

# SlimSeal SSL Connector

The SlimSeal SSL connectors are low profile, single row connectors developed for indoor and outdoor LED lighting applications. These connectors provide low power, sealed solutions for free hanging, wire-to-wire interconnects and for robust, stable electrical and mechanical wire-to-board connections used in solid state lighting.



## SlimSeal **SSL Connector**



## LIGHTING **APPLICATIONS**





Channel/Sign

Emergency





**Digital Signage** 

Architectural



1

Street & Stadium

Commercial Refrigeration

## **KEY FEATURES**

- Available in 1, 2, 3 & 4 positions for use in various lighting and control applications
- 1 position designed for daisy chaining adjacent LED modules in a single fixture
- SMT and thru hole versions permits assembly to SMT metal clad & FR4 thru hole pc boards
- Polarized connections eliminates the possibility of mis-mating connectors
- Positive integral latching prevents inadvertent unmating of connectors
- Pre-assembled seals & wire guides reduces assembly time
- IP67 seal rating for outdoor and commercial refrigeration lighting applications

### **ELECTRICAL**

Operating Current : 5 AMPS (18-20 AWG) & 3.5 AMPS (22-24 AWG) Maximum Operating Voltage : 400VAC / 400VDC Dielectric Withstanding Voltage : 1800 VAC

## **MECHANICAL**

Number of positions : 1, 2, 3 and 4

Operating Temperature : -40°C to 105°C

Seal Rating : IP67

Durability: 30 mating cycles

## **MATERIALS**

Housings : UL 94 VO rated high temperature resistant thermoplastic

Receptacle Contacts : Tin Plated Copper Alloy

Tab Contacts : Tin Plated Brass

Integral Seals : Silicone Rubber

### STANDARDS AND SPECIFICATIONS

UL 1977, CSA C22.2 No. 182.3

TE Application Specification : 114-13261

TE Product Specification : 108-2391

Exposure : UL 746C F1 (suitable for outdoor use, wire-to-wire only)

## **APPLICATION TOOLING**

#### 18-20 AWG Tab and Receptacle Terminals

PART NUMBER	DESCRIPTION			
2063957-1	Hand Tool			
1530177-2	HDI Applicator-Bench Terminator			
1530177-1	HDI Applicator-Leadmaker			

#### 22-24 AWG Tab and Receptacle Terminals

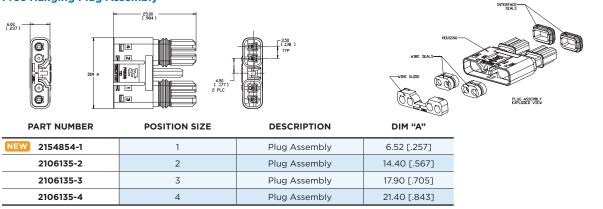
PART NUMBER	DESCRIPTION			
2063956-1	Hand Tool			
1530178-2	HDI Applicator-Bench Terminator			
1530178-1	HDI Applicator-Leadmaker			

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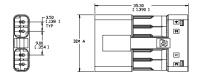


### **PRODUCT DIMENSIONS cont.**

#### Free Hanging Plug Assembly



#### Free Hanging Receptacle Assembly

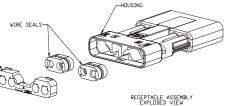




### **Exploded View**

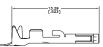
WIRE GUIDE

**Exploded View** 



PART NUMBER	POSITION SIZE	DESCRIPTION	DIM "A"
NEW 2154852-1	1	Receptacle Assembly	6.52 [.257]
2106136-2	2	Receptacle Assembly	14.40 [.567]
2106136-3	3	Receptacle Assembly	17.90 [.705]
2106136-4	4	Receptacle Assembly	21.40 [.843]

#### **Receptacle Contact**



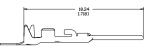
PART NUMBER	MBER DESCRIPTION			
2106123-1	18-20 AWG Receptacle Terminal			
2106123-2	18-20 AWG Receptacle Terminal (Loose Piece)			
1-2106123-1 22-24 AWG Receptacle Terminal				
1-2106123-2	22-24 AWG Receptacle Terminal (Loose Piece)			

#### **Cable Assemblies**

#### DESCRIPTION

	PART NUMBER	POSITION	DESCRIPTION				
NE	2106378-1	1	101.60 [4.000] Plug Cable Assembly				
	2106378-2	2	101.60 [4.000] Plug Cable Assembly				
	2106378-3	3	101.60 [4.000] Plug Cable Assembly				
	2106378-4	4	101.60 [4.000] Plug Cable Assembly				

### **Tab Contact**



PART NUMBER	DESCRIPTION		
2106124-2	18-20 AWG Tab Terminal		
2106124-9	18-20 AWG Tab Terminal (Loose Piece)		
2-2106124-2	22-24 AWG Tab Terminal		
2-2106124-7	22-24 AWG Tab Terminal (Loose Piece)		

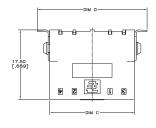
#### PART NUMBER POSITION

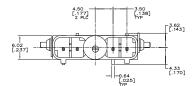
NE	2106391-1	1	101.60 [4.000] Receptacle Cable Assembly			
	2106391-2	2	2 101.60 [4.000] Receptacle Cable Assembly			
-	2106391-3	3	101.60 [4.000] Receptacle Cable Assembly			
	2106391-4	4	101.60 [4.000] Receptacle Cable Assembly			

