









-  Magnetic Integrated Connector Modules
-  Compliant with IEEE802.3 standard including 350µH OCL with 8mA DC Bias
-  2000VDC isolation voltage
-  Enhanced performance on EMI suppression with metal shield
-  Support 4 pairs fo Category 5 UTP cable with 1000Base-T full duplex applications
-  Operating temperature 0°C to +70°C
-  Stacked 2x1 design for Hub and Switch Applications
-  RoHS compliant versions are available



#### GENERAL ELECTRICAL SPECIFICATION @ 25°C

| Insertion Loss (dB Max) |            | Return Loss <sup>1</sup> (dB Min) |                | CMRR (dB Min) | Crosstalk <sup>1</sup> (dB Min) | Hipot (VDC) |
|-------------------------|------------|-----------------------------------|----------------|---------------|---------------------------------|-------------|
| 0.1-100MHz              | 100-125MHz | 0.5-40MHz                         | 40-100MHz      | 0.1-100MHz    | 0.1-100MHz                      |             |
| 1.0                     | 1.2        | 18.0                              | 12-20Log(F/80) | 32.0          | 33-20Log(F/50)                  | 2000        |

#### PART NUMBER TABLE

| Part Number <sup>2</sup> | RoHS Part Number | Turn Ratio (±3%) (Chip : Cable) | Configuration <sup>3</sup> | LED <sup>4</sup> (Left / Right) | Mechanical Package | Schematic |
|--------------------------|------------------|---------------------------------|----------------------------|---------------------------------|--------------------|-----------|
| MJ-21N2EEA2-G308         | MJR21N2EEA2-G308 | 1CT:1                           | TCA                        | E / E                           | MJ21N-01A          | G308      |

#### Notes:

1. "F" represents the test frequency specified in MHz.
2. For different electrical and mechanical specifications, please contact E&E Magnetic Products Limited.
3. Core location are counted from PCB (Chip) side to Cable (Media) side, where:  
"T" = Isolation transformer ; "C" = Common-mode choke ; "A" = Auto-transformer
4. LEDs (Left / Right) : "E" = Orange & Green bi-color (3 terminals type). For different LED color requirements, please contact E&E Magnetic Products Limited.
5. Panel tabs are optional.
6. All parts shown in this datasheet have gold plating thickness of 10 micro-inch (min.) over contact area. Advance options including 30 micro-inch (min.) and 50 micro-inch (min.) are also available.

