TAOGLAS

Datasheet

RJ45 ICM 1G Base-T Short Body

Part No:
TMJG4820G4NL

Description:

RJ45 connector with integrated magnetics 1G Base-T

Single Port Tab-DOWN with right angle THT mount and LEDs

Features:

Short Body

Transformer + CMC

Shielded EMI Finger

Industrial grade

RoHS & Compliant

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1. Introduction

Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJG4820G4NL is an RJ45 Integrated Connector 1G Base-T Single Port Tab Down with shielded EMI Finger and short body design that offers extra space.

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, 100mV, 8mADC, J1-J2; J3-J6; J4-J5; J7-J8, LP.
Turn Ratio	1CT:1CT
Insertion Loss	1～100MHz: -1.0dB Max
Return Loss (dB Min)	1～40MHz: -18
	40～60MHz: -14
	60～80MHz: -12
	80～100MHz: -10
Crosstalk	1～100MHz: -30dB Min
CMR	1～100MHz: -35dB Min
Isolation Voltage	1500Vrms/60Hz

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

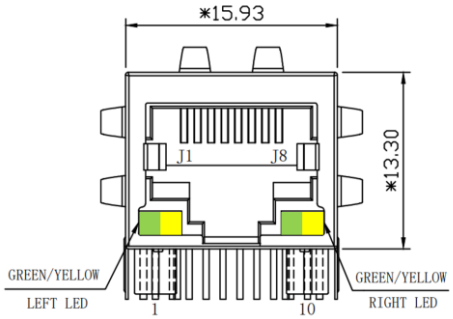
Material Specifications	
Housing	Thermoplastic PBT+30%G. F UL94V-0
Contact	Phosphor Bonze C5210R-EH Thickness=0.35mm
Pins	Brass C2680R-H Thickness=0.35mm
Shield	SUS 201-1/2H Thickness=0.2mm
Contact plating	Gold 6 micro-inches min. in contact area.
Wave solder tip temperature	265℃ Max, 5 Sec

Compliance
IEEE 802.3
UL recognized - FILE NO. E528697
RoHS Compliant

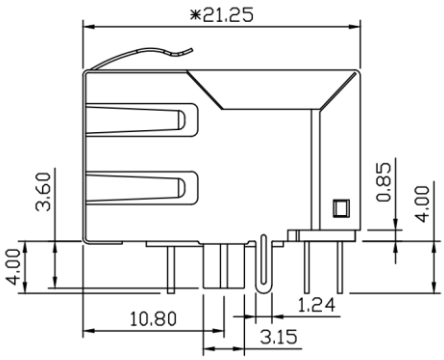
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

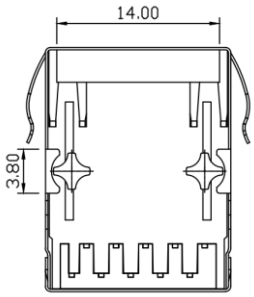
3.1 Mechanical Drawings



Front View



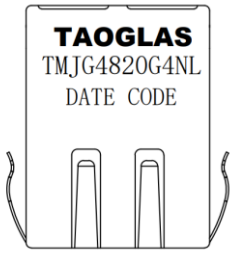
Left View



Bottom View

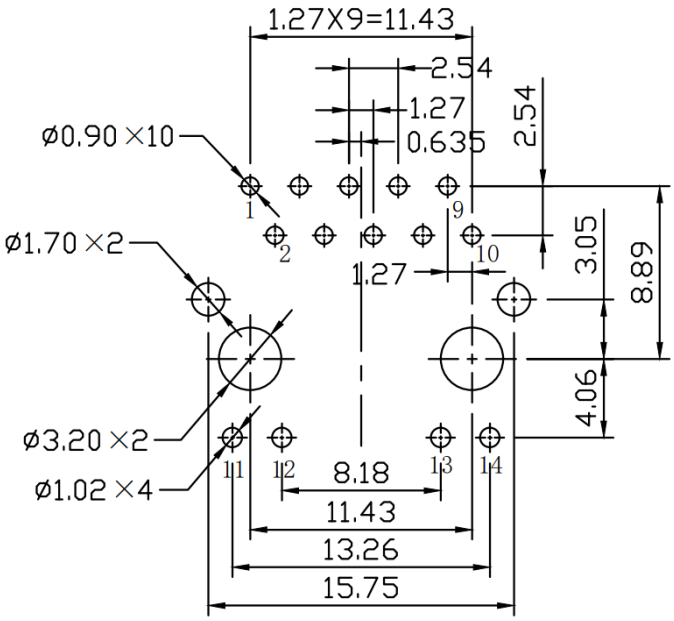
Mechanical Specifications	
Height	13.30mm
Width	15.93mm
Depth	21.25mm
Weight	5.95g
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

