

# RJ45 1000 Base-T Single Port, PoE++, w/ LEDs, Extend Temp



ARJ-139

## Features

- Compliant with IEEE802.3 standard
- Designed for Network Interface Cards(NIC), LAN-on-Motherboard(LOM)
- High performance for maximum EMI suppression
- 350 $\mu$ H minimum OCL with 8mA bias current
- RoHS peak wave solder temperature 260°C

## Applications

- Support 1000 Base-T applications w/ Bi-Color LEDs
- PoE++(max 1A) with Extended Temperature (-40°C~85°C)
- Applicable for Ethernet Switch, Servers, & Access Point Routers
- Provides signal conditioning, EMI suppression and signal isolation

## Electrical Specifications

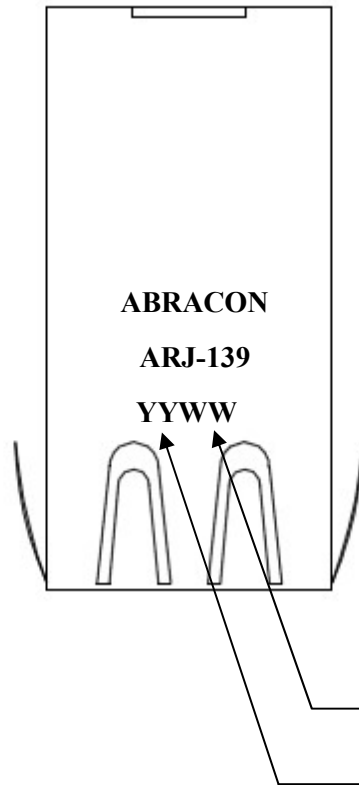
Parameters	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		+85	°C	
Storage Temperature	-40		+85	°C	
Turn Ratio ( $\pm 5\%$ )	1CT:1CT				Tx
	1CT:1CT				Rx
Inductance (OCL)	350			$\mu$ H	100KHz/0.1V@8mA
DC Resistance (DCR)			1.5 / 0.750	$\Omega$	MDI-PHY side / Cable side
Insertion Loss		-1.0		dB	1-100MHz
Return Loss	-20			dB	1-10MHz
	-16				30MHz
	-12				60-80MHz
Cross Talk		-40		dB	1-10MHz
		-35			32-65MHz
		-30			65-100MHz
CMR		-30		dB	1-125MHz
		-20			125-500MHz
PoE Current Capacity		720	1000	mA	@ 57V
Hi-Pot	1500Vrms/0.5mA/2Sec				Pri to Sec

# RJ45 1000 Base-T Single Port, PoE++, w/ LEDs, Extend Temp



ARJ-139

## Marking



W: Week: E.g. 15 for the 15<sup>th</sup> week of the year.

