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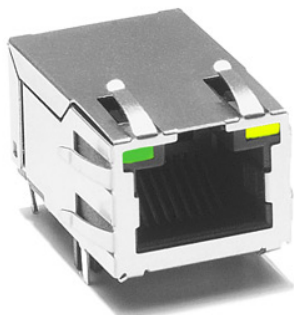
# PULSEJACK™

## 1X1 Tab-UP RJ45



### Description:

10/100 Base-TX RJ45 1X1 Tab-UP with LEDs 8-pin (J1 series) and 6-pin (JP series) integrated magnetics connector (ICM), designed to support applications, such as SOHO (ADSL modems), LAN-on-Motherboard (LOM), Hub and Switches.



### Features and Benefits:

- 1X1 Tab-UP RJ45 with internal magnetics
- 8 or 6-pin signal pin versions available
- Available with LEDs
- Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP
- Internal magnetics are 100% electrically tested for HI-POT and functionality

### Electrical Performance Summary:

- Internal magnetics options available
- Meets or exceeds IEEE 802.3 standard for 100Base-T
- 350 µH minimum OCL with 8 mA bias current
- High performance for maximum EMI suppression
- Minimum 1500 Vrms isolation per IEEE 802.3 requirement

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

Part Number	Turns <sup>1,2</sup> Ratios		EMI <sup>5</sup> Fingers	LEDs <sup>3</sup> L/R	Insertion Loss (dB TYP)	Return Loss (dB TYP) 100 Ω ±15 Ω				Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)		Hipot (Vrms)
	TX	RX				L/R	1-65 MHz	1-10 MHz	10-30 MHz	30-60 MHz	60-80 MHz	1-30 MHz	30-60 MHz	60-100 MHz	
J1006F01P	1CT:1	1CT:1	No	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1006F21	1CT:1	1CT:1	YES	NONE	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1011F01P	1CT:1	1CT:1	No	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1011F21P	1CT:1	1CT:1	YES	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1012F01C	1CT:1	1CT:1	No	Y/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1012F21C	1CT:1	1CT:1	YES	Y/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1012F21K	1CT:1	1CT:1	YES	G/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1012F21R	1CT:1	1CT:1	YES	RG/RG	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1012F21L	1CT:1	1CT:1	YES	RY/RG	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1026F01	1CT:1	1CT:1	No	NONE	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1026F01P	1CT:1	1CT:1	No	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J1026F21C	1CT:1	1CT:1	YES	Y/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
JP006821U	1CT:1	1CT:1	YES	G_O/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
JP011821U	1CT:1	1CT:1	YES	G_O/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
JP026821U	1CT:1	1CT:1	YES	G_O/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500

#### Notes:

1. Both transmit and receive channels meet IEEE 802.3 specifications.
2. Different electrical and mechanical specifications can be accommodated.
3. LEDs Left/Right: G=green, Y=yellow, G\_O=green/orange bi-color, R = LEDs with resistors.
4. J1/JP series platform capable of withstanding 235°C solder reflow.
5. For explanation of EMI fingers, refer to mechanical drawing on page 2.

### RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
JP/J1 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
JP/J1 Series	Brass	10-20m inches Nickel over 10-20m inches Brass	Phosphor Bronze	Nickel underplating and selective gold plating 15µ inches	120µ inches Sn90/Pb10 over 50µ inches nickel	Thermoplastic	UL 94 V-0

#### Notes:

1. All connector part numbers starting with the series prefix JP/J1 comply to the above limits.
2. Connector dimensions comply with FCC dimension requirements.

