

1. INTRODUCTION

This specification covers the requirements for application of 3 pin wire to wire downlight connectors (Plug & Receptacle) 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.

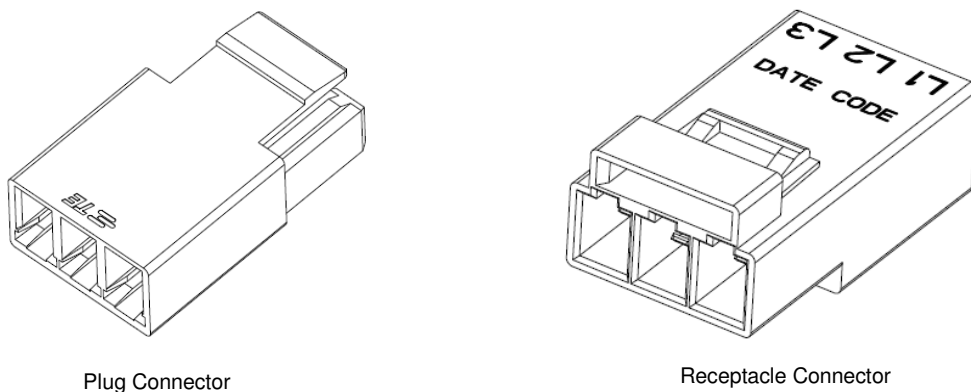


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Revision A – Initial release

Revision B – Adding more detail information for process control

2.2. Customer Assistance

Reference Product Base Part Numbers 2834054/2834055/2834056 are representative of the wire to wire downlight 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°C to 105°C

3.3. Material

Contact is made of copper alloy; Housing is made from UL 94V-0 rated thermal plastic.

3.4. Storage

A. Ultraviolet Light

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

NOTE **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 are designed for copper to copper connection only, **DO NOT** use on Aluminum or other alloy. The applicable wire size and type are list in table 1.

Table 1 Applicable Wire Size and Type

Wire Type	Wire Size
Solid	18-22 AWG
Tin Dipped	16-20 AWG(26 strands Max. for 16 AWG, 16 strands Max. for 18 AWG, 7 strands Max. for 20AWG)

When preparing stranded wire, it is recommended to twist strands after stripping the insulation. The strands need to be well organized and in a uniform straight style. The stranded wire need to be coated with Tin. Too much Tin coated is not allowed. Tin dipping depth is same as wire strip length. The wire strip length is $9.0 \pm 0.5\text{mm}$ and the typical unacceptable wire preparation example is shown on Figure 2.

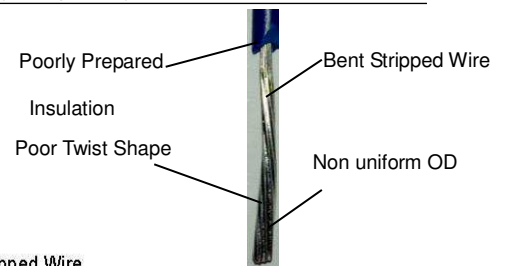
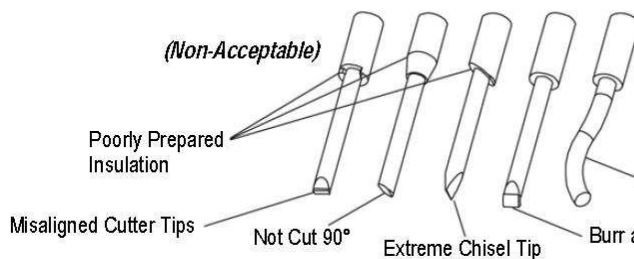
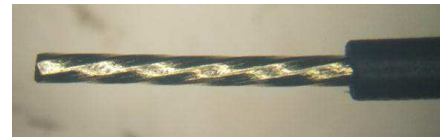
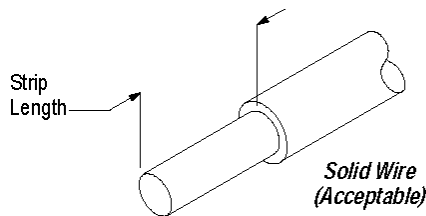


Figure 2

3.6 Assembly Procedure

In the field, these kits must be assembled by a qualified electrician in accordance with national and local electrical codes and the following instructions.



Turn off power before removing or installing connector.

