

# Vertical SMT Plug



## Series 9159



AVX developed the 9159 Series of SMT connectors for co-planar PCB mating for the challenging Solid State Lighting (SSL) market. These connectors needed to be small, low in height, carry up to 5 Amps/contact and then function up to 125C for extended periods. This application has been very unique to the SSL market where PCB's are stacked end-to-end to create linear strip lighting in everything from office to transportation applications where products are exposed to harsh mechanical and environmental environments.

This vertical plug connector opens up the spectrum to include all commercial, industrial and transportation applications requiring perpendicular PCB mating and latching Wire-to-Board cabled sockets with an already proven connector system. With sizes from 2p-6p, these gold plated contacts mate with high spring force beryllium copper receptacle connectors.

### APPLICATIONS

- Allows assembly of PCB's at right angles
- Accepts 24-9159 IDC wired/cabled socket
- Reference application notes 201-01-123
- Reference Product Specification 201-01-119

### FEATURES AND BENEFITS

- Single sided SMT RoHS solder attachment;
- Centrally located pick & place cap for easy placement
- Gold plated BeCu contact system for high reliability in harsh environments
- Standard color is white with optional black for specific applications

### ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

### ENVIRONMENTAL

- Operating Temperature: -40°C to +125°C

### MECHANICAL

- Insulator Material: Nylon: UL94VO
- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

### HOW TO ORDER

<b>13</b>	<b>9159</b>	<b>XXX</b>	<b>1</b>	<b>01</b>	<b>X</b>	<b>16</b>																																	
Prefix Plug - Vertical Mount	Series	Number of Ways	2 Part PCB Strip Connector	Connector Pitch 01 = 3mm	Color/Approval	Plating Option																																	
		<table border="1"> <thead> <tr> <th>Code</th> <th>No of Ways</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>002</td> <td>2</td> <td>Page 19</td> </tr> <tr> <td>003</td> <td>3</td> <td>Page 20</td> </tr> <tr> <td>004</td> <td>4</td> <td>Page 21</td> </tr> <tr> <td>005</td> <td>5</td> <td>Page 22</td> </tr> <tr> <td>006</td> <td>6</td> <td>Page 23</td> </tr> </tbody> </table>	Code	No of Ways	Details	002	2	Page 19	003	3	Page 20	004	4	Page 21	005	5	Page 22	006	6	Page 23			<table border="1"> <thead> <tr> <th>Code</th> <th>Color</th> <th>Approval</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>White</td> <td>Standard</td> </tr> <tr> <td>9</td> <td>White</td> <td>UL Approved</td> </tr> </tbody> </table>	Code	Color	Approval	1	White	Standard	9	White	UL Approved	<table border="1"> <thead> <tr> <th>Code</th> <th>Contact</th> </tr> </thead> <tbody> <tr> <td rowspan="3">16</td> <td>Gold in Contact Area Tin on Solder Tail</td> </tr> <tr> <td><b>Bracket</b></td> </tr> <tr> <td>Tin All Over</td> </tr> </tbody> </table>	Code	Contact	16	Gold in Contact Area Tin on Solder Tail	<b>Bracket</b>	Tin All Over
Code	No of Ways	Details																																					
002	2	Page 19																																					
003	3	Page 20																																					
004	4	Page 21																																					
005	5	Page 22																																					
006	6	Page 23																																					
Code	Color	Approval																																					
1	White	Standard																																					
9	White	UL Approved																																					
Code	Contact																																						
16	Gold in Contact Area Tin on Solder Tail																																						
	<b>Bracket</b>																																						
	Tin All Over																																						

