

PulseJack™

1XN, Tab-Up, PoE



Description:

100 Base-TX (Fast Ethernet) RJ45 1xN Integrated Connector Module (ICM) with LEDs -
Designed to support PoE applications



Features and Benefits:

- Ⓢ RoHS peak wave solder temperature rating 260°C
- Ⓢ Unique design ensures a separation of >2.0mm between Power, Signal and Ground pins.
- Ⓢ Compact design includes integrated magnetics, bi-color LEDs
- Ⓢ 350µH minimum OCL with 8mA bias current
- Ⓢ Meets IEEE 802.3 specification

Electrical Specifications @ 25°C - Operating Temperature 0°C to +70°C

| RoHS Compliant Part Number | Number of Ports | LEDs ¹ L/R | Insertion Loss TX/RX (dB TYP) | | Return Loss (dB TYP) 100Ω (± 15 Ω) | | | | Crosstalk (dB TYP) | | | Common Mode Rejection (dB TYP) | | Hipot (Vrms MIN) |
|----------------------------|-----------------|-----------------------|-------------------------------|----------|---------------------------------------|-----------|----------|-----------|--------------------|-----------|-------------|--------------------------------|--|------------------|
| | | | 1-100 MHz | 1-10 MHz | 30 MHz | 60-80 MHz | 1-10 MHz | 30-60 MHz | 60-100 MHz | 1-125 MHz | 125-500 MHz | @ 60Hz 1 MIN | | |
| JG0-0031NL | 1x2 | Y-G/G | -0.15 | -20 | -16 | -12 | -40 | -35 | -30 | -20 | -20 | 1500 | | |
| JG0-0032NL | 1x4 | | | | | | | | | | | | | |

Notes:

1. LEDs Left/Right: **Y-G** = Bi-color: yellow/green; **G** = green.

RJ45 Durability Testing Rating

| Part Number | Mating Force (MAX) | Unmating Force (MAX) | Durability | Plug to Jack Retention (MIN) |
|-------------|--------------------|----------------------|----------------|------------------------------|
| JG0 Series | 5 lbs./2.268 kgs. | 5 lbs./2.268 kgs. | 750 Insertions | 20 lbs./9.072 kgs. |

RJ45 Material Specification

| Part Number | Shield | | Contact | | | Housing | |
|-------------|----------|---|-----------------|---|------------------|---------------|---------------|
| | Material | Finish | Material | Plating Area | Solder Area | Material | Specification |
| JG0 Series | Brass | 10-20µ inches thick nickel over 10-20µ inches thick brass | Phosphor Bronze | 30µ inches gold over 30-80µ inches nickel | Tin matte finish | Thermoplastic | UL 94 V-0 |

Notes: 1. Connector dimensions comply with FCC dimension requirements.

