



#### **ELECTRONICS**

### CONNECTORS FOR FLEXIBLE CIRCUITRY FFC/FPC/CIC

#### FCI: SETTING THE STANDARD FOR CONNECTORS

#### With operations in 30 countries, FCI is a leading manufacturer of connectors. Our 13,000 employees are committed to providing customers with high-quality, innovative products for a wide range of consumer and industrial applications.

#### INTRODUCTION

You can count on FCI, as a leader in flex circuit connectors, for the most innovative and complete range of products in the industry. FCI offers products in ZIF (zero insertion force) and non-ZIF, upper and down contact options, vertical and right angle orientations, surface mount and through hole terminations in contact spacing options all the way down to 0.3mm with finer pitch products on their way. Additional features, such as optional cable locks and additional mounting devices, insure that FCI has a solution for almost any application, no matter how demanding.

As your connection to innovation, FCI continues to bring you unique solutions that not only give you the footprint you need but help to maximize the quality level of your application. Many of our flex circuit connectors offer ZIF with prehold, which applies a small retention force on the cable to hold it in place until the actuator is locked. FCI introduced the first flex connector with a back side flip actuator that allows the user to insert the flex cable and lock the actuator with one hand. FCI improved that feature on many products by modifying the connector housing to provide visual confirmation that the flex cable is mated properly. FCI was also the company that first brought you the option of an FFC/FPC connector under 1mm in height. These features combine to insure your application has the highest quality possible when it leaves your site.

0.3MM PITCH	
SFY Series SFYL Series YLL-D Series YLL-U Series	5 5 6 6
0.4MM PITCH	
GLH Series	6
0.5MM PITCH	
OPU Series SFVA Series SFVE Series SFVL Series SFV-R Series SFV-S Series VHC Series VLH Series VLK Series VLL Series VLP Series	7 7 8 9 9 10 10 11 11 11
0.8MM PITCH	
SFR Series	12
1.0MM PITCH	
HFW Series HLW Series SFW Series SLW Series	13 13 14 15
1.25MM PITCH	
SLD-R Series SLD-S Series SLP-R Series SLP-S Series	16 16 17 17
2.54MM PITCH	
Clincher Duflex	18 18

