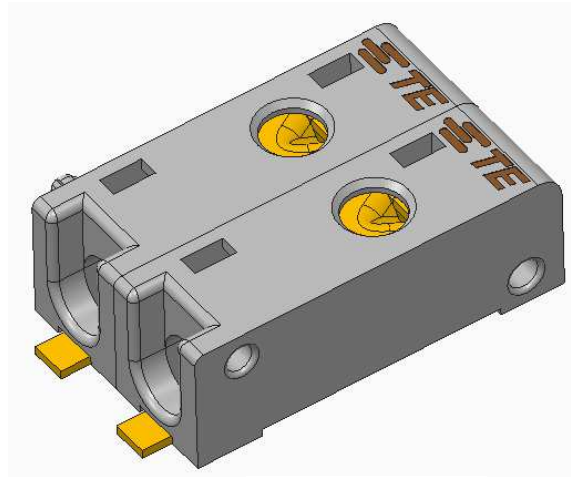


## 1. INTRODUCTION

This specification covers the requirements for application of Releasable Poke-in connector for use on lighting field. When corresponding with TE Connectivity Personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.



Connector

*Figure 1*

## 2. REFERENCE MATERIAL

### 2.1. Revision Summary

Revision A2– Add Solder paste thickness

### 2.2. Customer Assistance

Reference Product Base Part Numbers 2834006-\* & 2834385-\* are representative of the releasable poke in connector. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product information. Such information can be obtained through a local TE Connectivity Representative.

### 2.3. Drawings

Customer Drawings for specific products are available from the responsible TE Connectivity Engineering department via the service network. The information contained in the Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by TE Connectivity.

## 3. REQUIREMENTS

### 3.1. Safety:

**DO NOT** stack product shipping containers so high that the containers buckle or deform.

### 3.2. Limitations:

The connectors are designed to operate in a temperature range of  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$

### 3.3. Material

Housing is made of UL94V-0 rated thermoplastic;

Contact is made of copper alloy;

Under-plated overall with nickel, and plated with tin;

**3.4. Storage**

**A. Ultraviolet Light**

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the connector material.

**B. Shelf Life**

The contacts and connectors should remain in the shipping containers until ready for use to prevent deformation to components. The components should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

**C. Chemical Exposure**

**DO NOT** store the contacts or connectors near any chemical listed below as they may cause stress corrosion cracking in the components.

