

## Modular Jack – RJ45 Series

### CAT6, VERTICAL, LOW PROFILE, SINGLE PORT CONNECTOR WITH LEDs

The RJ45 single port series of Modular Jacks meets CAT6 performance per EIA-568-C.2 standards. It supports 10G Ethernet data rate and transmission frequencies up to 250MHz. The available shielding enhances EMI performance and LEDs support link activity and network speed verification. These connectors are made with high temperature composites and are coupled with high temperature resistant LEDs. Highly durable with 750 mating and unmating cycles and supports an operating temperature of -55°C to + 85°C, making them suitable for a wide range of environmental conditions.

- Supports 5G and 10G Ethernet Protocols
- Meets Cat6 performance on its own without outside assistance
- Same size and footprint as the RJ4A CAT6A series
- Multiple shield and LED options available
- RoHS compliant



#### TARGET MARKETS



#### FEATURES

- Variety of LED options
- Standard size
- Accommodates industry standard plugs
- IR Reflow compatible
- Various shield options available
- Meets CAT5e or CAT6 performance per EIA-568-C.2

#### BENEFITS

- Customers can opt for the LED color of their choice
- Optimizes the PCB
- Can mate successfully with all types of standard plugs
- Single process for soldering to PCB, saving time and money
- Accommodates a wide range of EMI needs
- Supports up to 10G Ethernet

# TECHNICAL INFORMATION

## MATERIAL

- Insulator: High temperature engineering thermoplastic; Complies with UL94V-0, Black
- Contacts: Phosphor bronze hard temper with gold thickness options (6u", 15u", 30u", 50u") over 50u" min. nickel on contact mating area. 100u" min. matte tin plating on soldering tail
- Shield: Copper alloy, nickel plated with tin dipped tail or stainless steel with tin dipped tail
- LED: Pure tin plating on LED tails

## ELECTRICAL PERFORMANCE

- Contact Resistance: 20mΩ max.
- Insulation Resistance: 500MΩ min. at 500V DC for 2 minutes max.
- Current Rating: 1.5A
- Voltage Rating: 125V AC
- DWV: 1000V AC, 60Hz., 1 minute
- LED Forward DC Current: 20mA typical
- LED Forward Voltage: 1.9V max. @ 2mA (for single colors), 2.6V max. @ 20mA (for bicolours)
- LED Reverse Voltage: 5V min.
- LED Light Intensity: 0.4 to 1.5mcd @ 2mA (for single colors), 0.5mcd min. @ 2mA (for bicolours)
- LED Wave Length: Yellow – 587 ± 7nm measured @ 20mA, Green – 565 ± 7 nm measured @ 20mA, Red – 625 ± 5 nm measured @ 20mA

## MECHANICAL PERFORMANCE

- Insertion Force: 5lbs max.
- Pull Retention Force: 20lbs min.
- Durability: 750 mating and unmating cycles
- Operating Temperature: -55°C to +85°C
- Recommended Soldering Temperature: Wave soldering peaked at 260°C for 5 seconds max.

## APPROVALS AND CERTIFICATIONS

- RoHS
- REACH
- UL

## PACKAGING

- Available in tray and tape and reel packaging

## TARGET MARKETS/APPLICATIONS



5G Wireless  
Telephones  
Modems  
Fax Machines  
Copiers/printers



Security Systems  
Set Top Boxes  
Video Game Systems  
PCs  
Laptops



Storage  
Servers  
Routers  
Switches  
Hubs



Uninterruptible Power Supply (UPS)  
ATMs  
Vending Machines  
POS Terminals  
Industrial IoT Platforms



Analysis equipment  
Mass Spectrometers

## PART NUMBERS

Product	Description	Part Numbers
RJE45 Modular Jack Series	No shield and no LEDs	RJE45-188-0401
RJE45 Modular Jack Series	No shield with LEDs	RJE45-188-0411
RJE45 Modular Jack Series	No shield with LEDs	RJE45-188-0441
RJE45 Modular Jack Series	Shield without EMI tabs, no LEDs	RJE45-188-2401
RJE45 Modular Jack Series	Shield without EMI tabs, no LEDs	RJE45-188-4401
RJE45 Modular Jack Series	Shield without EMI tabs, with LEDs	RJE45-188-2411
RJE45 Modular Jack Series	Shield without EMI tabs, with LEDs	RJE45-188-4411
RJE45 Modular Jack Series	Shield with top and bottom EMI tabs, with LEDs	RJE45-188-1411
RJE45 Modular Jack Series	Shield with top and bottom EMI tabs, no LEDs	RJE45-188-1401