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

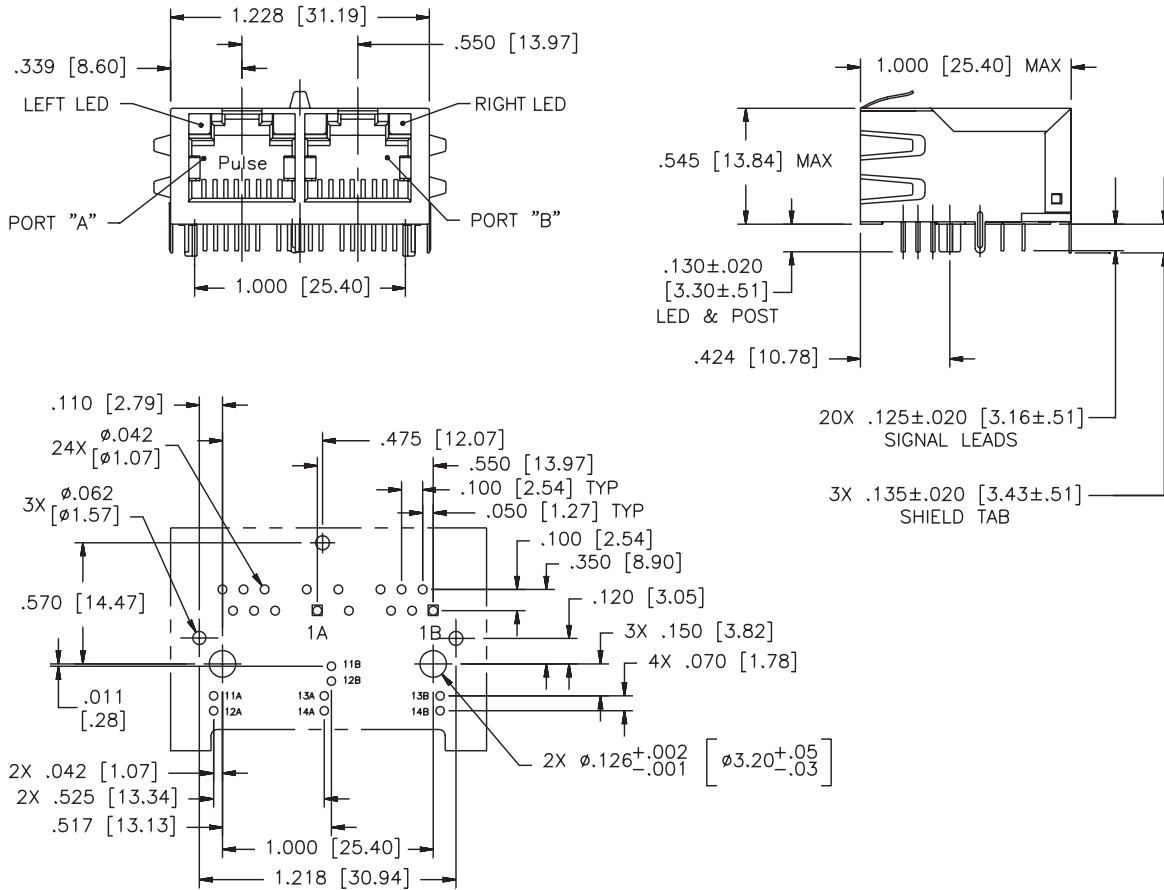
Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

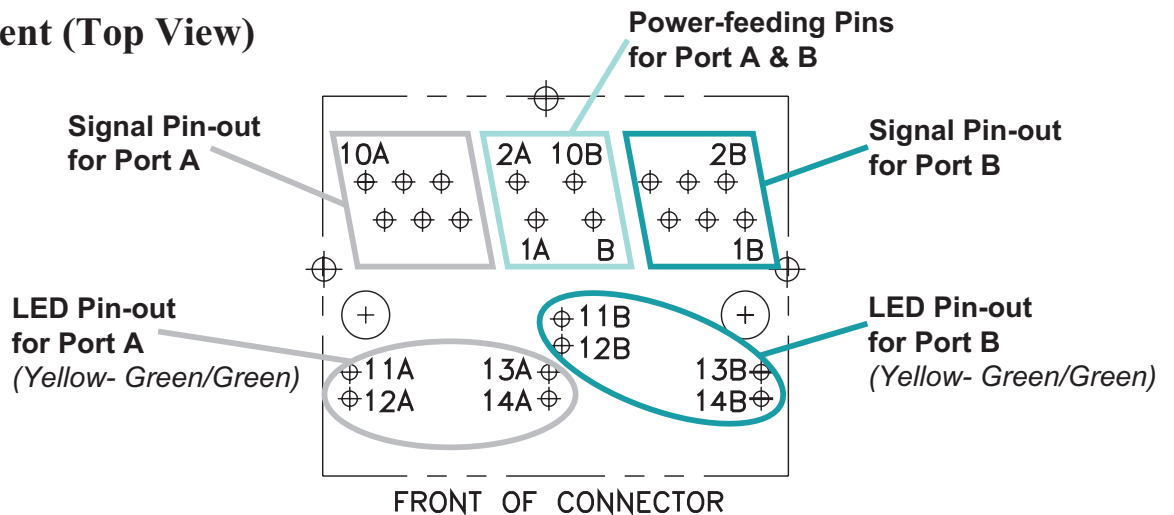
Mechanicals

JG0-0031NL



SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.003 UNLESS OTHERWISE SPECIFIED