1. Select the proper assembly for your production requirements.
2. If using customer-assembled connectors, strip two wires with applicable copper conductors provided in Figure 2.
3. Insert each stripped wire into a poke-in slot in the back of the plug or receptacle until bottomed. The maximum allowed insertion angle is 10° (Figure 3).

For field wiring, black, white, green or other defined color wires must be inserted into corresponding slot which mark L1,L2,L3 accordingly (See Figure 1).

Pull back gently on the wires to ensure they have latched fully in the housings.



The wire retention side of the connector is for **ONE TIME USE ONLY, DO NOT REMOVE AND REPLACE WIRES.**

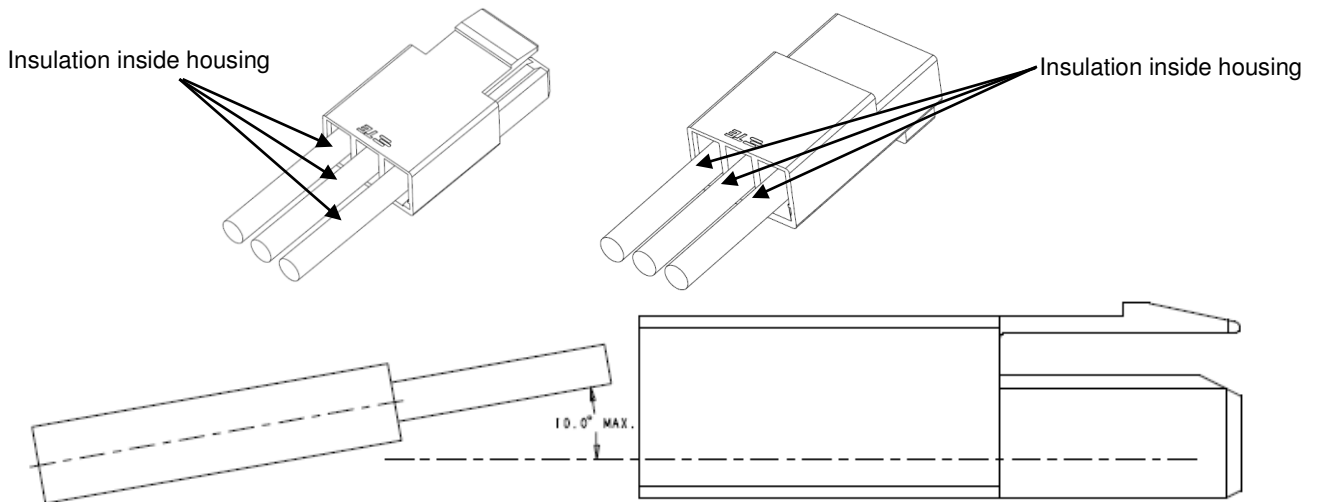


Figure 3

1. Apply optional approved flammability rated tape or clamp to organize the wire. Please keep at least 5mm long straight line before bending the wires, See Figure 4.