#### CONNECTOR SELECTION MATRIX

Pitch	Series	Part Number	Height (mm)	Contact Location	ZIF / Non-ZIF	Positions Available
0.3mm	SFY	62789	2.0	Bottom	Non-ZIF (FF)	45,51,57,67
	SFYL-D	10013057	1.2	Bottom	Non-ZIF (FF)	17,21,25,29,31,35,45
	SFYL-U	10017251	1.2	Тор	Non-ZIF (FF)	11,15,19,23,25,27,31,39,
						41,45,51
	YLL-D	10061122	0.9	Bottom	ZIF (FF)	13,15,17,21,23,25,29,33,35,
						39,41,43,45
	YLL-U	10064555	0.9	Тор	Non-ZIF (FF)	15,21,23,25,27,31,33,35,37,
						39,41
D.4mm	GLH	10051806	1.2	Bottom	ZIF (FF)	57,60
0.5mm	OPU-D	62684-xx1	2.0	Bottom	ZIF (SL)	40,45,50,55,57
	OPU-U	62684-xx2	2.0	Тор	ZIF (SL)	32,34,36,40,45,50,55,57
	SFVA	10014265	2.0	Dual Contact	Non-ZIF (BF)	60
	SFVE	10054365	1.2	Тор	ZIF (FF)	18,20,24,28,30
	SFVL-D	59453-xx1	0.9	Bottom	ZIF (BF)	4,5,6,7,8,9,12,13
	SFVL-U	59453-xx2	0.9	Тор	ZIF (BF)	4,5,6,8
	SFV-R	SFVxxR	1.8	Top, Bottom	ZIF (SL)	4-35
	SFV-S	62674	4.1	N/A	ZIF (SL)	8,12,16,20,21,22,23,24,25,26
						30,32,33
	VHC	10085901	2.0	Bottom	ZIF (FF)	60
	VLH	10042867	1.3	Bottom	ZIF (BF)	40,45,50
	VLK	10076529	1.3	Bottom	ZIF (FF)	35,45,60
	VLL	10051922	1.2	Bottom	ZIF (BF)	8,10,11,12,14,15,16,18,
						20,22,24,26,28,30
	VLP	10062827	0.7	Bottom	ZIF (BF)	4,8,10
D.8mm	SFR	SFRxxR	2.5	Bottom	ZIF (SL)	4,6,8,10,12,14,16,18,
						20,22,24,26,28,30
1.0mm	HFW-R	HFWxxR	1.9	Top, Bottom	Non-ZIF	4-30
	HFW-S	HFWxxS	5.3	N/A	Non-ZIF	4-30,32
	HLW-R	HLWxxR	3.9	Тор	Non-ZIF	4-32
	HLW-S	HLWxxS	5.9	N/A	Non-ZIF	4-32
	SFW-R	SFWxxR	2.7	Top, Bottom	ZIF (SL)	4-30
	SFW-S	SFWxxS	5.3	N/A	ZIF (SL)	4,5,6,8,10,11,12,14,15,16,17,
						18,20,22,23,24,26,28,30
	SLW-R	SLWxxR	4.0	Bottom	ZIF (SL)	4-30
	SLW-S	SLWxxS	5.5	N/A	ZIF (SL)	4-30
1.25mm	SLD-R	SLDxxR	7.0	Bottom	ZIF (SL)	4-20,22,24,25,26-40
	SLD-S	SLDxxS	8.0	N/A	ZIF (SL)	4-20,22-37,39,40
	SLP-R	SLPxxR	5.0	Тор	ZIF (SL)	4-10,12-16,20
	SLP-S	SLPxxS	5.5	N/A	ZIF (SL)	4-16,20
2.54mm	Clincher	65801		d receptacle		2-32
	Clincher	67516	Receptacle with keying latch			2-16
	Clincher	10027313	Receptacle with keying feature			6-34
	Clincher	10022753		cle with keying & a	6-34	
	Clincher	66226	Standard	d plug	3-14	

xx - Number of Contacts

ZIF (SL): Slider action ZIF/Non-ZIF (FF): Front side flip ZIF/Non-ZIF (BF): Back side flip

#### **SFY SERIES - 62789**



- Crientation: Right Angle
- Cable termination: Non-ZIF (LIF)
- Cable type: FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 2.0mm
- Lead free with gold plating
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- Economical fine pitch flex connector
- Application: DSC / DVC, brown products, wireless customer premises equipment and mobile device

#### SFYL SERIES - 10013057, 10017251



- Crientation: Right Angle
- Cable termination: Non-ZIF (LIF)
- Cable type: FPC
- Board termination: Surface mount
- Contact location: Top and bottom options
- Height: 1.2mm
- Lead free with gold plating
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- Very low profile for maximum space savings

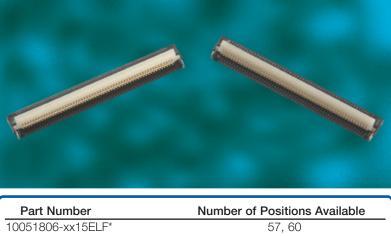
Application: Mobile phone, brown products, wireless customer premises equipment and mobile device

\*xx - Number of Contacts

For all products featured in this catalogue, you can find all the product details like customer drawings, product specifications etc on our dedicated Flex Connector website.

#### YLL-D SERIES - 10061122





- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 1.2mm
- Lead free with gold plating
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- Very low profile for maximum space savings
- Application: Car multimedia device, PDA, Digital still camera/ Digital video camera and CD/ DVD drive

