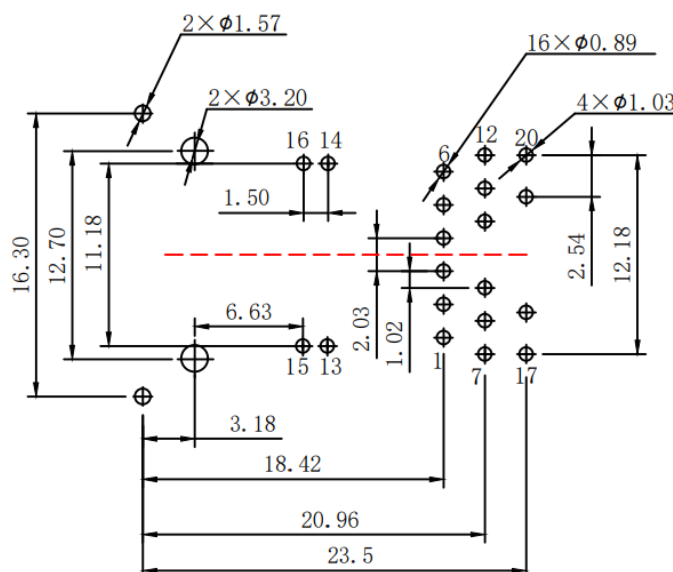
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

3.1 Mechanical Drawings



3.2 PCB Layout

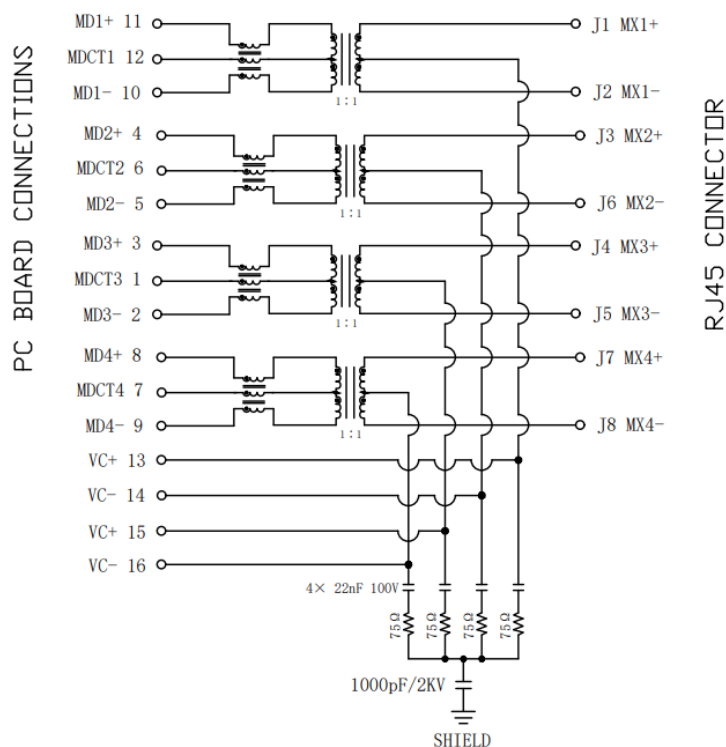


Suggested PCB Layout (Top View)

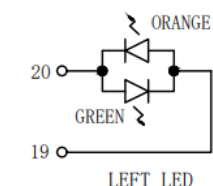
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

4. Electrical

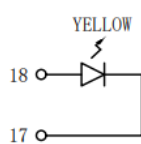
4.1 Electrical Drawings



4.2 LED



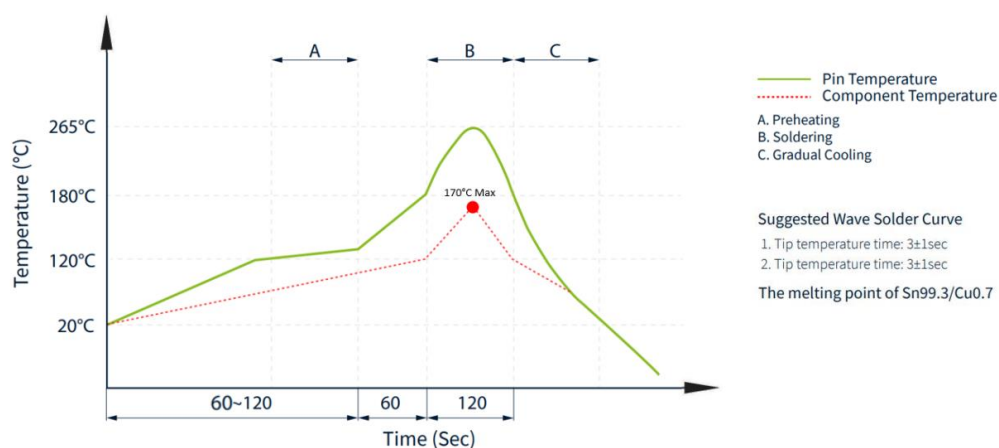
LED POLARITY		COLOR
PIN 20	PIN 19	
+	-	GREEN
-	+	ORANGE



LED POLARITY		COLOR
PIN 18	PIN 17	
+	-	YELLOW

Emitting Color	$\lambda_p(\text{nm})$	$V_F @ I_F = 20\text{mA}$	$I_R @ V_R = 5\text{V}$
ORANGE/GREEN	610/565	1.8~2.6V	10 μA max
YELLOW	585	1.8~2.6V	10 μA max

4.3 Profile of Wave Solder

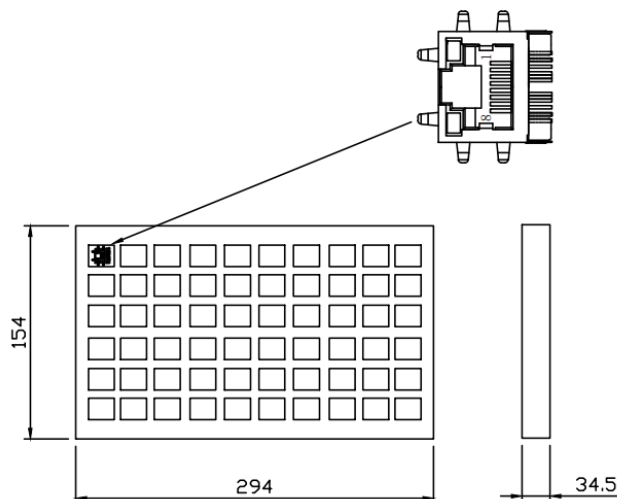


5. Packaging

5.1 SPQ

1 tray = 60 pcs

Tray weight = 0.546 kg

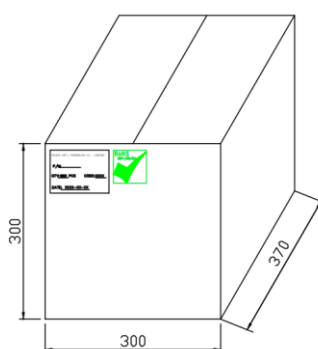


5.2 Carton

1 Carton = 16 trays = 960 pcs

Carton dimensions = 300*370*300 mm

Carton Weight = 10.5 kg



5.3 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-23-8-351 – TMJK60-71KAONL

Revision: A (Original First Release)	
Date:	2023-12-11
Notes:	
Author:	Javier Vasena

Previous Revisions



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