Y: Year: E.g. 15 for 2015

Marking Method = Laser Marking

# RJ45 1000 Base-T Single Port, PoE++, w/ LEDs, Extend Temp

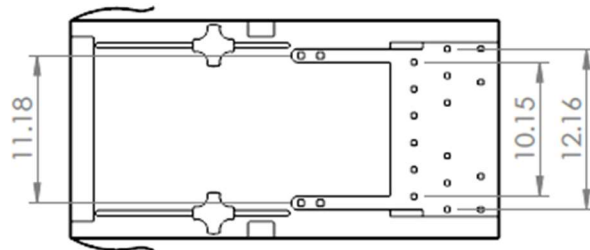


ARJ-139

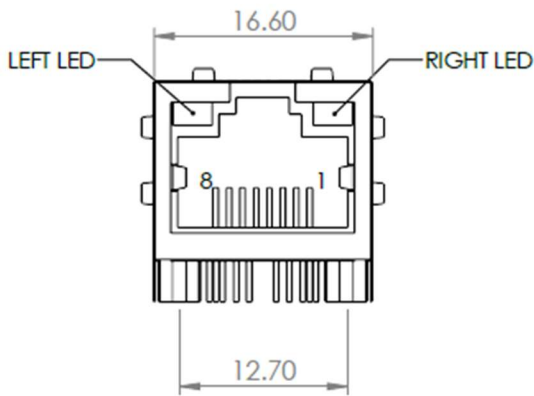
## Mechanical Specifications



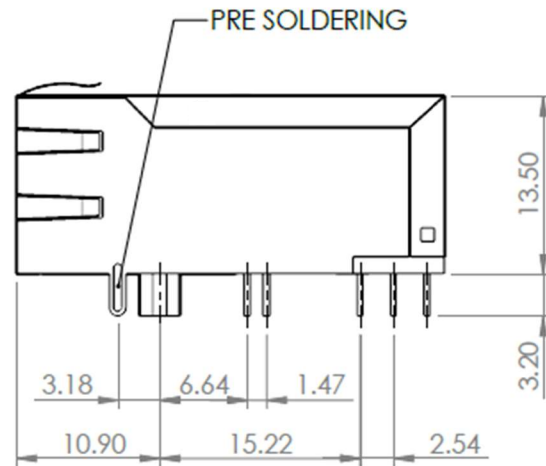
**TOP VIEW**



**BOTTOM VIEW**



**FRONT VIEW**



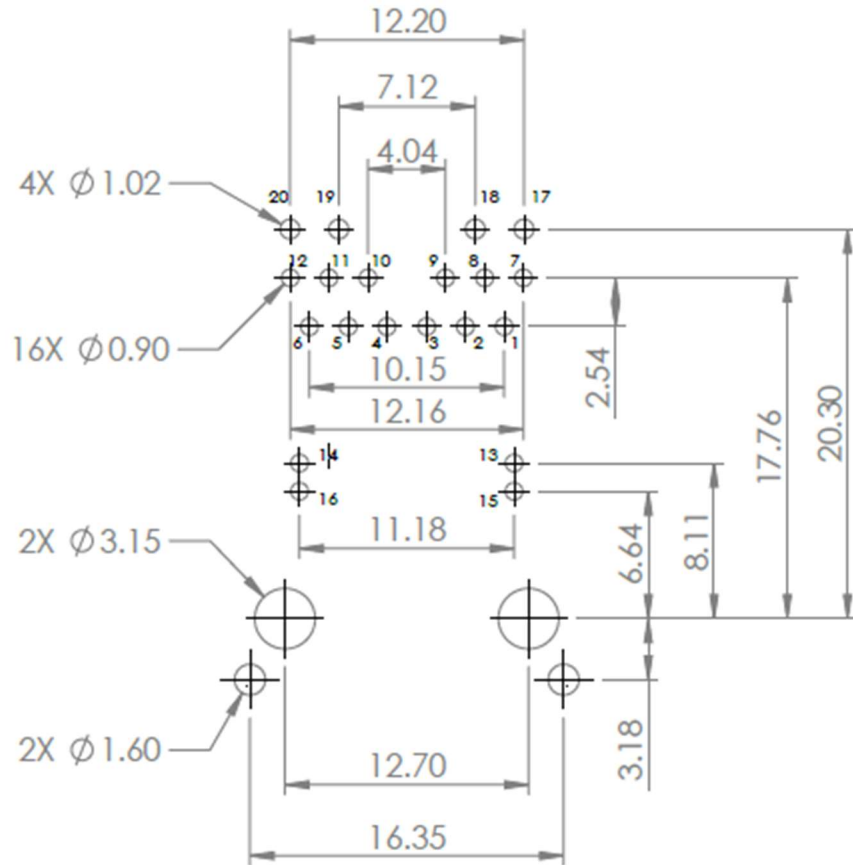
**SIDE VIEW**

**Dimensions: mm**  
**All tolerances are  $\pm 0.25$  unless otherwise specified.**



ARJ-139