\*xx - Number of Contacts

#### **OPU SERIES - 62684**



Part Number Top Side Contact 62684-xx2100ALF\* 62684-xx21N0ALF\*

Bottom Side Contact 62684-xx1100ALF\* 62684-xx11N0ALF\*

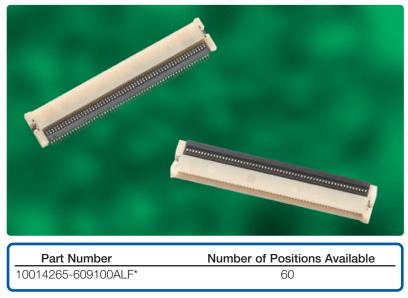
#### Number of Positions Available

32,34,36,40,45,50 55.57

> 40,45,50 55,57

- Orientation: Right Angle
- Cable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Top and bottom options
- Height: 2.0mm
- Lead free with gold plating
- Optional Halogen free type
- Accommodated cable thickness: 0.3mm
- Economical higher pin count flex connector solution
- Traditional sliding actuator secures cable
- Application: Brown products, Medical, Industrial and Instrumentation, printer, car multi media devices and mobile device

#### SFVA SERIES - 10014265



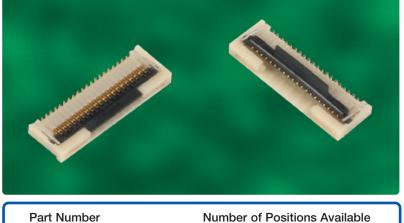
- Orientation: Right Angle
- Cable termination: Non-ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Dual contact
- Height: 2.0mm
- Lead free with gold plating
- Accommodated cable thickness: 0.3mm
- Very compact design saves space on the printed circuit board
- Back side flip actuator design makes cable insertion easy
- Application: Car multimedia devices, brown products, Medical, Industrial and Instrumentation

\*xx - Number of Contacts

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## 0.5mm Pitch

#### SFVE SERIES - 10054365

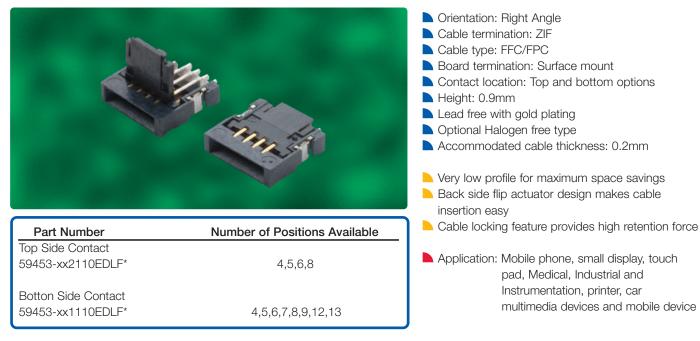


Part Number 10054365-xx2110ELF\*

Number of Positions Available 18,20,24,28,30

- Crientation: Right Angle
- Cable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Top
- Height: 1.2mm
- Lead free with gold plating
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- Application: Car multimedia devices, brown products, Medical, Industrial and Instrumentation

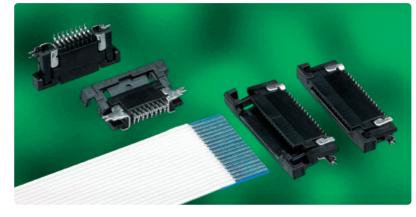
#### SFVL SERIES - 59453



\*xx - Number of Contacts

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#### SFV-R SERIES



Crientation: Right Angle

- Cable termination: ZIF with prehold
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Top and bottom options
- Height: 1.8mm
- Lead free with gold plating
- Optional cable lock
- Versatile, economical connector system with uses in many applications
- Traditional sliding actuator secures cable
- Application: Mobile phone, brown products, Medical, Industrial and Instrumentation, printer, car multimedia devices and mobile device

Part Number	Number of Positions Available
SFVxxR-1STBE1LF*	4-35
Contact Location/Cable Type	Packaging
1-FFC/FPC bottom side contact	E1-tape and reel 2000 pieces
2-FFC/FPC top side contact	
3-FPC bottom side with cable lock	
4-FPC top side with cable lock	