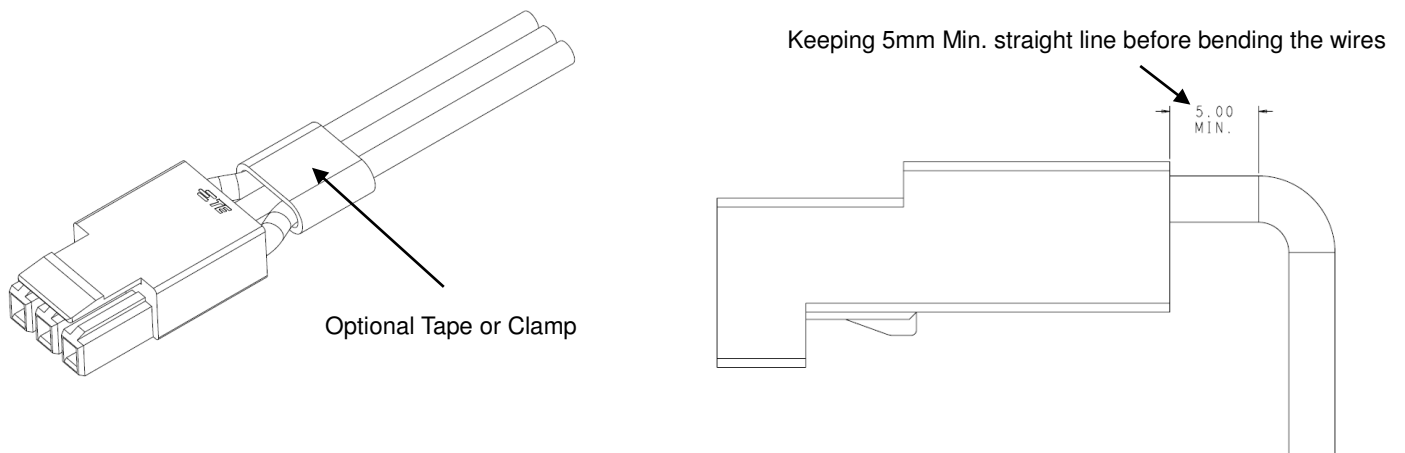


Figure 4

3.5. Connector Mating

Align the polarized mating faces of the housings, and grasp the housings and push to mate with each other. **DO NOT** force the housings to mate. When fully mated, the housings must appear bottomed with each other and flush at the point of engagement. See Figure 5.

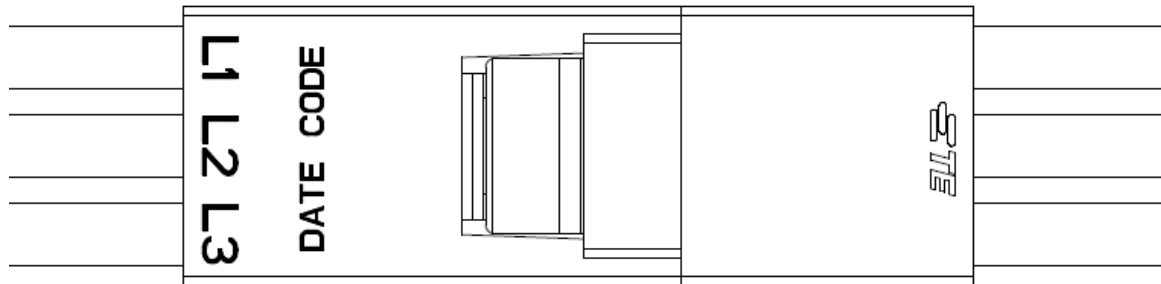


Figure 5 Mated Status

3.6. Connector Unmating

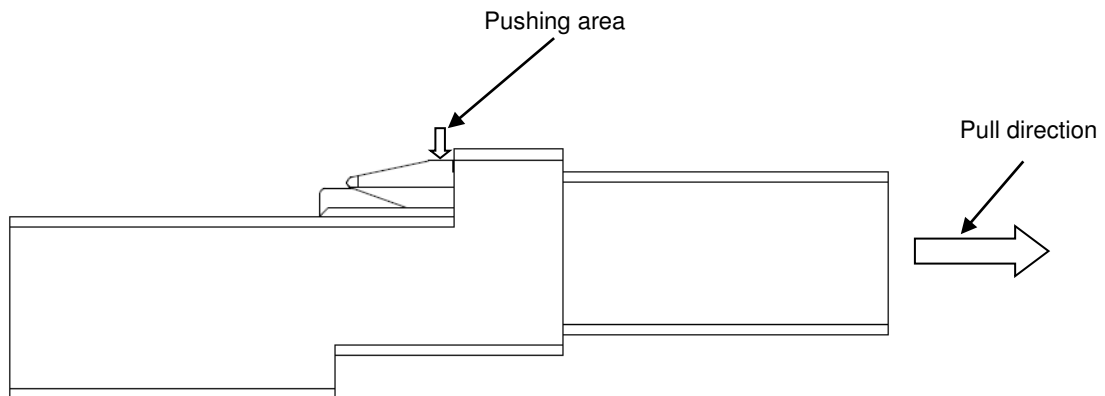


To reduce risk of electrical shock, **DISCONNECT** the electrical supply before unmating the connectors.

To unmate the connectors, grasp the connector at each end and pull apart the mated connectors.



DO NOT pull on the wires when unmating the connectors.



3.7. Replacement/Repair

The contacts and housings are not repairable. **DO NOT** use damaged or defective contacts or housings. **DO NOT** remove the wire and re-terminate contacts.

4. QUALIFICATION

Connectors are Component Recognized by Underwriters Laboratories, Inc.

UL1977 Approval: E28476.