Certification: UL File #E90723

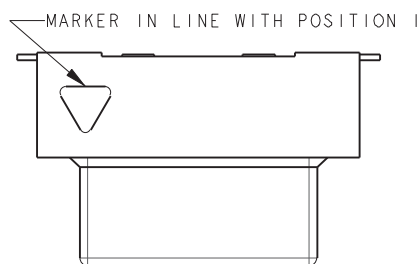


# Vertical SMT Plug



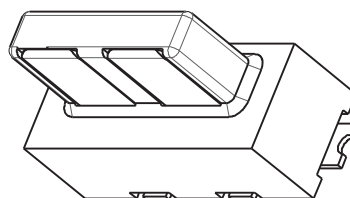
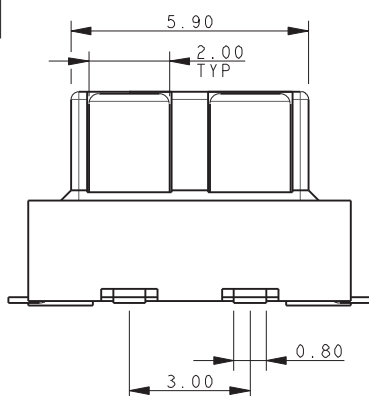
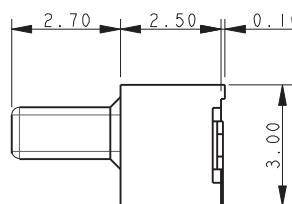
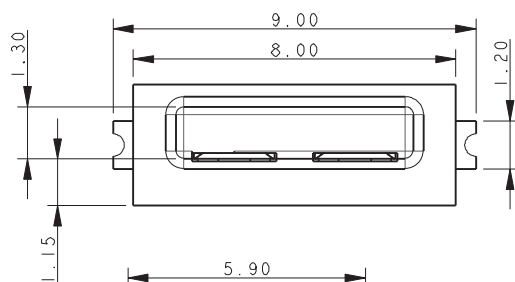
## Series 9159

### PLUG – VERTICAL MOUNT 2 WAY 2 PART PCB STRIP CONNECTOR

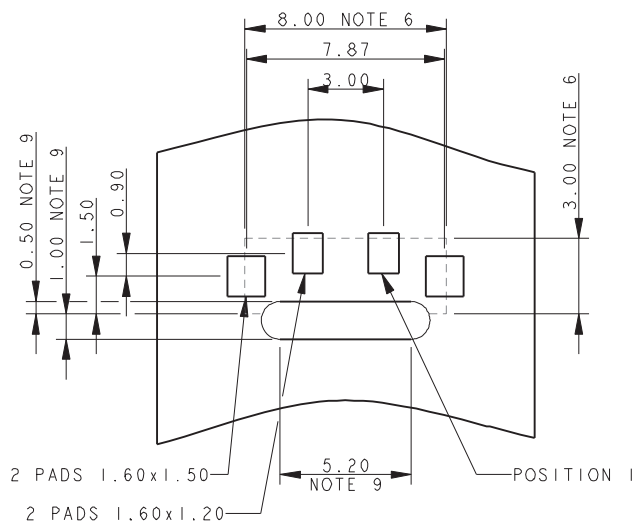


#### NOTES:

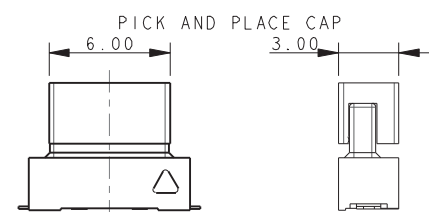
1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
2. GENERAL TOLERANCE  $\pm 0.20$  UNLESS TOLERANCED.
3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
5. BRACKETS; COPPER ALLOY, TIN PLATED.
6. OUTLINE OF CONNECTOR.
7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.