\* A: Selective gold plating B: Full gold plating

#### **SFV-S SERIES - 62674**

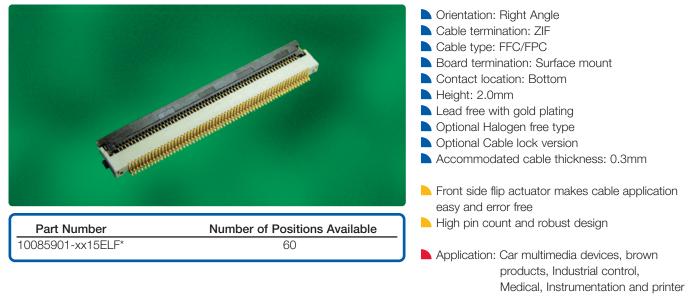


- Orientation: Vertical
  Cable termination: ZIF
  Cable type: FFC/FPC
  Board termination: Surface mount
  Contact location: Vertical
  Height: 4.1mm
  Lead free with gold plating
- Economical vertical ZIF flex cable connector
   Traditional sliding actuator secures cable
- Application: Brown products, Medical, Industrial and Instrumentation, printer, car multimedia devices and mobile device

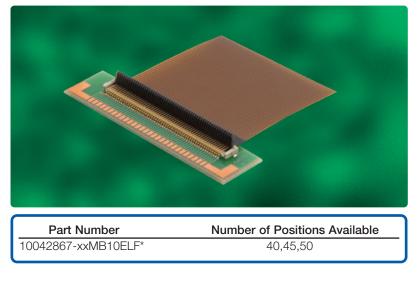
\*xx - Number of Contacts

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#### VHC SERIES - 10085901



#### **VLH SERIES - 10042867**

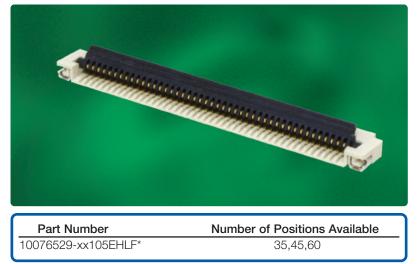


- Orientation: Right Angle
   Cable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 1.3mm
- Lead free with gold plating
- Accommodated cable thickness: 0.3mm
- Back side flip type actuator makes cable application easy
- Innovative housing design provides visual confirmation that flex cable is properly inserted
- Higher retention design insures cable stays in place
- Application: Mobile phone, brown products, Medical, Industrial and Instrumentation, printer, car multimedia devices and mobile device

\*xx - Number of Contacts



#### **VLK SERIES - 10076529**



- Orientation: Right Angle
- Cable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 1.3mm
- Lead free with gold plating
- Halogen free
- Accommodated cable thickness: 0.3mm
- Front side flip actuator makes cable insertion easy and error free
- High pin count and good operability
- Higher retention design incures cable stays in place
- Application: Brown products, Medical, Industrial and Instrumentation, personal computer, car multimedia system and mobile device

#### VLL SERIES - 10051922 (0.5MM PITCH)

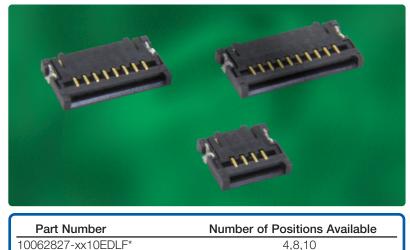


- Orientation: Right Angle
- Cable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 1.2mm
- Lead free with gold plating
- Accommodated cable thickness: 0.3mm
- Back side flip type actuator makes cable application easy
- Innovative housing design provides visual confirmation that flex cable is properly inserted
- Higher retention design insures cable stays in place
- Application: Mobile phone, brown products, Medical, Industrial and Instrumentation, printer, car multimedia devices and mobile device

\*xx - Number of Contacts

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#### **VLP SERIES - 10062827**



Crientation: Right Angle

- Cable termination: ZIF
- Cable type: FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 0.7mm
- Lead free with gold plating
- Halogen free
- Accommodated cable thickness: 0.12mm
- Back side flip design makes cable insertion easy and error free
- Very low profile for maximum space savings
- Cable locking feature provides high retention force
- Application: Mobile phone, small display, touch pad, Medical, Industrial and Instrumentation, personal computer, car multimedia device and mobile device