UL2459 Approval: E308110.

5. TOOLING

Only a wire stripper is needed for the installation of the connectors if using customer-assembled connectors. No special tooling is required.

6. VISUAL AID

The illustration below (Figure 6) shows a typical application of 2 Pin Wire to Wire Connectors. 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.

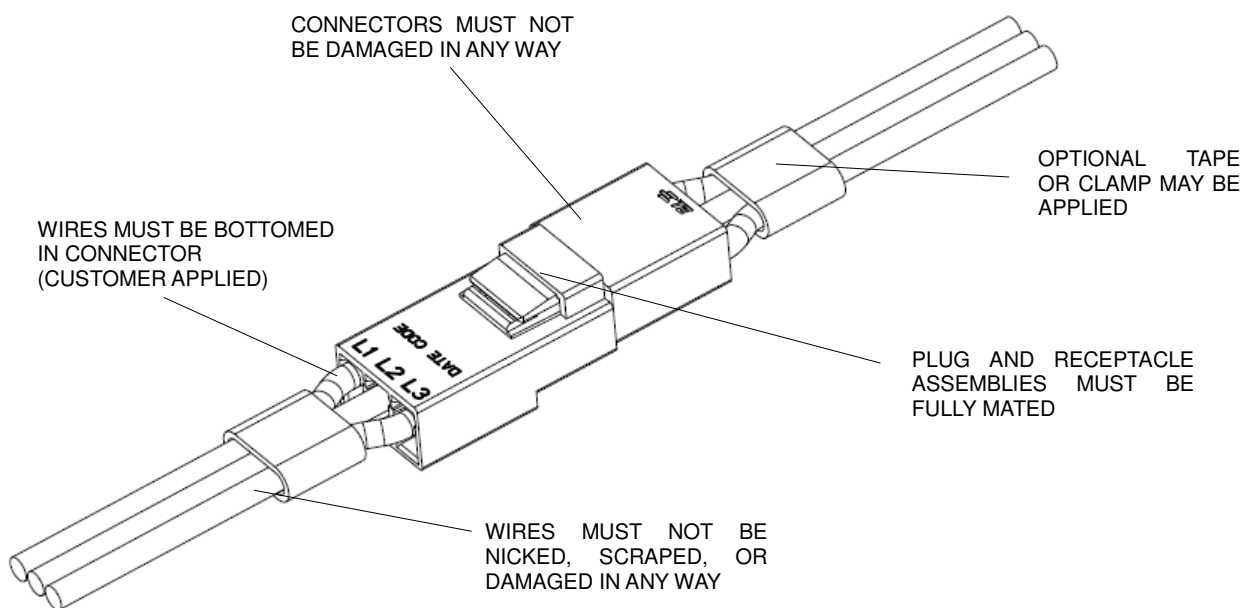
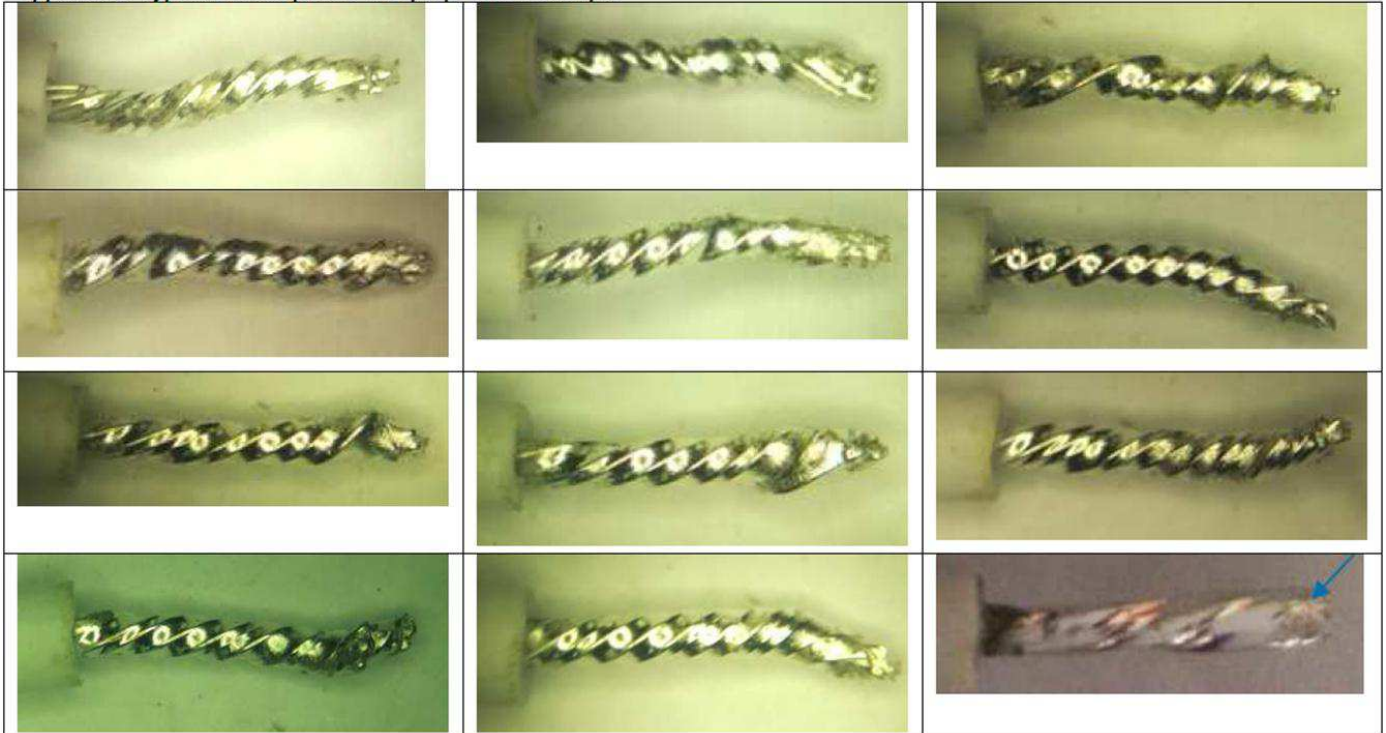