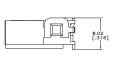


## **PRODUCT DIMENSIONS**

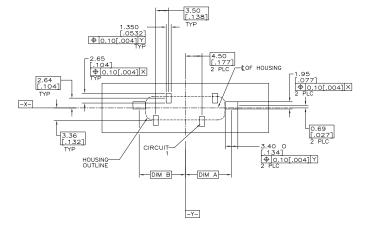
#### **Vertical SMT Header**





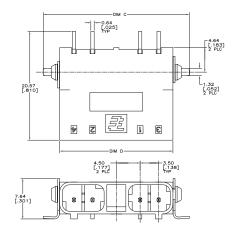


#### **Recommended PCB Layout**

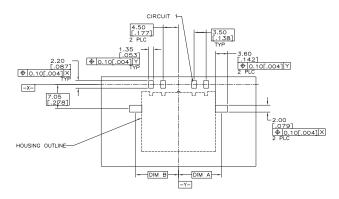


PART NUMBER	POSITION SIZE	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
2106053-2	2	SMT Vertical Header	8.96 [.353]	8.96 [.353]	14.40 [.567]	20.65 [.813]
2106053-4	3	SMT Vertical Header	12.46 [.491]	8.96 [.353]	17.90 [.705]	24.15 [.951]
2106053-6	4	SMT Vertical Header	12.46 [.491]	12.46 [.491]	21.40 [.843]	27.65 [1.089]

#### **Right Angle SMT Header**



#### Recommended PCB Layout

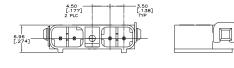


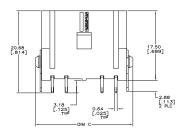
PART NUMBER	POSITION SIZE	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
2106056-2	2	SMT Right Angle Header	8.96 [.353]	8.96 [.353]	20.61 [.811]	14.40 [.567]
2106056-5	2106056-5 3 SMT Right Angle		12.46 [.491]	8.96 [.353]	24.11 [.949]	17.90 [.705]
2106056-8	4	SMT Right Angle Header	12.46 [.491]	12.46 [.491]	27.61 [1.087]	21.40 [.843]



### **PRODUCT DIMENSIONS cont.**

#### Vertical Thru Hole Header



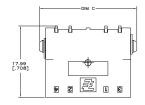


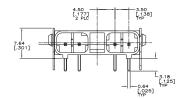
#### HOUSING OUTLINE → DIM B → DIM A → DIM A → DIM A ↓ (R-OH) ↓ (2, 4 ±0.05 ↓ (905±002] ↓ (1.05 ↓ (001) ↓ (1.05 ↓ (001) ↓ (002) ↓ (001) ↓

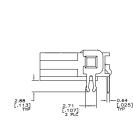
PART NUMBER	POSITION SIZE	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"
2106112-2	2	Vertical Thru Hole Header	7.42 [.292]	7.42 [.292]	17.54 [.691]
2106112-4	3	Vertical Thru Hole Header	10.92 [.430]	7.42 [.292]	21.04 [.828]
2106112-6	4	Vertical Thru Hole Header	10.92 [.430]	10.92 [.430]	24.54 [.966]

2.71 [.107] 2 PLC

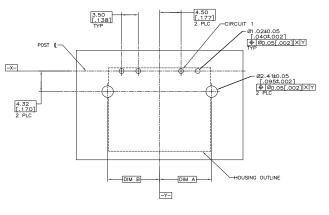
#### **Right Angle Thru Hole Header**







#### **Recommended PCB Layout**



PART NUMBER	POSITION SIZE	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"
2106111-2	2	Right Angle Thru Hole Header	7.42 [.292]	7.42 [.292]	17.54 [.691]
2106111-4	3	Right Angle Thru Hole Header	10.92 [.430]	7.42 [.292]	21.04 [.828]
2106111-6	4	Right Angle Thru Hole Header	10.92 [.430]	10.92 [.430]	24.54 [.966]

### Recommended PCB Layout

CIRCUIT 1

## Questions to ask at design in

#### What wire gauge and insulation type will you be using?

The connectors accepts 18 -20 AWG and 22 - 24 AWG stranded wire with a wire varying maximum insulation outside diameters per wire gauge.

## What special retention mechanisms are available to ensure stability on the printed circuit board?

The vertical and right angle SMT headers have surface mount hold downs whereas the vertical and right angle thru hole headers have board locks to provide stability during mating and un-mating.

## What prevents the connectors from being disconnected unintentionally?

The connectors are snag resistant and have an integral, flush mounted, actuated latch that prevents inadvertent un-mating of the connectors.

#### Is your manufacturing process automated?

The SMT headers are manufactured in high temperature material for reflow processing and tape and reel packaged for high speed SMT processing.

#### What application tooling options are available?

Hand tools are available for product evaluation and/or low volume production using loose piece terminals. Applicators are available for mid to high volume production terminals on reel using bench top semi-automatic presses or fully automated lead makers.

## What mechanical and electrical testing has the connectors been subjected to?

The TE Product Specification 108-2391 provides a summary of the test groups, sequences and results that the product was subjected to during product qualification testing.

## What version of the header assemblies, vertical or right angle, are more widely accepted?

Right angle surface mount headers are more often chosen because they provide a more robust, low profile connection to the printed circuit board. Vertical headers are chosen if limited space is available to mate the plug connection in the final assembly

#### FOR MORE INFORMATION : te.com/lighting

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