

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

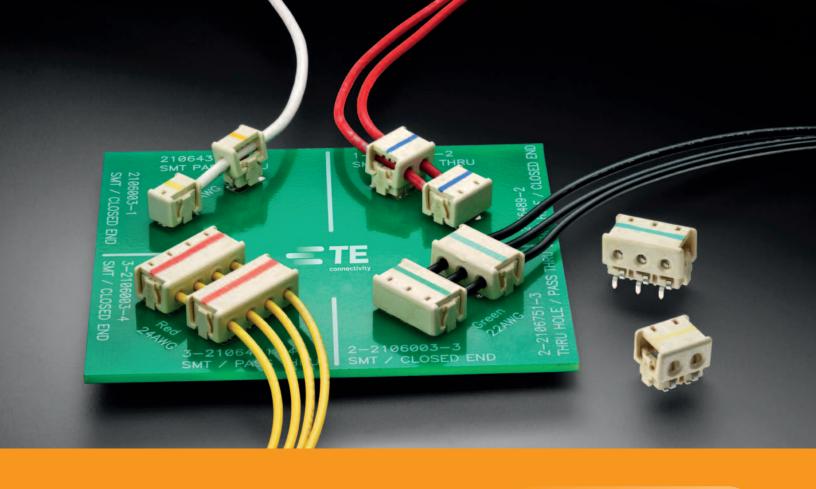
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









## **IDC SSL Connector**

The IDC SSL connector series are insulation displacement (IDC) SMT and thru-hole wire-to-board connectors designed for quick, tool-less termination of discrete wires onto LED printed circuit boards. These connectors use TE Connectivity (TE) proven insulation displacement technology to provide a robust, stable electrical and mechanical power connection to single or multiple printed circuit boards in solid state lighting and non-lighting applications.

#### **KEY FEATURES**

- Available in 1, 2, 3 and 4 positions
- SMT and thru-hole
- Closed end and feed thru
- 18-24 AWG stranded and solid wire
- Dual IDC slots for redundancy
- Wire placement "viewing" window
- Wire gauge color coded
- Tool-less termination

#### **APPLICATIONS**

- LED lighting controls
- General illumination LED fixtures
- Connecting strings of pcb LED light modules
- Non-lighting wire-to-board applications



## **IDC SSL Connector**



#### **LIGHTING APPLICATIONS**





Channel/Sign

**Emergency** 





Digital Signage

Architectural





Street & Stadium

Indoor





Office

Commercial Refrigeration

#### **ELECTRICAL**

Operating Current: 8 AMPS (18 AWG only)

Maximum Operating Voltage: 400VAC / 400VDC

Dielectric Withstanding Voltage: 1500VAC

#### **MECHANICAL**

Operating Temperature: -40°C to 105°C

Wire Retention: 5 lbs. minimum

#### **MATERIALS**

Housings: 94 VO rated high temperature resistant thermoplastic

Contacts: Tin over nickel plated copper alloy

#### STANDARDS AND SPECIFICATIONS

UL 1977

Product Specification: 108-2404

Application Specification: 114-13266

Tape and Reel Packaging per EIA-481



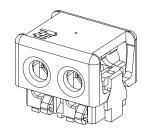
### **PRODUCT DIMENSIONS**

#### **Closed End IDC SSL Connectors (SMT)**

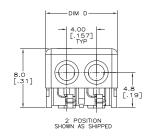
PART NUMBER	POSITION	WIRE SIZE	DIM "D"	COLOR
2106003-1	1	18 AWG	5.70 [.224]	YELLOW
2106003-2	2	18 AWG	9.70 [.382]	YELLOW
2106003-3	3	18 AWG	13.70 [.539]	YELLOW
2106003-4	4	18 AWG	17.70 [.697]	YELLOW
1-2106003-1	1	20 AWG	5.70 [.224]	BLUE
1-2106003-2	2	20 AWG	9.70 [.382]	BLUE
1-2106003-3	3	20 AWG	13.70 [.539]	BLUE
1-2106003-4	4	20 AWG	17.70 [.697]	BLUE
2-2106003-1	1	22 AWG	5.70 [.224]	GREEN
2-2106003-2	2	22 AWG	9.70 [.382]	GREEN
2-2106003-3	3	22 AWG	13.70 [.539]	GREEN
2-2106003-4	4	22 AWG	17.70 [.697]	GREEN
3-2106003-1	1	24 AWG	5.70 [.224]	RED
3-2106003-2	2	24 AWG	9.70 [.382]	RED
3-2106003-3	3	24 AWG	13.70 [.539]	RED
3-2106003-4	4	24 AWG	17.70 [.697]	RED