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites		Tartrates

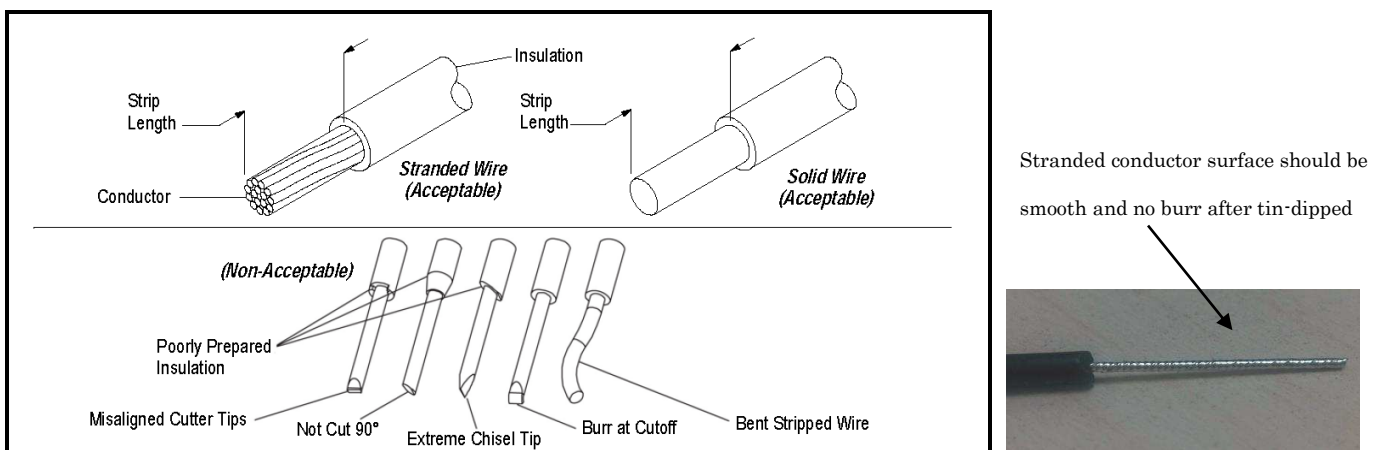
**3.5. Wire Selection and Preparation**

These connectors will accept 18 to 22 AWG range wire; The applicable wire size and type are list in table 1.

*Table 1 RECOMMENDED WIRE*

Wire Size	Wire Type	Insulation Diameter	Strip Length
18 AWG	Solid	2.05mm max	8.0+/-0.5mm
	Stranded(Tin-dipped)		
20 AWG	Solid		
	Stranded(Tin-dipped)		
22 AWG	Solid		
	Stranded(Tin-dipped)		

The typical unacceptable wire preparation example is shown on Figure 2.



**Figure 2**

**3.6 Wire Termination**

The receptacles must be terminated according to the following instructions.

**A. Workmanship**



**CAUTION**

The housing must not be damaged in any way. There shall be no bending of the contacts. There shall be no exposed copper wire or broken or bent conductor strands.

**B. Wire Insertion**

All wires must be pushed firmly inside the contact wire openings. The wires must be fully inserted so that the wire insulation is inserted into and surrounded by the end of the housing. Refer to Figure 3.



**CAUTION**

To avoid buckling of wire strands during insertion, depressing the release button to open the contact wire retention beams is recommended. Using up to a 1.80 mm diameter device, depress the release button vertically through the release button window, then insert the stranded wire. Refer to Figure 3.

**C. Wire Termination Depth**

The required wire termination depth is achieved when the wire has bottomed in the connector housing. Refer to Figure 3.