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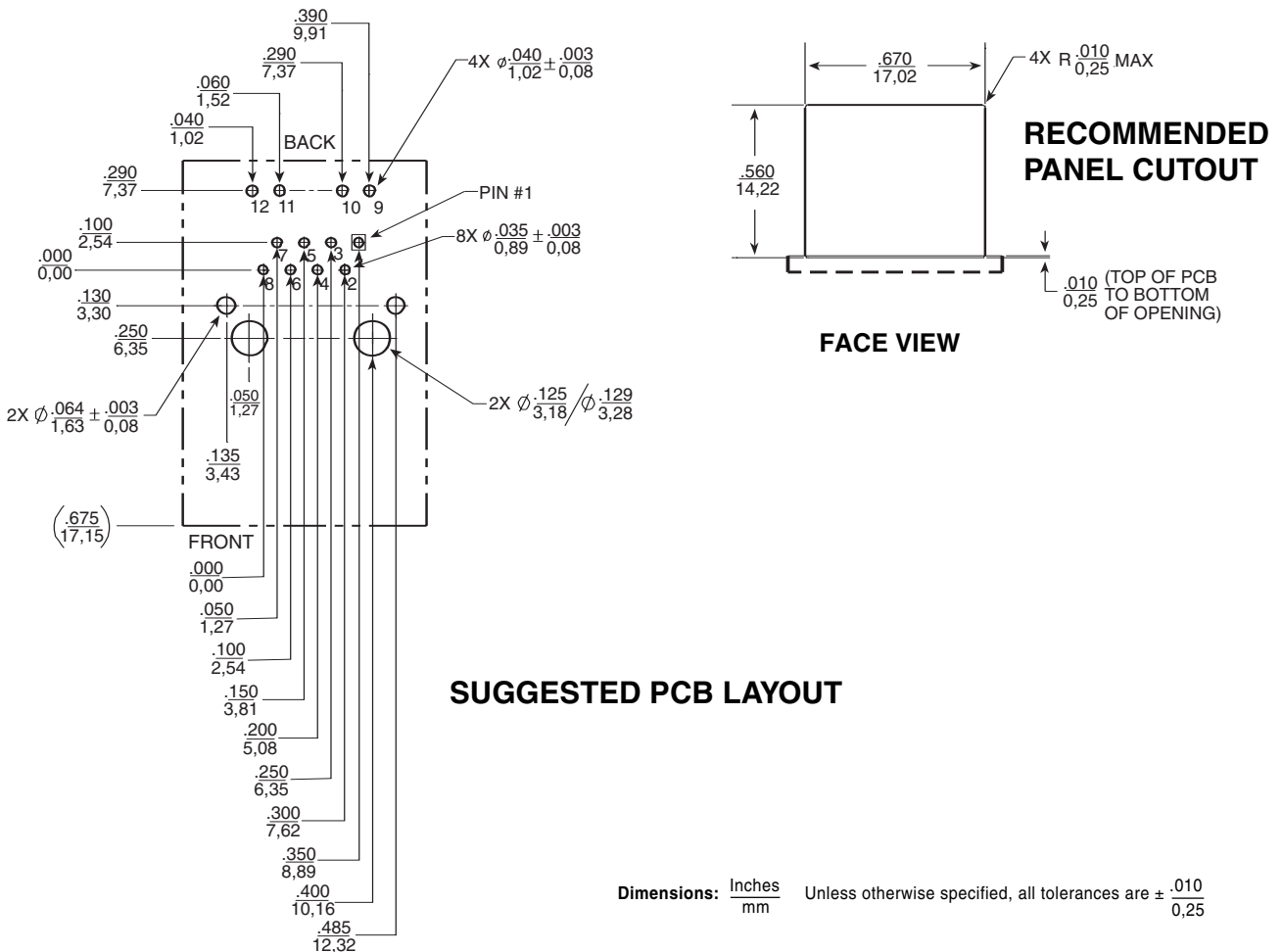
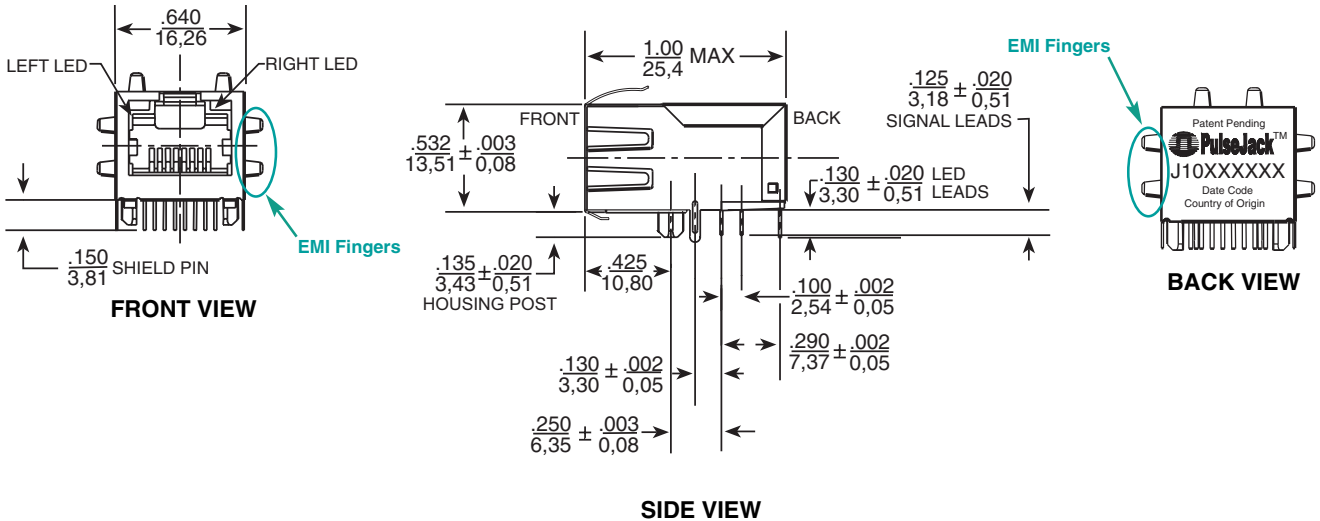
## 1X1 Tab-UP RJ45