#### **Closed End**

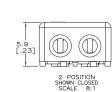
#### **Feed Thru**



#### **Product Dimensions**



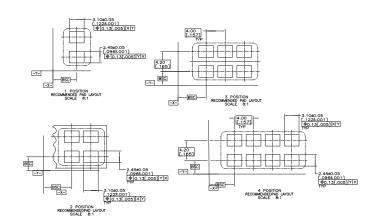




#### Feed Thru IDC SSL Connectors (SMT)

PART NUMBER	POSITION	WIRE SIZE	DIM "D"	COLOR
2106431-1	1	18 AWG	5.70 [.224]	YELLOW
2106431-2	2	18 AWG	9.70 [.382]	YELLOW
2106431-3	3	18 AWG	13.70 [.539]	YELLOW
2106431-4	4	18 AWG	17.70 [.697]	YELLOW
1-2106431-1	1	20 AWG	5.70 [.224]	BLUE
1-2106431-2	2	20 AWG	9.70 [.382]	BLUE
1-2106431-3	3	20 AWG	13.70 [.539]	BLUE
1-2106431-4	4	20 AWG	17.70 [.697]	BLUE
2-2106431-1	1	22 AWG	5.70 [.224]	GREEN
2-2106431-2	2	22 AWG	9.70 [.382]	GREEN
2-2106431-3	3	22 AWG	13.70 [.539]	GREEN
2-2106431-4	4	22 AWG	17.70 [.697]	GREEN
3-2106431-1	1	24 AWG	5.70 [.224]	RED
3-2106431-2	2	24 AWG	9.70 [.382]	RED
3-2106431-3	3	24 AWG	13.70 [.539]	RED
3-2106431-4	4	24 AWG	17.70 [.697]	RED

#### **Recommended PCB Layout**



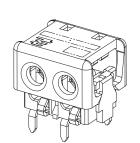


#### PRODUCT DIMENSIONS cont.

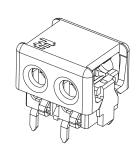
#### **Closed End IDC SSL Connectors (Thru-Hole)**

PART NUMBER	POSITION	WIRE SIZE	DIM "D"	COLOR
2106489-1	1	18 AWG	5.70 [.224]	YELLOW
2106489-2	2	18 AWG	9.70 [.382]	YELLOW
2106489-3	3	18 AWG	13.70 [.539]	YELLOW
2106489-4	4	18 AWG	17.70 [.697]	YELLOW
1-2106489-1	1	20 AWG	5.70 [.224]	BLUE
1-2106489-2	2	20 AWG	9.70 [.382]	BLUE
1-2106489-3	3	20 AWG	13.70 [.539]	BLUE
1-2106489-4	4	20 AWG	17.70 [.697]	BLUE
2-2106489-1	1	22 AWG	5.70 [.224]	GREEN
2-2106489-2	2	22 AWG	9.70 [.382]	GREEN
2-2106489-3	3	22 AWG	13.70 [.539]	GREEN
2-2106489-4	4	22 AWG	17.70 [.697]	GREEN
3-2106489-1	1	24 AWG	5.70 [.224]	RED
3-2106489-2	2	24 AWG	9.70 [.382]	RED
3-2106489-3	3	24 AWG	13.70 [.539]	RED
3-2106489-4	4	24 AWG	17.70 [.697]	RED