# 0.8mm Pitch 0.5mm Pitch

#### **SFR SERIES (0.8MM PITCH)**

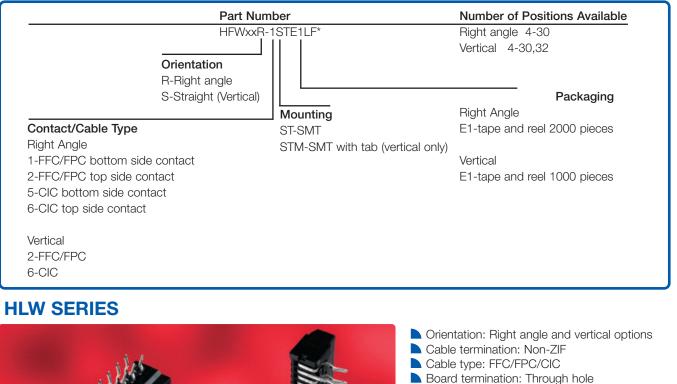


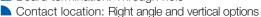
\*xx - Number of Contacts

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#### **HFW SERIES**





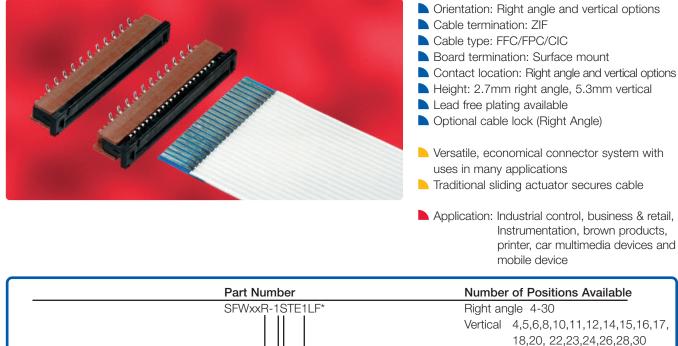


- Height: 3.9mm right angle, 5.9mm vertical
- Lead free plating available
- Through hole alternative
- Economical connector system
- Application: Industrial control, business & retail, Instrumentation, brown products, printer, car multimedia devices and mobile device

Part Number	Number of Positions Available
HLWxxR-2C7LF*	4-32
Orientation	Cable Type
R-Right angle	2-FFC/FPC
S-Straight (Vertical)	6-CIC

\*xx - Number of Contacts

#### **SFW SERIES**



Vertical 4,5,6,8,10,11,12,14,15,16,17, Orientation R-right angle S-Straight (Vertical) Contact Location/Cable Type Packaging **Right Angle** Mounting 1-FFC/FPC bottom side contact **Right Angle** ST-SMT E1-tape and reel 2000 pieces 2-FFC/FPC top side contact STM-SMT with tab (vertical only) 3-FPC bottom side with cable lock 4-FPC top side with cable lock Vertical 5-CIC bottom side contact E1-tape and reel 1000 pieces 6-CIC top side contact 7-CIC bottom side with cable lock 8-CIC top side with cable lock Vertical 2-FFC/FPC 6-CIC

\*xx - Number of Contacts

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#### **SLW SERIES**



- Crientation: Right angle and vertical options
- Cable termination: ZIF
- Cable type: FFC/FPC/CIC
- Board termination: Through hole
- Contact location: Right angle and vertical options
- Height: 4.0mm right angle, 5.5mm vertical
- Lead free plating available
- Versatile, economical connector system with uses in many applications
- Application: Industrial control, business & retail, Instrumentation, brown products, printer, car multimedia devices and mobile device

Part Number	Number of Positions Availa
SLWxxR-1C7LF*	* 4-30
Orientation	Cable Type
R-Right angle	1-FFC/FPC
S-Straight (Vertical)	5-CIC

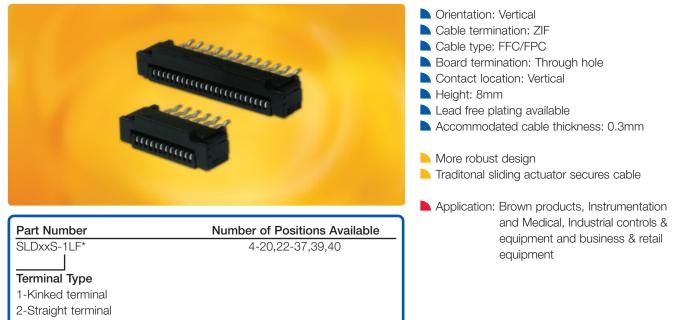
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## **1.0mm Pitch**