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### J1 Series Mechanicals



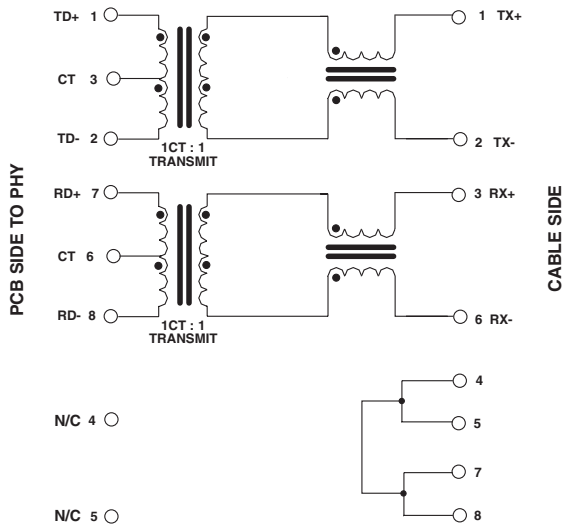
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## 1X1 Tab-UP RJ45



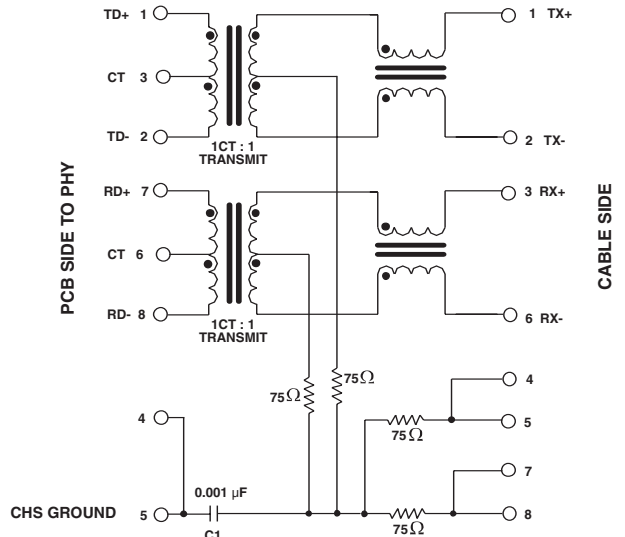
### J1 Series Electrical Schematics

**J1006**



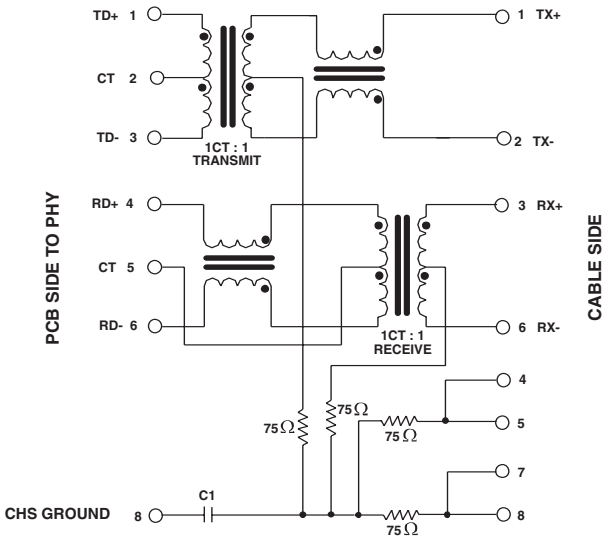
NOTE: Connect CHS GND to PCB ground.