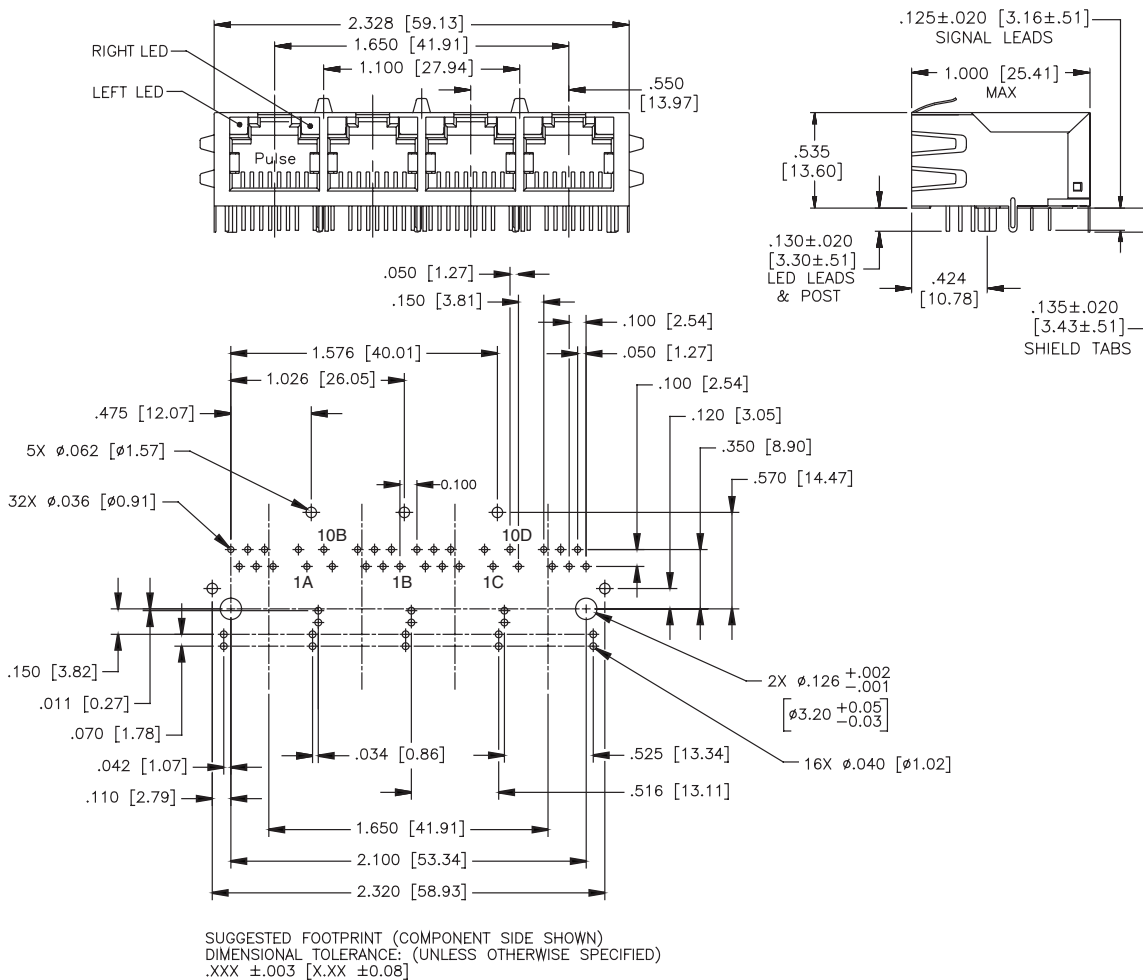
Pin Assignment (Top View)