#### **SLD-R SERIES**



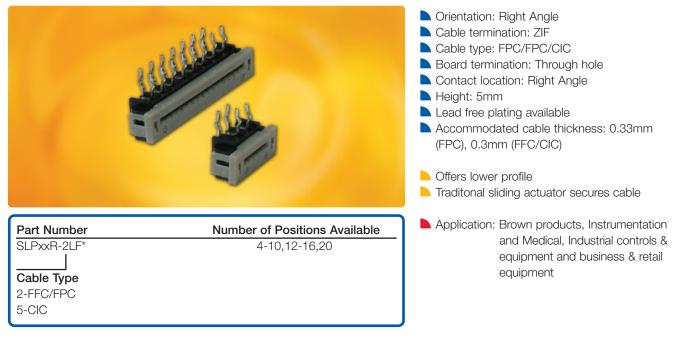
#### **SLD-S SERIES**



\*xx - Number of Contacts



#### **SLP-R SERIES**



#### **SLP-S SERIES**



\*xx - Number of Contacts

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#### **CLINCHER**



Part Num	nber	Number of Positions Available			
5 digit pa 65801 = receptade assembly	rt number	Receptacle assembly 2-32,34 Pin assembly 2-32			
66226 = pin assembly	$0 = s^{2}$	tandard version			
	1 = for thin film circuits				
	(0.15mm MAX. thickness)				
	Female receptacle only				

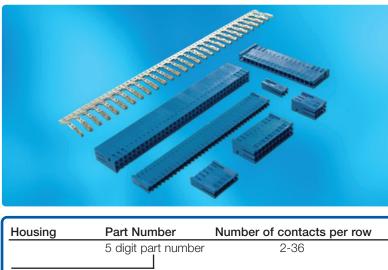
#### Cable termination: Mates with 0.62mm square or round pins

- Cable type: FFC/FPC/CIC
- Height: 2.54mm
- Lead free with gold or tin plating
- Accommodated cable thickness: 0.305+/-0.025mm (0.012+/-0.0001inch)
- Pre-assembled connectors reduce overall applied costs and ensure full contact protection
- Snap-shut allows a single connection operation and therefore increases assembly speed
- Lead free and RoHS complaint
- Application: Industrial control & equipment and business & retail equipment

- Cable termination: Mates with 0.62mm square or round pins as short as 5mm
- Cable type: FFC/FPC
- Height of housing: 3.8mm for single row and 6.34mm for double row
- Gold or tin plating
- Accommodated cable thickness: 0.305+/-0.025mm (0.012+/-0.0001inch)
- Reliable dual beam contact design feeatures pre-stressed contact beam for low insertion force
- Ideal for large-volume users
- Mass-termination reduces overall costs and time
- Contacts fitting all housing styles ensures versatility and minimizes stock values
- Application: Industrial control & equipment and business & retail equipment