**J1011**



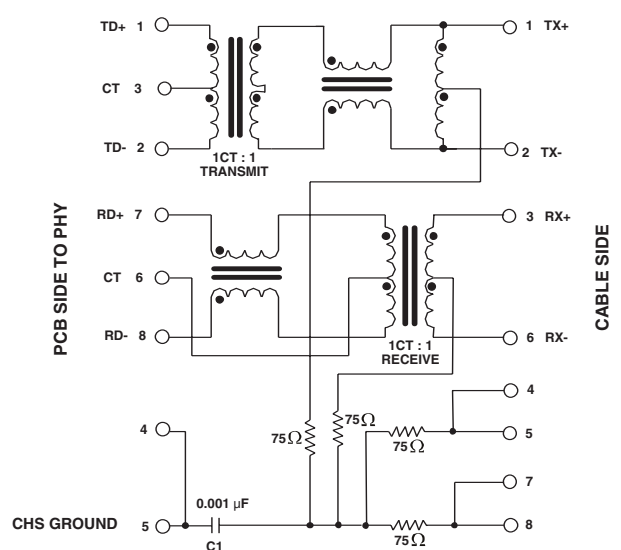
NOTE: Connect CHS GND to PCB ground.

**J1012**

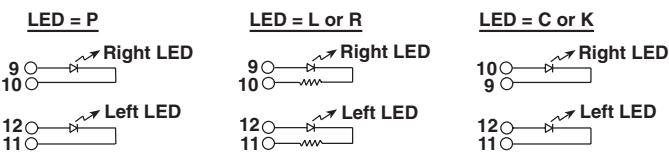


NOTE: Connect CHS GND to PCB ground.

**J1026**



NOTE: Connect CHS GND to PCB ground.



