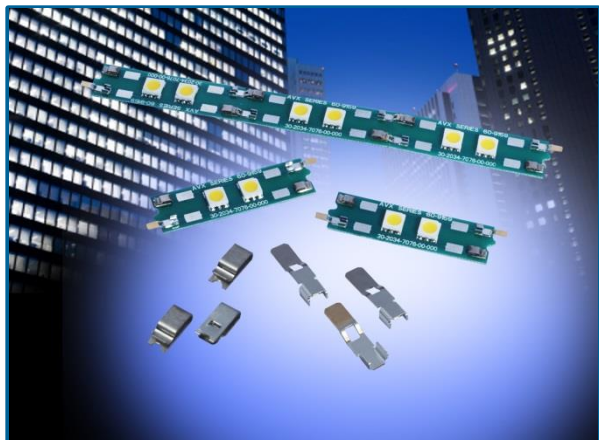


Coplanar BTB Contact System



DRAFT

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Basic Overview

Dissecting linear LED lighting from a connector standpoint looks very simple from far away, but up close there is no magical solution. Even though there have been new connectors developed in recent years specifically for this application, the specific requirements in challenging new designs continue to push for something better, different and more cost competitive. AVX has been one of the companies developing new connector systems for this specific application. The 2-Piece 9159 series offers the smallest profile while still supporting full 5 Amp capability. The 1-Piece version offers the best cost advantage for a connectorized solution, yet has limitations in LED pitch densities.

AVX's latest approach is to not even have a connector! LED's run down the center of the board looking to minimize pitch densities to maximize light output. Connectors interrupt this requirement at each Board-to-Board interface. By design and construction, providing a single contact connector is not economical. However, removing the cost of the connector without removing the functionality provides both a technical and cost effective solution. By removing the insulator and allowing contacts to be placed individually, the PCB can be designed with the LED's in the center of the PCB and the contacts on the outer edges. This optimizes the design for functionality and assembly at the best cost possible. More specifically, the contacts are packaged in T&R for automatic placement, absorb significant x and y assembly tolerances and provide a reliable gold-to-gold active contact interface. Application notes are available to outline all of the contact configurations to support both BTB and WTB applications.

Features and Benefits

- Gold plated horizontal contact system maximizes lateral PCB alignment and mating tolerances with a proven 2-pc connector solution
- Contact height has been minimized to 1.2mm above the PCB to prevent any shadowing effect
- Contacts can be individually spaced to support any voltage rating with a full 5 Amp current rating
- Individual contacts can support BTB and WTB applications

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Unique Features

Electrical

- Current Rating: 5.0 Amps
- Voltage Rating: Based on Placement Distance

Environmental

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

Mechanical

- Contact Material: Copper Alloy
- Plug Plating: Gold in mating area, tin on tails
- Socket Contact: Gold all over
- Durability: 5 Cycles

Applications

- Linear LED strip lighting
- Commercial/Industrial co-planar or extended card applications
- Reference Product Specification 201-01-149

How to Order

70	9159	001	4XX	006
Prefix	Series	# of Positions 001 = 1p	Contact Description 401 = Plug 402 = Socket	Plating Option 006 = Gold in Contact Areas

FAQ's

Q: How critical is the contact placement?

A: As the LED boards are placed on an extrusion, this provides a flat surface. The socket contact was designed horizontally to allow for 1mm side to side tolerance and the plug was extended to provide a 1mm mating tolerance.

Q: Why is the connector gold plated?

A: AVX continues to use good materials like BeCu and gold plating to assure maximum contact integrity for rugged lighting environments.

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