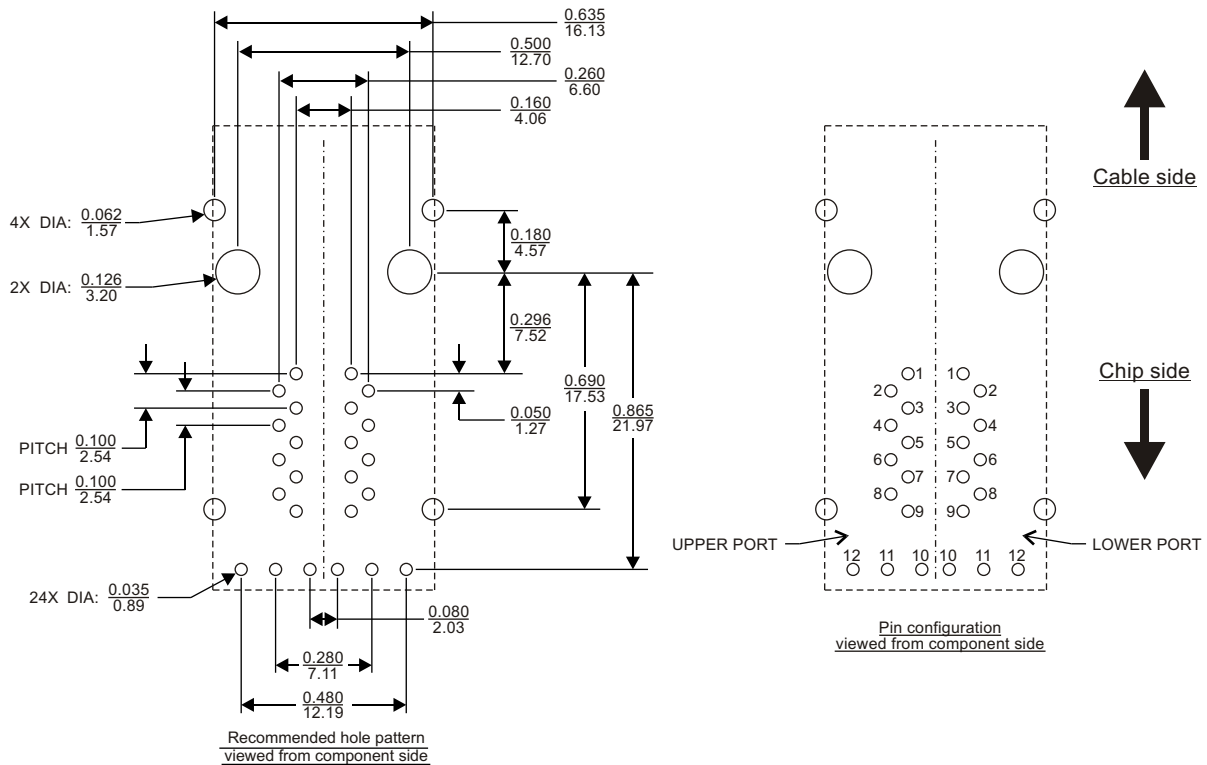
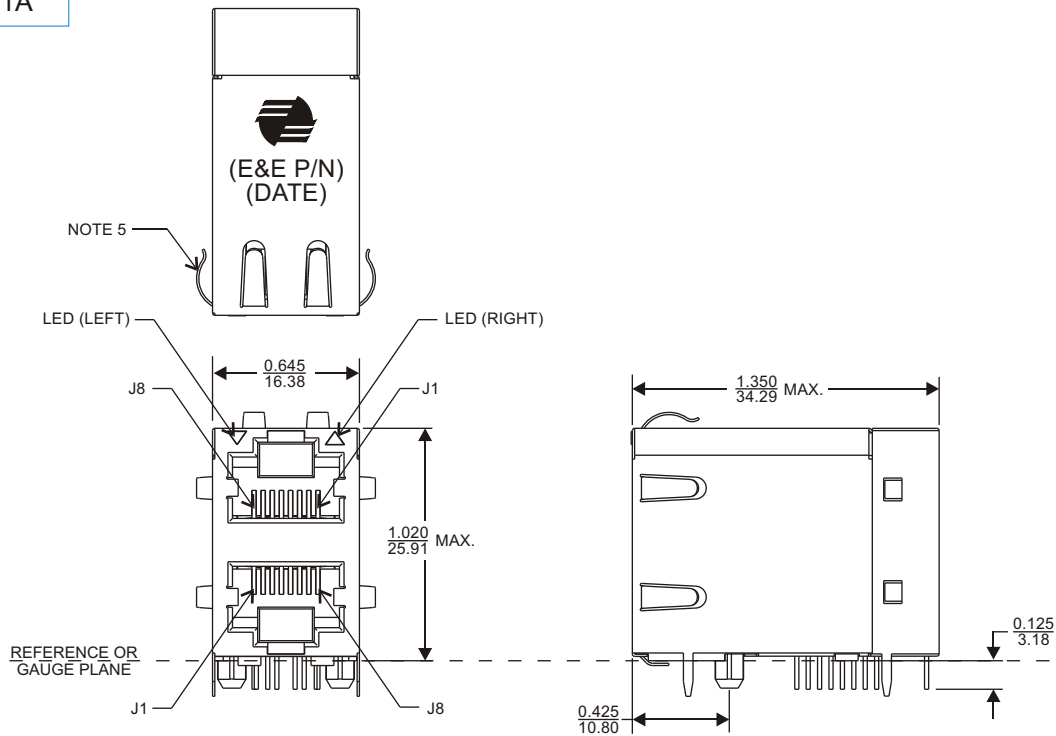
#### MATERIALS

|                           |  |
|---------------------------|--|
| Housing                   | Consist of thermoset & thermoplastic materials, all of them are UL 94-V0 rated.    |
| Contact Pins <sup>6</sup> | Phosphor bronze, plated with nickel under-plating and hard gold over contact area. |
| PCB Pins                  | Copper wire which meets solderability requirements per MIL-STD-202, method 208.    |