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

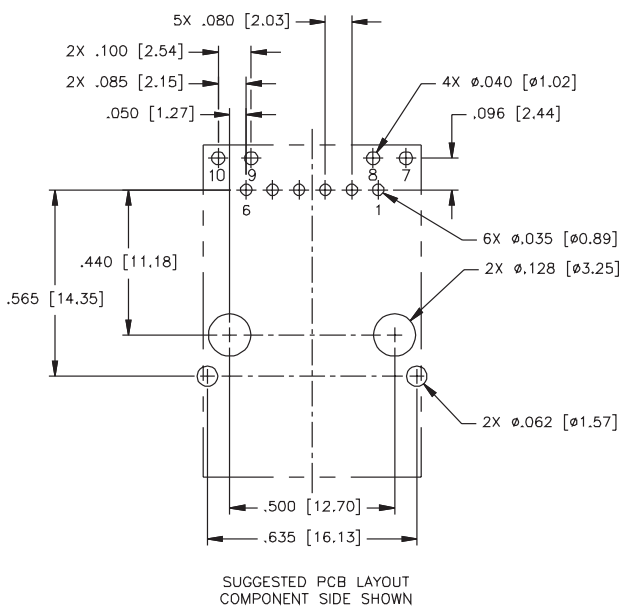
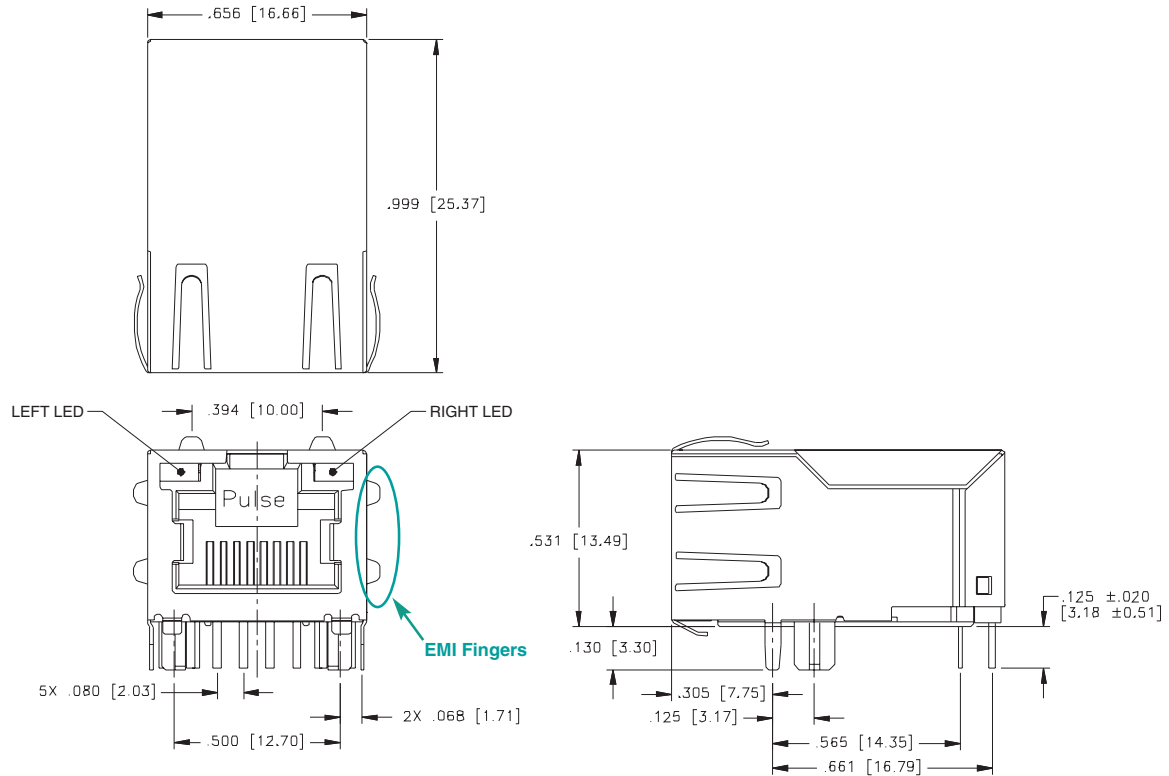
\* With a forward current of 20 mA

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## 1X1 Tab-UP RJ45



### JP Series Mechanicals



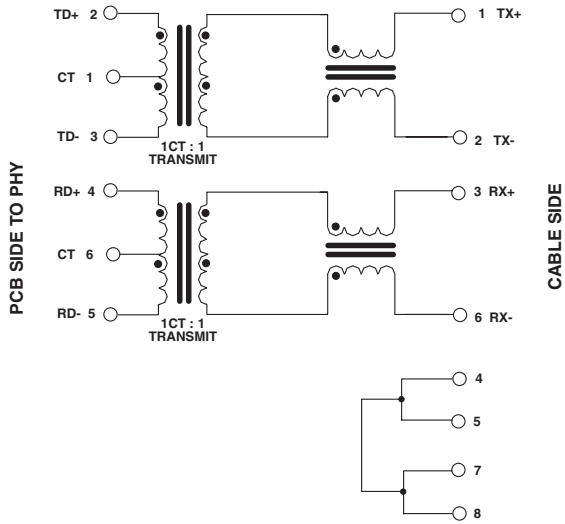
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