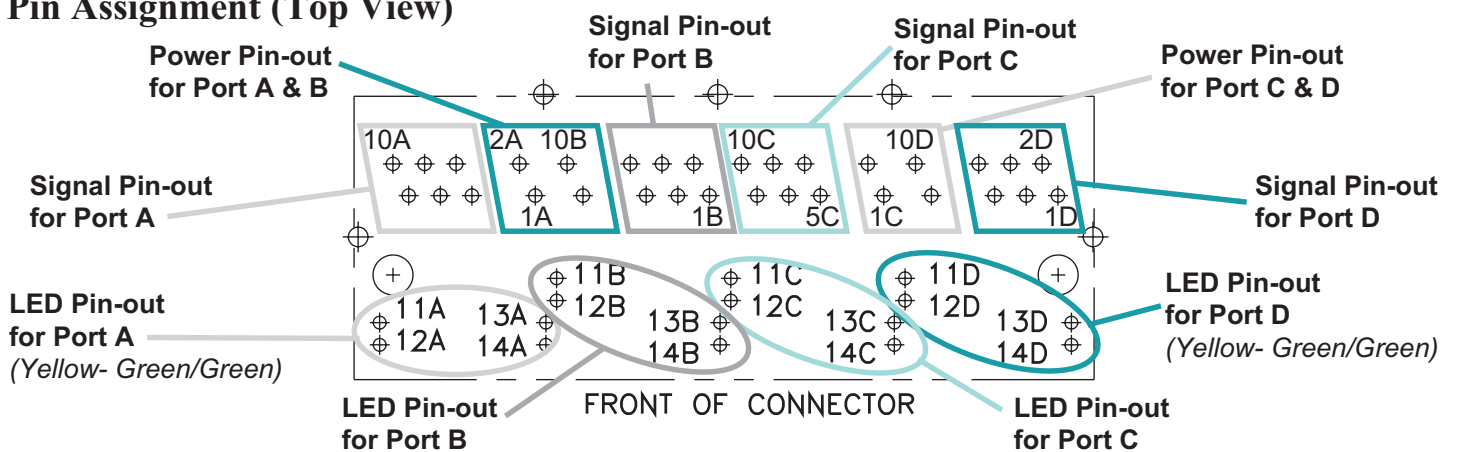
NOTE: Pins 3A, 4A, 7B and 8B are removed from component to simplify PCB layout and separation of Power, Signal and Ground planes.

Mechanicals

JG0-0032NL



Pin Assignment (Top View)

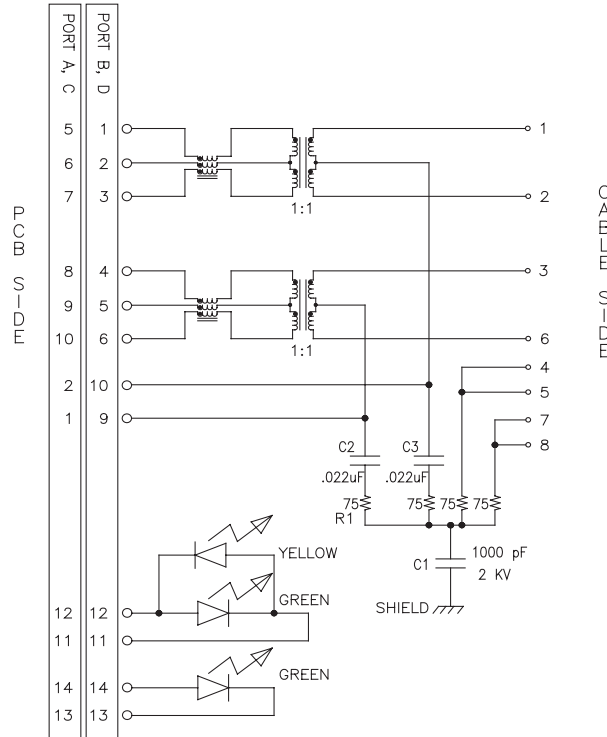


NOTE: Some pins are removed from component to simplify PCB layout and separation of Power, Signal and Ground planes.

PulseJack™ PowerJack G-UP 10

Schematic

JG0-0031NL/0032NL



LED SPECS (Rating At 25°C Ambient):

| COLOR | | Peak wave length λ_{Pnm} | Spectral halfwidth $\Delta\lambda_{nm}$ | Forward Voltage @20mA(v) | | Luminous intensity @10mA(mcd) | | Forward Current (mA) | Power Dissipation (mW) |
|------------------|-------------------|-------------------------------------|--|-----------------------------|------|----------------------------------|------|-------------------------|---------------------------|
| Emitted | Lens | | | Min. | Max. | Min. | Typ. | | |
| Green/ Yellow | White Diffused | 565 | 30 | 1.7 | 2.8 | 3.0 | 7.0 | 30 | 100 |
| | | 585 | 35 | 1.7 | 2.8 | 1.2 | 7.0 | 20 | 60 |
| Green | Green Diffused | 564~ 574 | 30 | 1.7 | 2.8 | 5 | 15 | 30 | 84 |

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