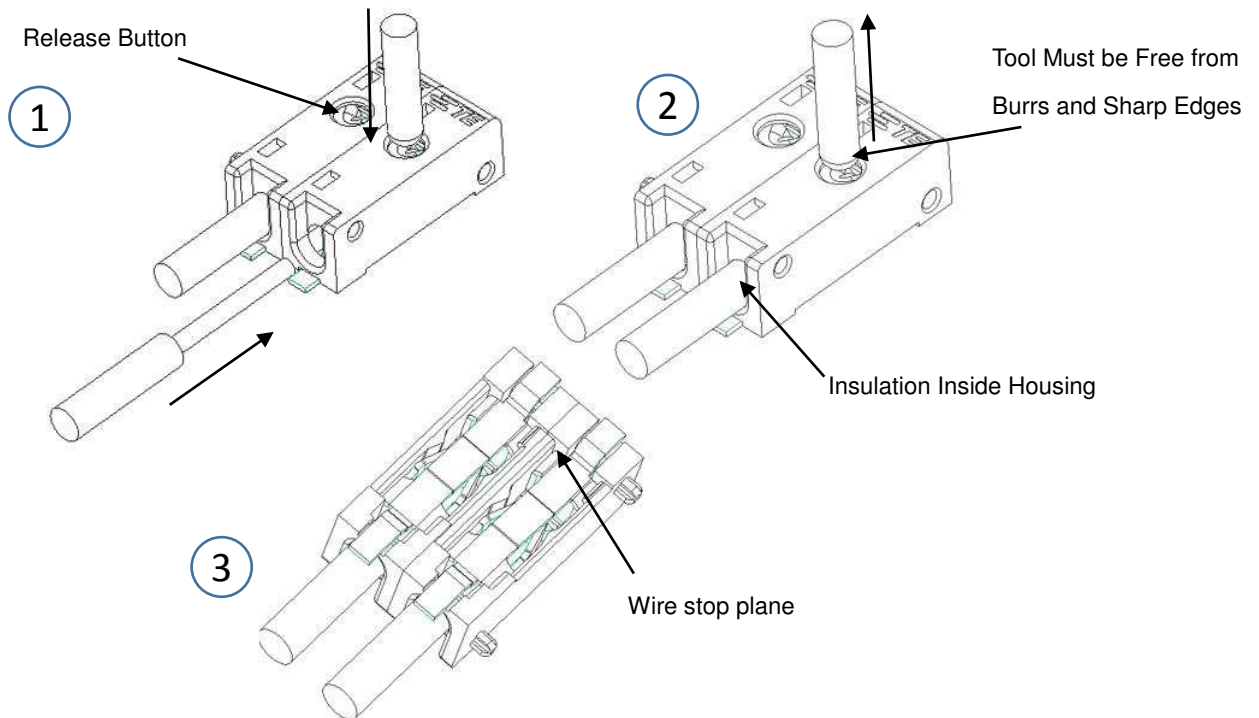


Figure 3

**D. Wire Extraction**

A fully inserted wire can be extracted from the connector using the release button located on the top of the connector housing. Using up to a 1.8 mm diameter device, depress the release button vertically through the release window, then wire may be extracted from the connector along the axis of wire insertion direction. Refer to Figure 4.



**CAUTION**

Extraction device to be free from burrs and sharp edges to ensure no damage is done to connector terminals.

**CAUTION** **CAUTION**  
 A new stripped wire must be re-inserted into cavity after extraction of existing wire. **DO NOT** re-use extracted wire.  
 Stranded 18AWG wire (Tin-dipped) must be twisted and extracted out from the connector.