## RECOMMENDED LAND PATTERN



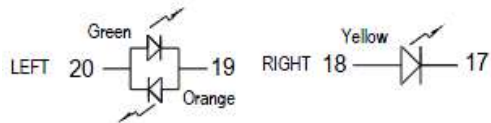
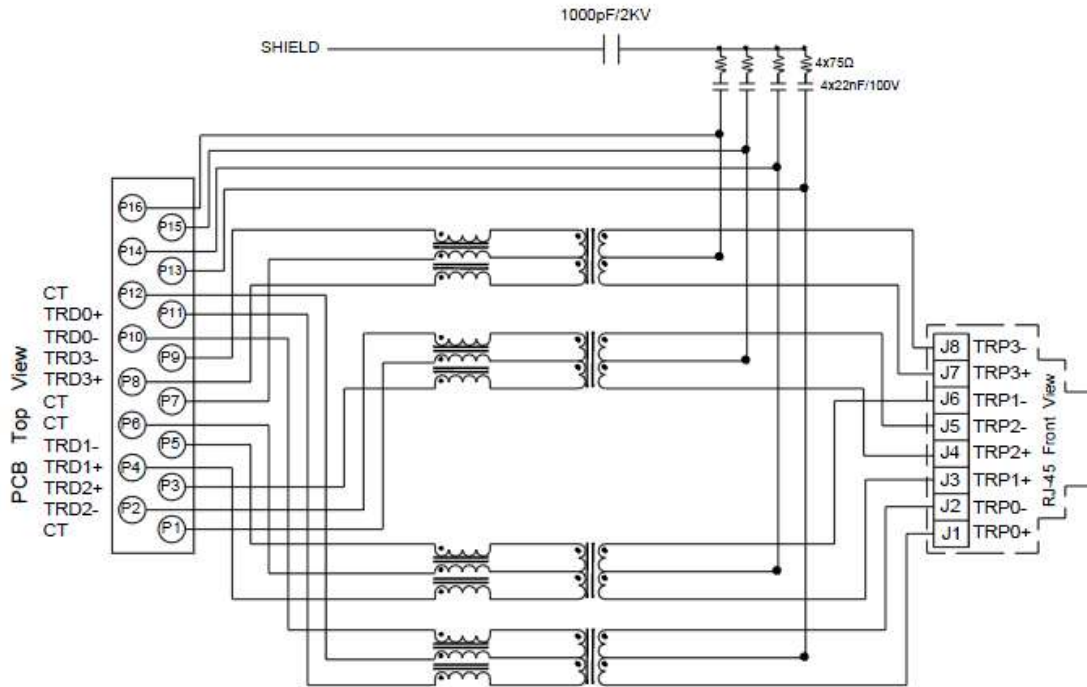
Dimensions: mm  
All tolerances are  $\pm 0.25$  unless otherwise specified.

# RJ45 1000 Base-T Single Port, PoE++, w/ LEDs, Extend Temp



ARJ-139

## Schematics



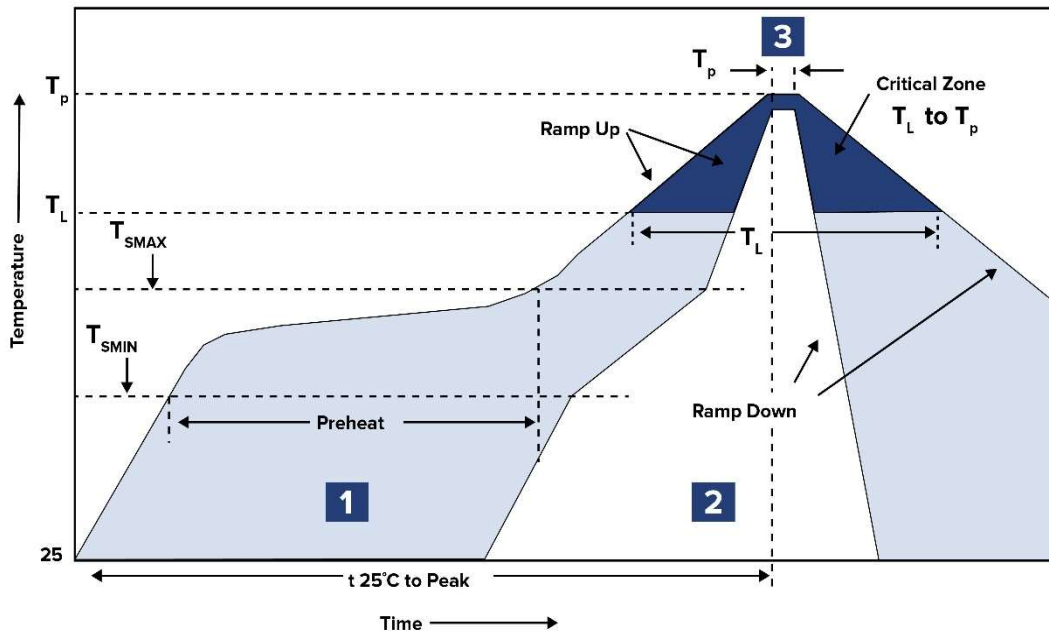
Standard LED	Wavelength	Forward*V(MAX)	TYP
Green	565nm	2.5v	2.2v
Yellow	585nm	2.5v	2.1v
Orange	610nm	2.5v	2.1v