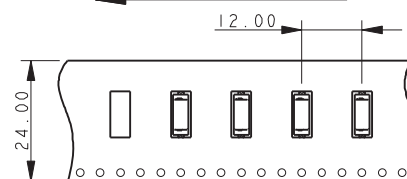
### 2 WAY PCB BOARD LAYOUT



### PACKING DETAILS



UNREELED DIRECTION



UNREELED DIRECTION

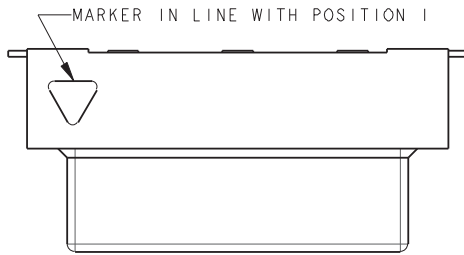


# Vertical SMT Plug



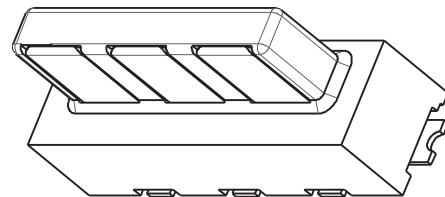
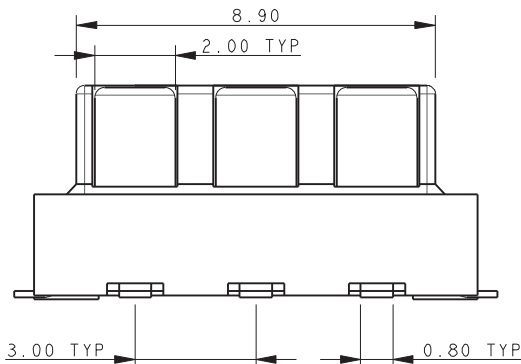
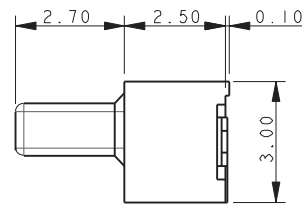
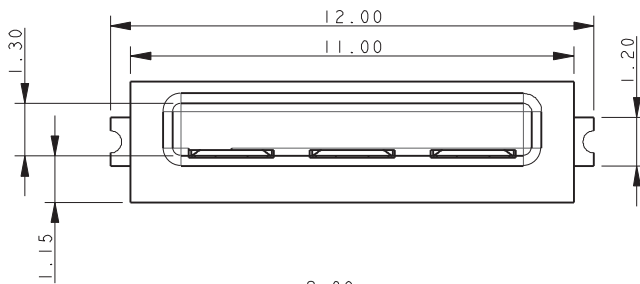
## Series 9159

### PLUG – VERTICAL MOUNT 3 WAY 2 PART PCB STRIP CONNECTOR



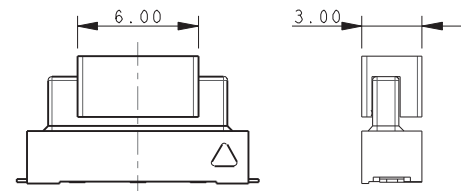
#### NOTES:

1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
2. GENERAL TOLERANCE  $\pm 0.20$  UNLESS TOLERANCED.
3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
5. BRACKETS: COPPER ALLOY, TIN PLATED.
6. OUTLINE OF CONNECTOR.
7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.