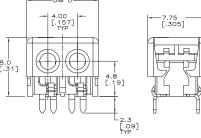
#### **Closed End**

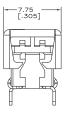


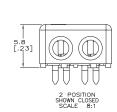
#### **Feed Thru**



**Product Dimensions** 



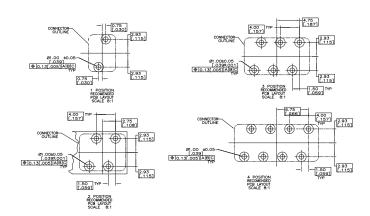




#### Feed Thru IDC SSL Connectors (Thru-Hole)

PART NUMBER	POSITION	WIRE SIZE	DIM "D"	COLOR
2106751-1	1	18 AWG	5.70 [.224]	YELLOW
2106751-2	2	18 AWG	9.70 [.382]	YELLOW
2106751-3	3	18 AWG	13.70 [.539]	YELLOW
2106751-4	4	18 AWG	17.70 [.697]	YELLOW
1-2106751-1	1	20 AWG	5.70 [.224]	BLUE
1-2106751-2	2	20 AWG	9.70 [.382]	BLUE
1-2106751-3	3	20 AWG	13.70 [.539]	BLUE
1-2106751-4	4	20 AWG	17.70 [.697]	BLUE
2-2106751-1	1	22 AWG	5.70 [.224]	GREEN
2-2106751-2	2	22 AWG	9.70 [.382]	GREEN
2-2106751-3	3	22 AWG	13.70 [.539]	GREEN
2-2106751-4	4	22 AWG	17.70 [.697]	GREEN
3-2106751-1	1	24 AWG	5.70 [.224]	RED
3-2106751-2	2	24 AWG	9.70 [.382]	RED
3-2106751-3	3	24 AWG	13.70 [.539]	RED
3-2106751-4	4	24 AWG	17.70 [.697]	RED

#### **Recommended PCB Layout**



### **TERMINATION SEQUENCE**

## As shipped

(staged configurations)

# Insert unstripped wire

(solid or stranded)

## Fully inserted wire

(wire retained and visible through "viewing" window)

## Tool-less terminated wire

(closed configuration)







#### Questions to ask at design in

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

The connectors accept 18-24 AWG stranded and solid wire (separate part numbers per wire size and connector type) with varying maximum insulation outside diameters per wire gauge.

#### What should be the design criteria for choosing either the closed end or feed thru versions of the connectors?

Closed end connectors should be chosen when attaching power leads to a single printed circuit board. However, in applications that require bringing power to multiple printed circuit boards, feed thru connectors provide a more flexible solution.

#### Is your manufacturing process automated?

The connectors are manufactured in high temperature plastic material and tape and reel packaged for high speed SMT reflow or thru-hole wave solder processing.

#### What application tooling options are available?

The pre-assembled connector cover serves two purposes: One, it positions and retains the wire in the pre-stage position. Two, it serves as a wire stuffer for tool-less termination while providing strain relief to the terminated wire. Customers should provide simple "flat rock" tooling to fully seat the cover to complete the termination process.

## What mechanical and electrical testing has the connectors been subjected to that validates their long term performance?

The TE Product Specification 108-2404 provides a summary of the test groups, sequences and results that the product was subjected in to during product qualification testing.

## What applications dictate the use of either surface mount or thru hole connectors?

The SMT connectors will be used in the majority of the LED applications on aluminum clad printed circuit boards. However, for non-lighting applications that require bringing wire leads to FR4 printed circuit boards mounted with thru hole components, customers will find the thru-hole connectors more advantageous.

## What special retention mechanisms are available to help ensure PCB stability?

The Thru-hole connectors have two off-set legs per terminal and the SMT connectors have solder tabs to help ensure printed circuit board stability.

FOR MORE INFORMATION: te.com/lighting

#### **TE Technical Support Center**

Interner: USA: +1 (800) 522-6752 +1 (905) 475-6222 Canada: Mexico +52 (0) 55-1106-0800 Latin/S. America: +54 (0) 11-4733-2200 Germany: +49 (0) 6251-133-1999 UK: +44 (0) 800-267666 +33 (0) 1-3420-8686 France: Netherlands: +31 (0) 73-6246-999 China: +86 (0) 400-820-6015

Part numbers in this brochure are RoHS Compliant\*, unless marked otherwise.

\*as defined www.te.com/leadfree

#### te.com

© 2011 Tyco Electronics Corporation, a TE Connectivity Ltd. Company. All Rights Reserved. 5-1773455-1 CIS WR 10/2011

TE Connectivity and TE connectivity (logo) are trademarks. Other logos, product and/or company names might be trademarks of their respective owners.