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#### DUFLEX



67013 = single row housing 66987 = double row housing

 Contact
 Part Number

 76785
 Packaging

 01 = 15000 per cardboard reel

 11 = 3000 per cardboard reel

 9

 9

 11 = 3000 per cardboard reel

 12 = 3000 per cardboard reel

 13 = 0.75µm gold

 14 = 5.00µm tin-lead

 15 = 0.01µm tin-lead

 15 = 0.01µm tin-lead

 16 = 0.01µm tin-lead

 17 = 0.01µm tin-lead

 18 = 0.01µm tin-lead

 19 = 0.01µm tin-lead

 10 = 0.01µm tin-lead

#### **PERFORMANCE CHARACTERISTICS**

Pitch	Series	Circuitry	Electrical Current Rating (AC/DC)	Rated Rating (AC/DC)	Contact Resistance (initial)	Insulation Resistance	Dialectric Withsanding Voltage	Mechanical Durability Cycle	Operating Temperature Range
0.3mm	SFY	FPC	0.2A	50V	50m <b>Ω</b> Max.	50M $\Omega$ Min.	AC200V	10	-25°C to +85°C
	SFYL-D	FPC	0.2A	50V	50m <b>Ω</b> Max.	50M $\Omega$ Min.	AC200V	10	-25°C to +85°C
	SFYL-U	FPC	0.2A	50V	70m <b>Ω</b> Max.	50M $\Omega$ Min.	AC200V	10	-25°C to +85°C
	YLL-D	FPC	0.2A	30V	100m <b>Ω</b> Max.	50M $\Omega$ Min.	AC90V	10	-55°C to +85°C
	YLL-U	FPC	0.2A	30V	100m <b>Ω</b> Max.	50M $\Omega$ Min.	AC90V	10	-55°C to +85°C
0.4mm	GLH	FPC	0.4A	40V	50m <b>Ω</b> Max.	50M $\Omega$ Min.	AC120V	20	-55°C to +85°C
0.5mm	OPU-D	FPC/FFC	0.5A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	20	-55°C to +85°C
	OPU-U	FPC/FFC	0.5A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	20	-55℃ to +85℃
	SFVA	FPC/FFC	0.5A	50V	70m <b>Ω</b> Max.	100MΩMin.	AC200V	20	-55°C to +85°C
	SFVE	FPC	0.2A	30V	70m <b>Ω</b> Max.	50M $\Omega$ Min.	AC250V	10	-55°C to +85°C
	SFVL-D	FPC	0.4A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	10	-55°C to +85°C
	SFVL-U	FPC	0.4A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	10	-55°C to +85°C
	SFV-R	FPC/FFC	0.5A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	20	-55°C to +85°C
	SFV-S	FPC/FFC	0.5A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	20	-55°C to +85°C
	VHC	FPC/FFC	0.5A	50V	50m <b>Ω</b> Max.	50M $\Omega$ Min.	AC250V	20	-55°C to +85°C
	VLH	FPC	0.4A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC250V	20	-55°C to +85°C
	VLK	FPC/FFC	0.5A	50V	50m <b>Ω</b> Max.	50M $\Omega$ Min.	AC250V	20	-55°C to +85°C
	VLL	FPC	0.5A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC250V	20	-55°C to +85°C
	VLP	FPC	0.4A	50V	30m <b>Ω</b> Max.	100MΩMin.	AC200V	10	-55°C to +85°C
0.8mm	SFR	FPC/CIC	0.5A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	20	-55°C to +85°C
1.0mm	HFW-R	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	30	-55°C to +85°C
	HFW-S	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	30	-55°C to +85°C
	HLW-R	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	30	-55°C to +85°C
	HLW-S	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	30	-55°C to +85°C
	SFW-R	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	20	-55°C to +85°C
	SFW-S	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	20	-55°C to +85°C
	SLW-R	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	20	-55°C to +85°C
	SLW-S	FPC/FFC/CIC	1.0A	100V	30m <b>Ω</b> Max.	500M $\Omega$ Min.	AC500V	20	-55°C to +85°C
1.25mm	SLD-R	FPC/FFC	1.0A	200V	30m <b>Ω</b> Max.	1000M <b>Ω</b> Min.	AC500V	20	-55°C to +85°C
	SLD-S	FPC/FFC	1.0A	200V	30m <b>Ω</b> Max.	1000M <b>Ω</b> Min.	AC500V	20	-55°C to +85°C
	SLP-R	FPC/FFC/CIC	1.0A	200V	30m <b>Ω</b> Max.	1000MΩMin.	AC500V	10	-55°C to +85°C
	SLP-S	FPC/FFC/CIC	1.0A	200V	30m <b>Ω</b> Max.	1000M <b>Ω</b> Min.	AC500V	10	-55°C to +85°C
2.54mm	Clincher	FFC/FPC/CIC	2.0A	500V	15mΩMax.	5000M $\Omega$ Min.	AC1000V	100	-65℃ to +105℃
	Duflex	FFC/FPC	3.0A	500V	15mΩMax.	N/A	AC1000V	200	-65℃ to +125℃

xx - Number of Contacts

For all products featured in this catalogue, you can find all the product details like customer drawings, product specifications etc on our dedicated Flex Connector website.

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