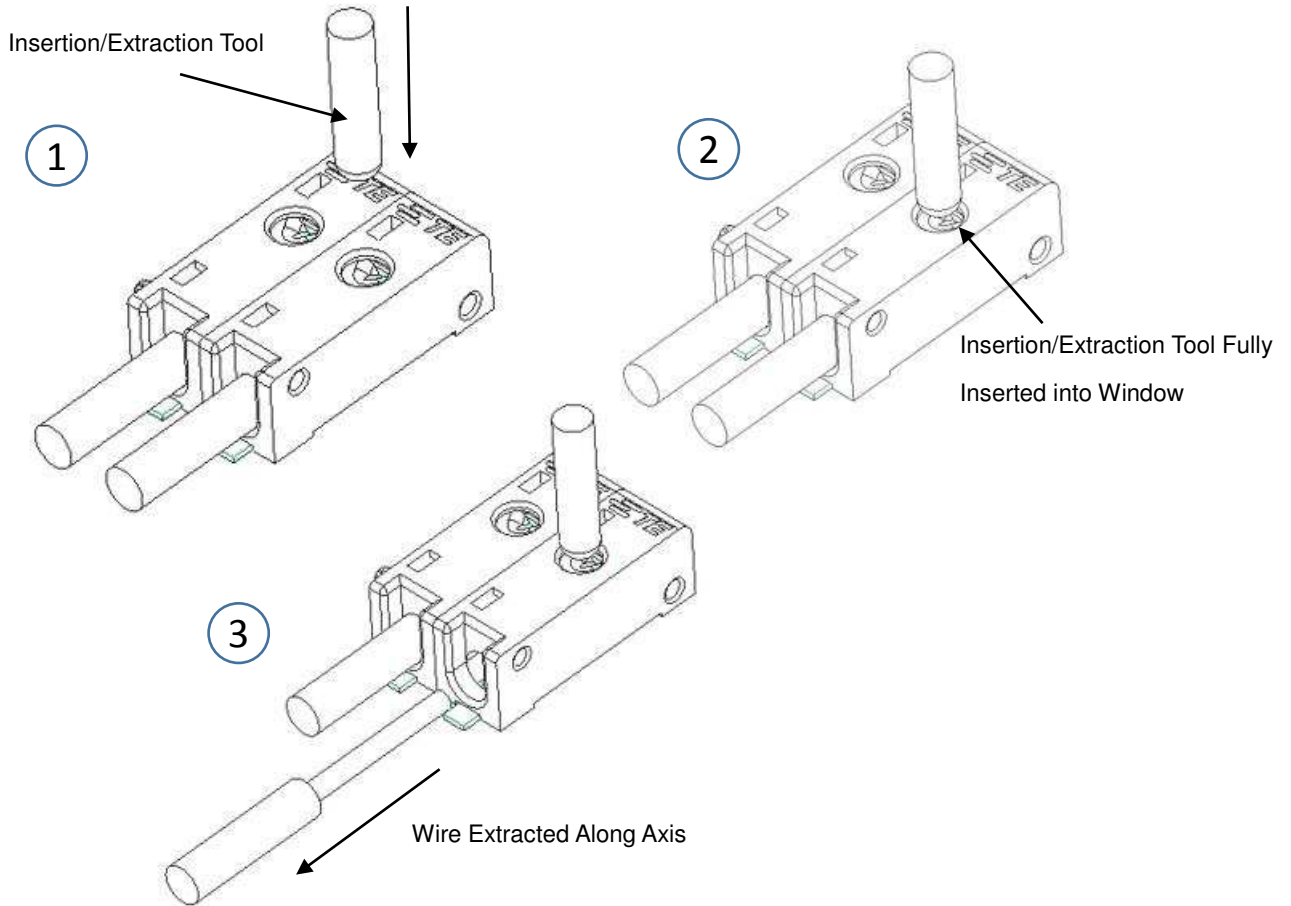


Figure 4

**3.7. PC Board**

**A. Material and Thickness**

Common pc board materials may be used such as glass epoxy (FR-4 or G-10), Aluminum-clad pc boards and flex circuits. The pc board thickness may vary to suit the end use thickness.

**B. Tolerance**

Maximum allowable bow of the PC board shall be 0.10 mm over the length of the connector.

**C. Pads**

The PC board circuit pads must be solderable in accordance with IPC J-STD-003.

**D. Layout**

The PC board layout must be designed using the dimensions provided on the customer drawing: C-2834006&C-2834385 for the specific connector.

The layout should be located on the edge of the PCB for the wire easy inserting.

**4. QUALIFICATION**

Qualification under process by Underwriters Laboratories Inc.

## 5. SOLDERING

Observe guidelines and procedures when soldering contacts. Solder, clean, and dry all leads to contacts according to the following. The connectors should be soldered using vapor phase reflow (VPR), double-sided, non-focused infrared (IR), forced air convection, or equivalent soldering techniques. All solder joints should conform to the Workmanship Specification IPC-A-610 and IPC J-STD-001.

### A. Flux Selection

Contacts must be fluxed prior to soldering with a mildly active, rosin base flux. Selection of the flux will depend on the type of pc board and other components mounted on the board. Additionally, the flux must be compatible with the wave solder line, manufacturing, health, and safety requirements.

### B. Connectors with SMT Contacts

#### 1. Solderability

The pc board pads must be solderable in accordance with IPC/EIA J-STD-003 and all other requirements for surface mount contacts specified in this document.

#### 2. Solder Paste Characteristics

- a. Alloy type shall be SAC 305; Sn 96.5/Ag 3.0/Cu 0.5.
- b. Flux incorporated in the paste shall be rosin, mildly active (RMA) type.
- c. Paste will be at least 80% solids by volume.
- d. Mesh designation -200 to +325 (74 to 44 square micron openings, respectively).
- e. Minimum viscosity of screen print shall be  $5 \times 10^4$  cp (centipoise).
- f. Minimum viscosity of stencil print shall be  $7.5 \times 10^4$  cp (centipoise).
- g. Solder paste thickness: 0.15mm min

#### 3. Process

Connectors with surface mount contacts should be soldered using vapor phase (VPR), double-sided, non-focused infrared reflow (IR) or equivalent soldering techniques. Due to many variables involved with the reflow process (i.e., component density, orientation, etc.), it is recommended that trial runs be conducted under actual manufacturing conditions to ensure product and process compatibility.