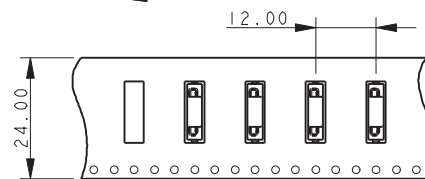


#### PACKING DETAILS

PICK AND PLACE CAP

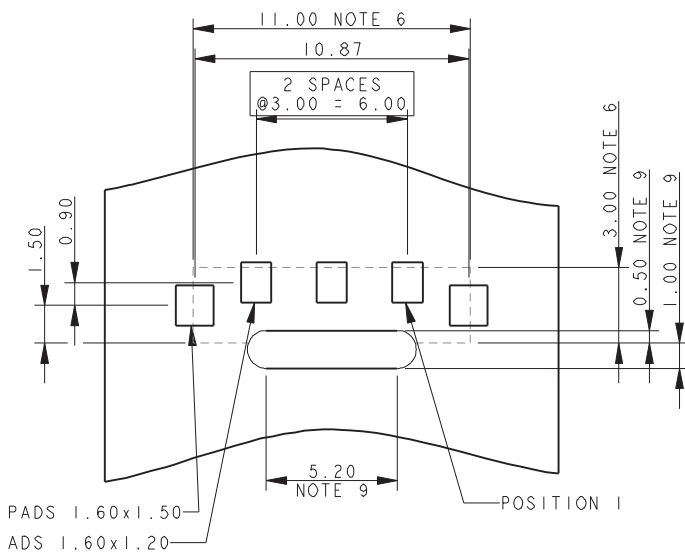


UNREEL DIRECTION



UNREEL DIRECTION

#### 3 WAY PCB BOARD LAYOUT

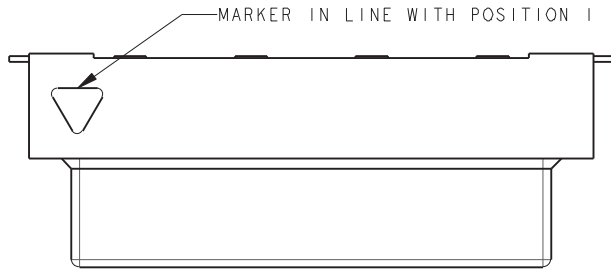


# Vertical SMT Plug



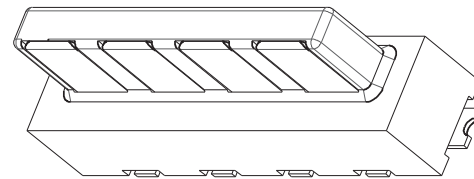
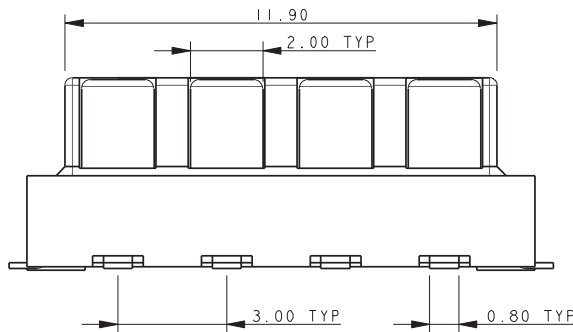
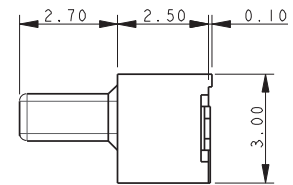
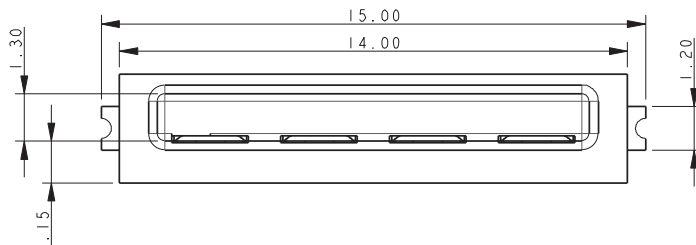
## Series 9159

### PLUG – VERTICAL MOUNT 4 WAY 2 PART PCB STRIP CONNECTOR

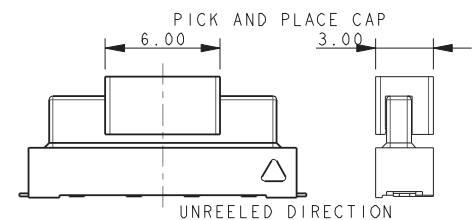


NOTES:

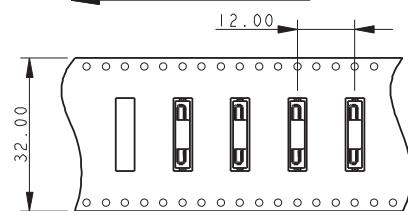
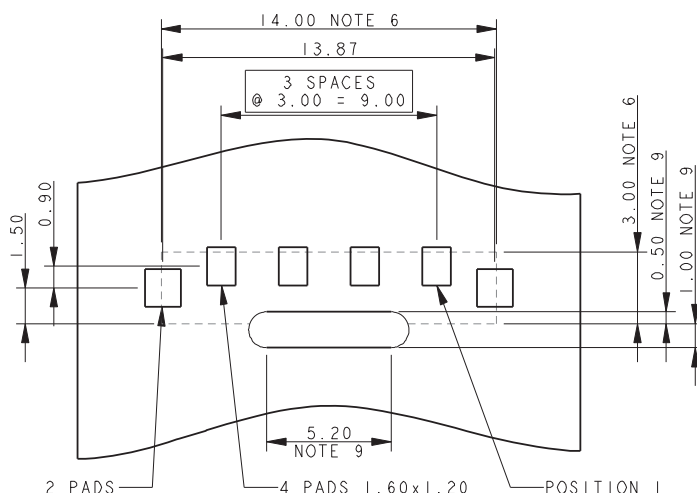
1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
2. GENERAL TOLERANCE  $\pm 0.20$  UNLESS TOLERANCED.
3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
5. BRACKETS; COPPER ALLOY, TIN PLATED.
6. OUTLINE OF CONNECTOR.
7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.