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



Top View

3.2 PCB Layout

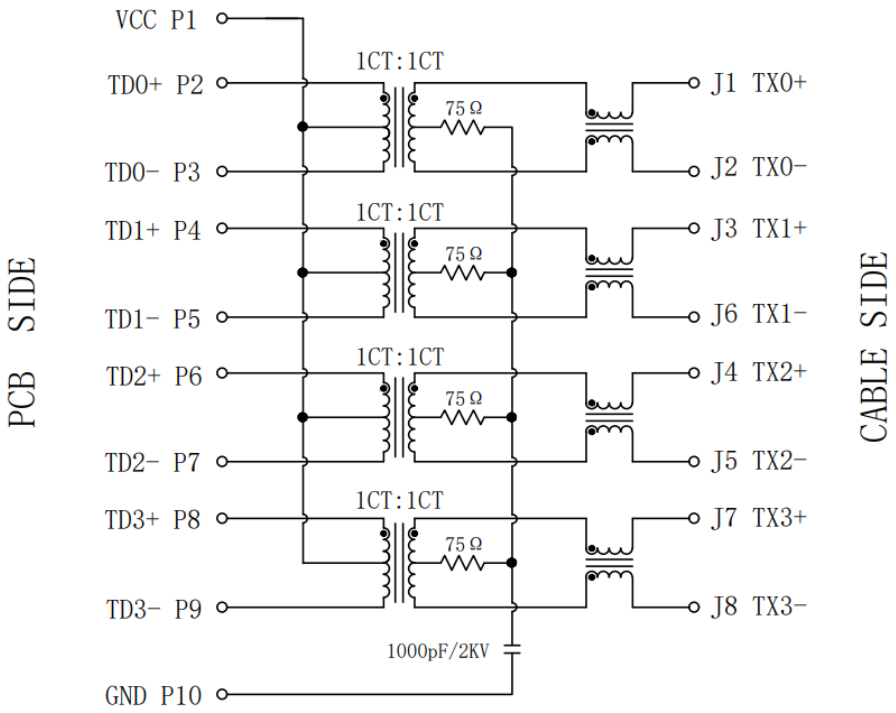


Suggested PCB Layout (Top View)

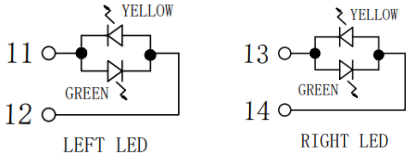
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

4. Electrical

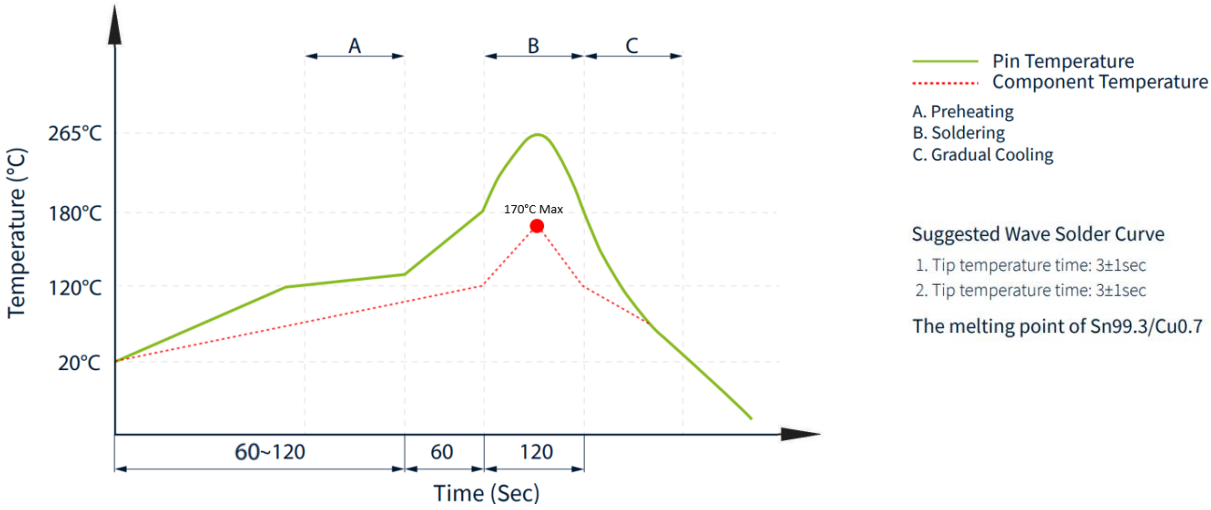
4.1 Electrical Drawings



LED Electrical Specification			
Standard LED	Wavelength (nm)	V_F (I_F=20mA)	I_R (V_R=5v)
Green	565	1.8~2.6v	10 μA Max
Yellow	585	1.8~2.6v	10 μA Max



4.2 Profile of Wave Solder



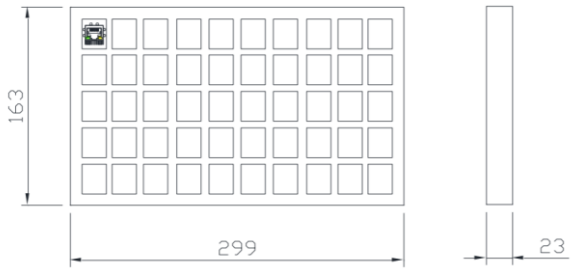
5. Packaging

5.1 SPQ

50 pcs/tray

Tray dimension: 299*163*23 mm

Tray Weight: 365g



1 Carton = 24 trays = 1200 pcs

Carton dimensions: 320*300*310mm

Carton Weight: 9kg

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-23-8-143 – TMJG4820G4NL

Revision: A (Original First Release)	
Date:	2023-10-01
Notes:	
Author:	Javier Vasena

Previous Revisions

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