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## 1X1 Tab-UP RJ45

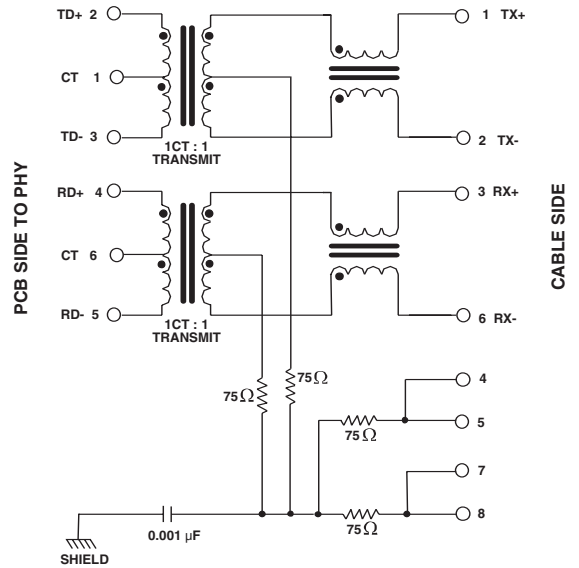
### JP Series Electrical Schematics

#### JP006

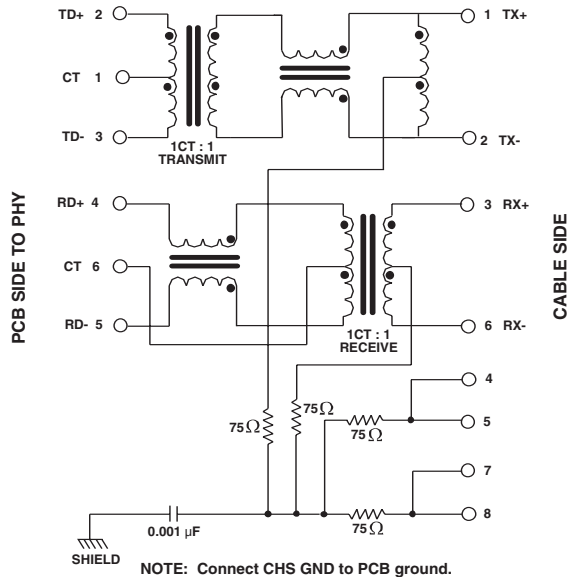


NOTE: Connect CHS GND to PCB ground.

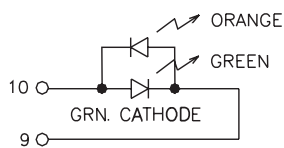
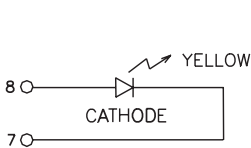
#### JP011



#### JP026



NOTE: Connect CHS GND to PCB ground.



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

\* With a forward current of 20 mA

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### Application Notes

#### Advantages of the PulseJack Modules

##### Increased Reliability

Pulse developed a patented method for ensuring the quality, consistency, and connection integrity of encapsulated coils and other three-dimensional electronic components. The InterLock Base consists of an internal plastic carrier that holds the coil firmly in place and provides precisely engineered "lead-channels" to lock together the lead wires and the leadframe pins. All of the InterLock Base interconnections are then simultaneously dip soldered, providing for both efficiency and uniformity for best common mode rejection and crosstalk.

##### Higher Manufacturing Yields

Because of this Pulse patented higher reliability method, there is less of a chance of opens and shorts, thus providing higher yields.

##### Consistent Electrical and Magnetic Performance

- With internal magnetics specifically oriented on all parts, there are more consistent readings on all functional tests. This is optimized for best crosstalk, common mode rejection and return loss.
- With the selection of common mode material and winding techniques, common mode noise rejection maintains integrity at higher frequencies.
- Multiple tabs around shield-to-ground, shield-to-chassis, and shunt noise to ground improves EMI suppression.

#### For More Information :

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12220 World Trade Drive San Diego, CA 92128 U.S.A. http://www.pulseeng.com TEL: 858 674 8100 FAX: 858 674 8262	1 & 2 Huxley Road The Surrey Research Park Guildford, Surrey GU2 5RE United Kingdom TEL: 44 1483 401700 FAX: 44 1483 401701	Zone Industrielle F-39270 Orgelet France TEL: 33 3 84 35 04 04 FAX: 33 3 84 25 46 41	150 Kampong Ampat #07-01/02 KA Centre Singapore 368324 TEL: 65 6287 8998 FAX: 65 6280 0080	3F-4, No. 81, Sec. 1 HsinTai Wu Road Hsi-Chih, Taipei Hsien Taiwan, R.O.C. Tel: 886 2 2698 0228 FAX: 886 2 2698 0948	9/F, Phase 2, Tai Sang Shatin Warehouse Centre 6 Wong Chuk Yeung Street Fotan, Shatin, Hong Kong TEL: 852 2788 6588 FAX: 852 2776 1055	

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