### PACKING DETAILS



### 4 WAY PCB BOARD LAYOUT



UNREELED DIRECTION

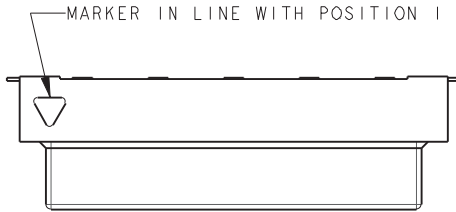


# Vertical SMT Plug



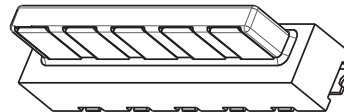
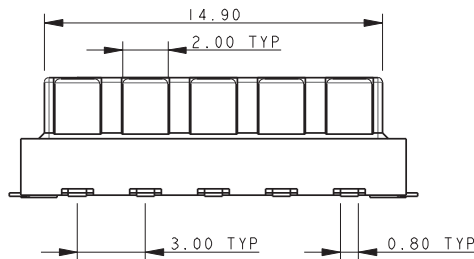
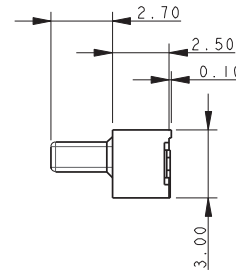
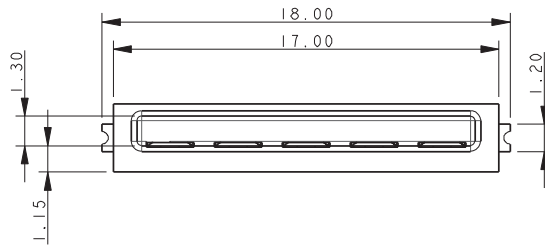
## Series 9159

### PLUG – VERTICAL MOUNT 5 WAY 2 PART PCB STRIP CONNECTOR

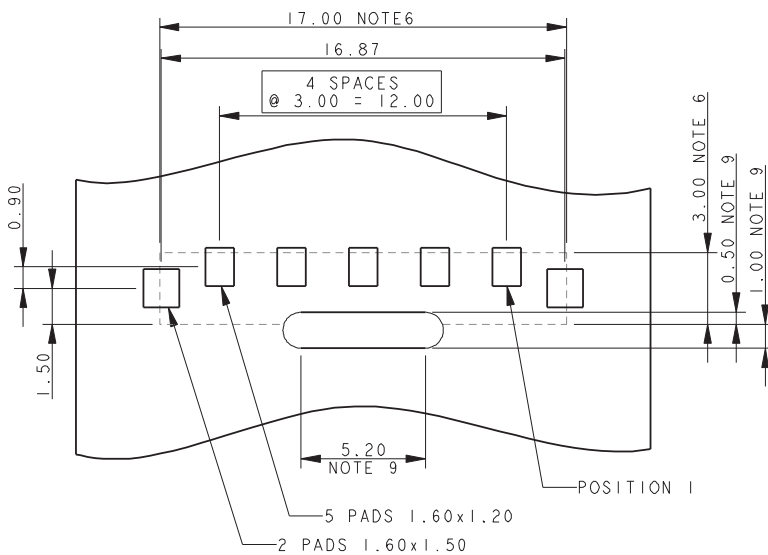


NOTES:

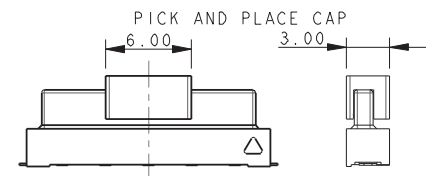
1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
2. GENERAL TOLERANCE  $\pm 0.20$  UNLESS TOLERANCED.
3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
5. BRACKETS: COPPER ALLOY, TIN PLATED.
6. OUTLINE OF CONNECTOR.
7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.