Figure 6. VISUAL AID

7. Appendix-Other process control item

6.1 Non-acceptable Tin dipped wires

Appendix I: Typical unacceptable wire preparation example



Poorly twist shape



Non-Uniform OD

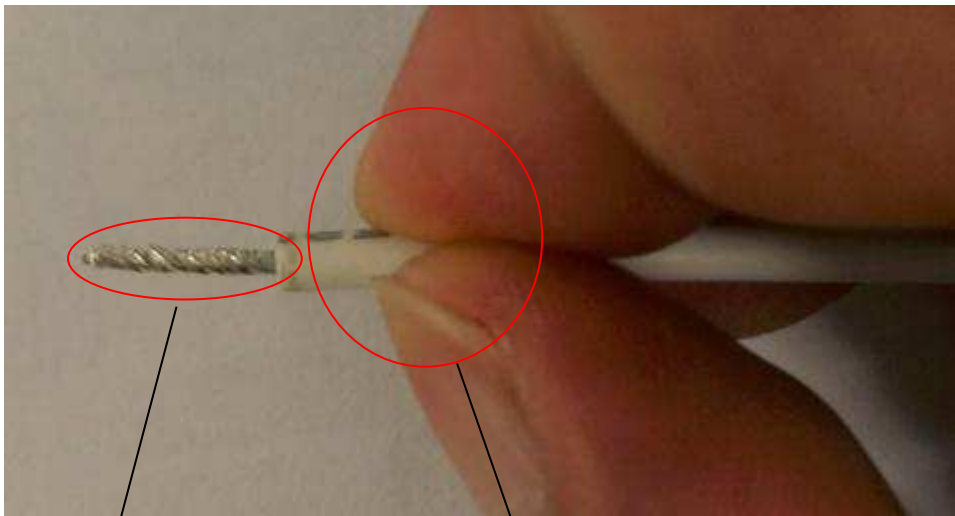


Non-Same long strands



Figure 7

6.2 Wire insertion



Tin dipped area

The grasping area should be as closer as to the Tin dipped area.

Figure 8



The connector is for one time use only, please replace new connectors if you find the wire cannot be bottomed inserted or the contacts are damaged. Please do not sway the wires during wire insertion, and please do not grasp the connector to shake the related lamp or devices. After wire fully insertion, please keep a little straight line wires before bending the wires, the following pictures for your reference:

Correct status-After wires fully insertion



Wrong status-After wires fully insertion



Visual Checking station-The wire should be bottom inserted



Figure 9