With a forward current of 20mA



ARJ-139

## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 120°C ~ 180°C	60 ~ 120 sec.
2	Reflow	$T_L$ 180°C	120 sec. Max
3	Peak heat	$T_P$ 250°C±10°C	5 sec. Max

# RJ45 1000 Base-T Single Port, PoE++, w/ LEDs, Extend Temp



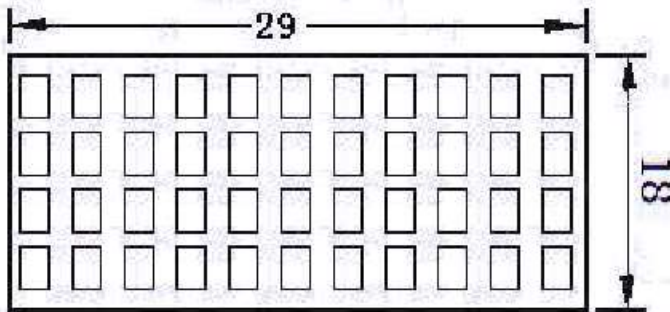
ARJ-139

## Packaging

**Packing: (40pcs/tray) MOQ = 1000pcs**

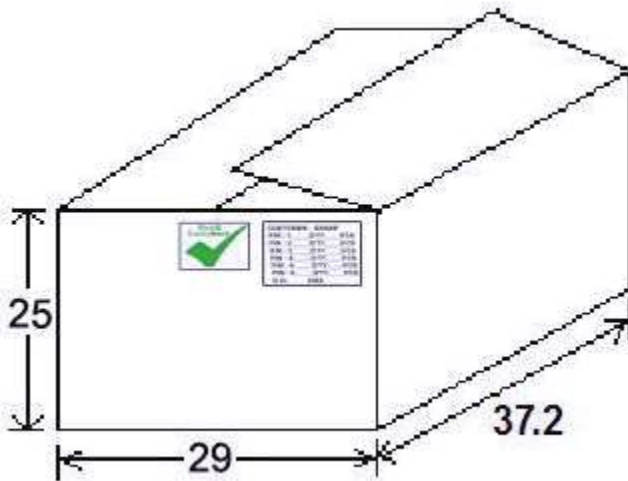
**Weight: 9.40 grams / pcs**

**Packaging material: PET**



Unit=cm

**Outer carton unit (optional): 800 pcs/ 20 Trays/box**



Dimensions: mm

**ATTENTION:** Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



5101 Hidden Creek Ln, Spicewood TX 78669  
Phone: 512-371-6159 Fax: 512-351-8858  
For terms and conditions of sales, please visit:  
[www.abracon.com](http://www.abracon.com)

REVISION F : 8/19/2024

ABRACON IS  
ISO9001-2015  
CERTIFIED