The lead-free reflow profile is shown in Figure 6

**Kester Lead-Free Reflow Profile**  
**Alloys: Sn96.5/Ag3.0/Cu0.5 and Sn96.5/Ag3.5**

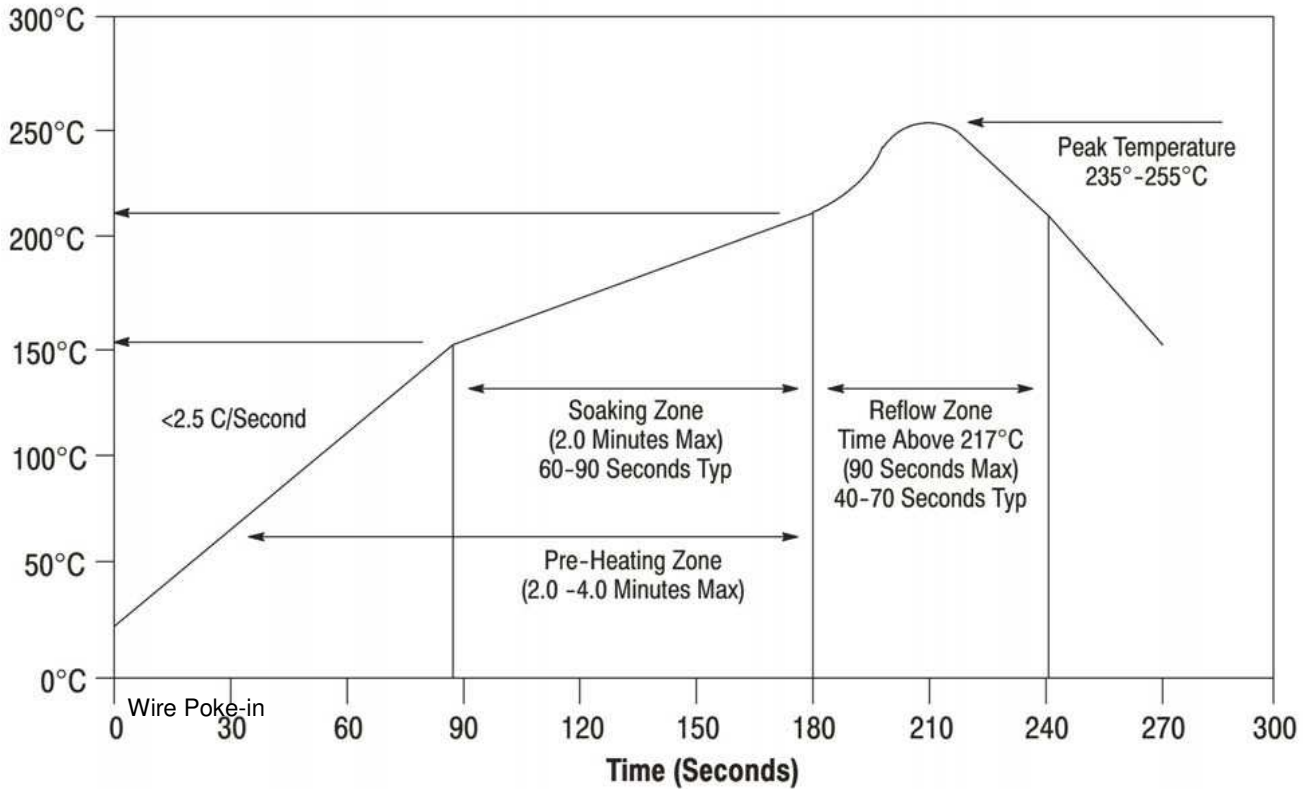


Figure 6

**6. VISUAL AID**

The illustration below shows a typical application of this Connector. This illustration should be used by production personnel to ensure a correctly applied product. Applications which **DO NOT** appear correct, should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product.