MECHANICAL DIMENSIONS

MJ21N-01A



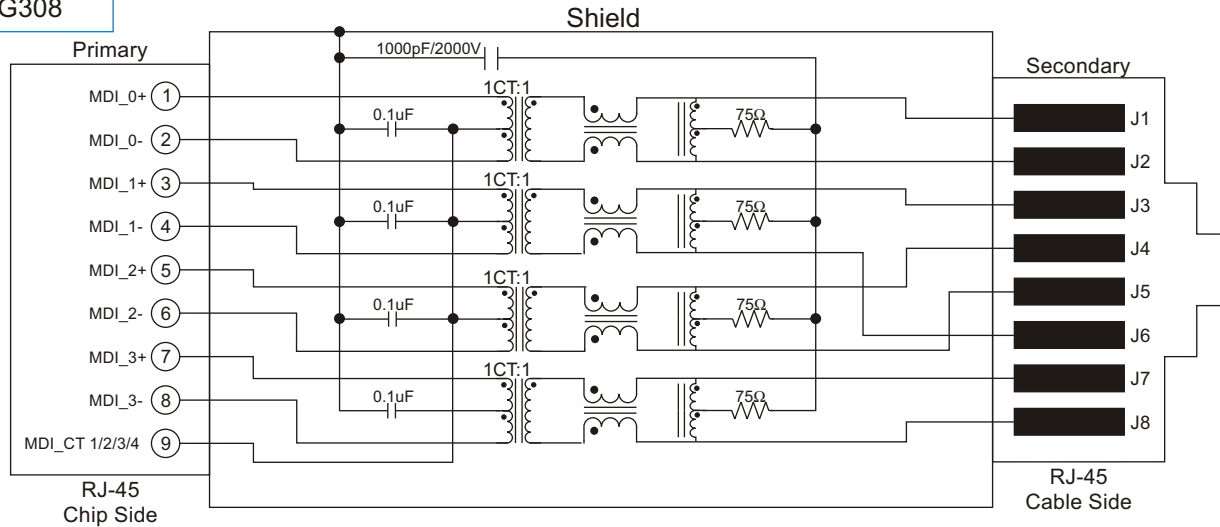
All dimensions are specified in  $\frac{\text{inch}}{\text{mm}}$  with higher precedence in inch.

Unless otherwise specified, all tolerances are  $\pm \frac{0.010}{0.25}$ .

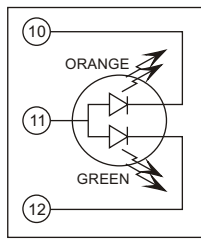


**SCHEMATICS**

G308



**LEDs COLOR AND POLARITY**



| COLOR | POLARITY |        | COLOR  | POLARITY |        |
|-------|----------|--------|--------|----------|--------|
|       | PIN 11   | PIN 12 |        | PIN 11   | PIN 10 |
| GREEN | +        | -      | ORANGE | +        | -      |

**LED SPECIFICATION @25°C, FORWARD CURRENT = 20mA**

| Standard Color | Typical Wavelength (nm) | Forward Voltage (volt) |         |
|----------------|-------------------------|------------------------|---------|
|                |                         | Typical                | Maximum |
| Green          | 565                     | 2.2                    | 2.5     |
| Orange         | 607                     | 2.05                   | 2.5     |

**FOR MORE INFORMATION, PLEASE CONTACT**

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