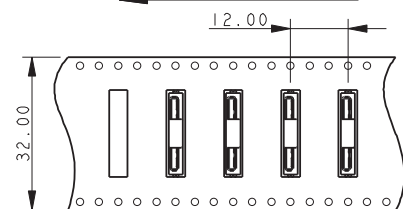
### 5 WAY PCB BOARD LAYOUT



### PACKING DETAILS



UNREELED DIRECTION



UNREELED DIRECTION

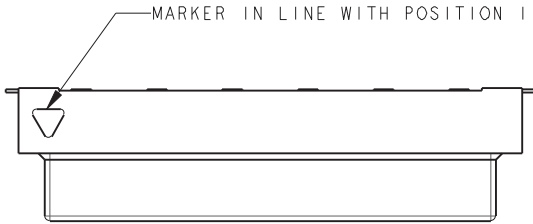


# Vertical SMT Plug



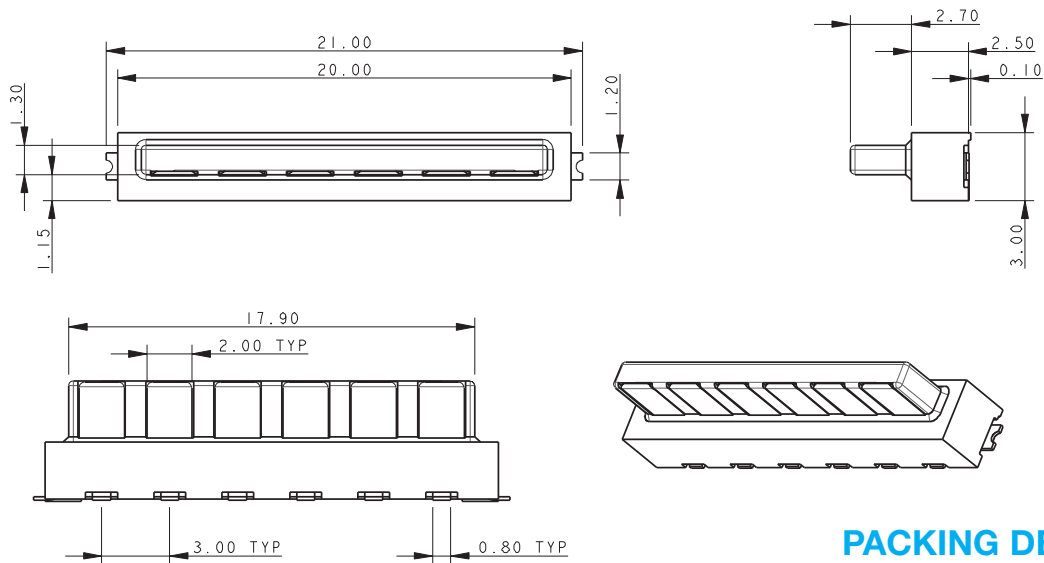
## Series 9159

### PLUG – VERTICAL MOUNT 6 WAY 2 PART PCB STRIP CONNECTOR

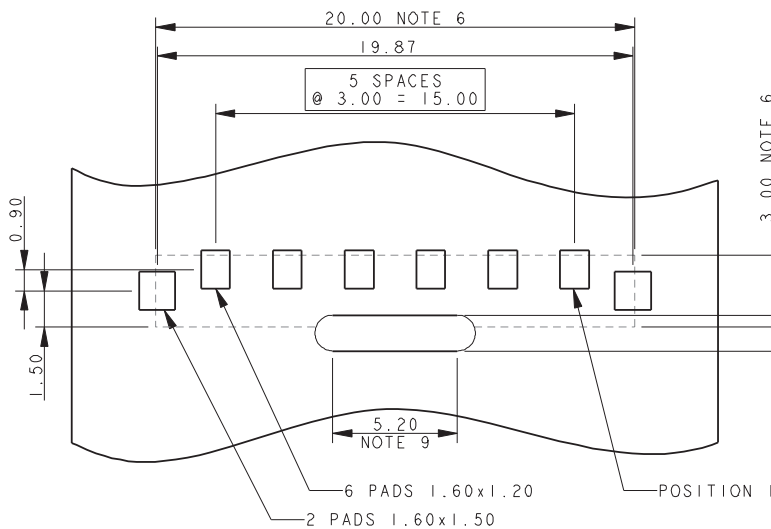


#### NOTES:

1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
2. GENERAL TOLERANCE  $\pm 0.20$  UNLESS TOLERANCED.
3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
5. BRACKETS; COPPER ALLOY, TIN PLATED.
6. OUTLINE OF CONNECTOR.
7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.



#### 6 WAY PCB BOARD LAYOUT



#### PACKING DETAILS

