

Product Guide



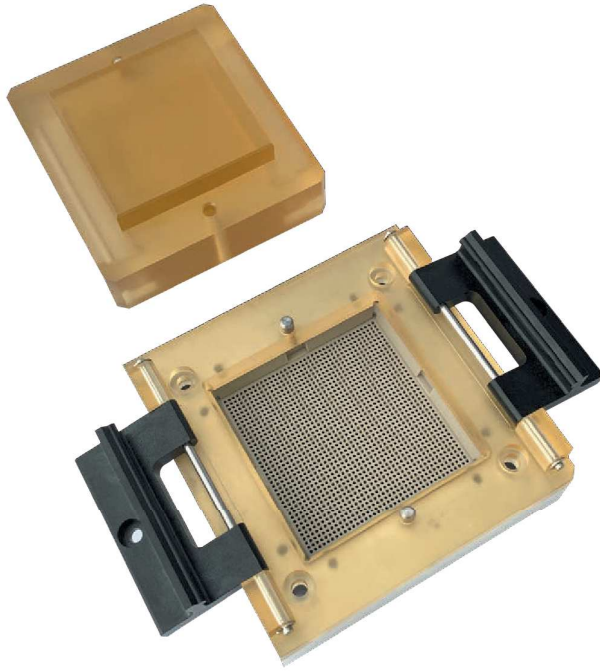
YAMAICHI ELECTRONICS Co.,Ltd.



Test Sockets

Yamaichi Electronics' Test Solutions evolve alongside the progress of semiconductor devices.

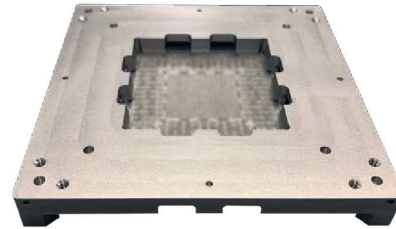
Probe Pin Test Socket



IC Socket for high pin count package

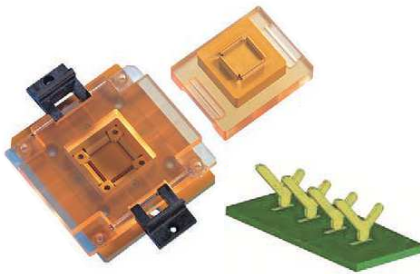


Spring Probe Pin

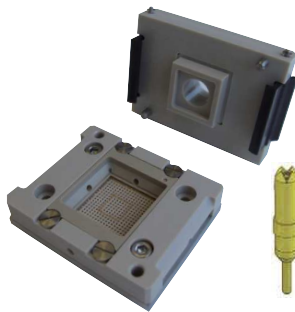


Coaxial Socket

High Frequency Test Sockets



Y- Contact



Short Probe Pin

Kelvin Socket



Kelvin Socket

Sensor Socket



Magnetic Sensor Socket

Probe Card



Vertical Type

FPC Test Socket



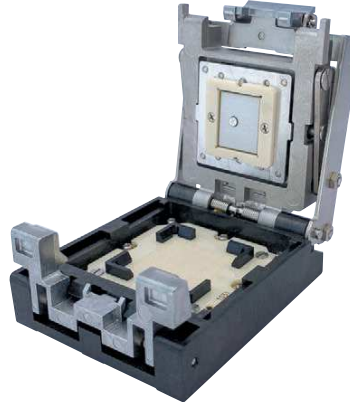
Burn-in Sockets

Universal Pitch Sockets

BGA, LGA, QFN, other (0.3mm ~ Irregular pitch from 0.30mm)



IC561 Series



IC530 Series



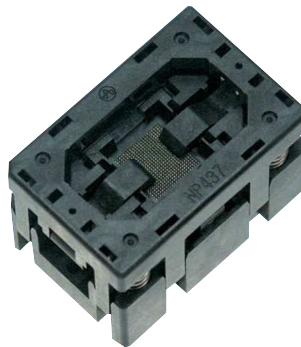
IC542 Series

Sockets for Grid-Array Package

BGA (0.35/0.4mm Pitch)



IC511 Series

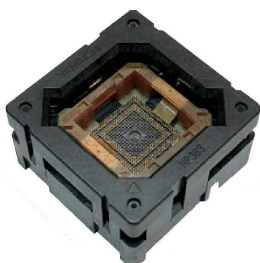


NP437 Series



NP597 Series

BGA (0.5mm Pitch)



NP383 Series



IC398 Series

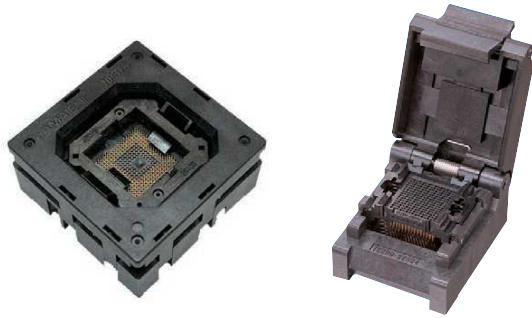


IC409 Series

Burn-in Sockets

Sockets for Grid-Array Package

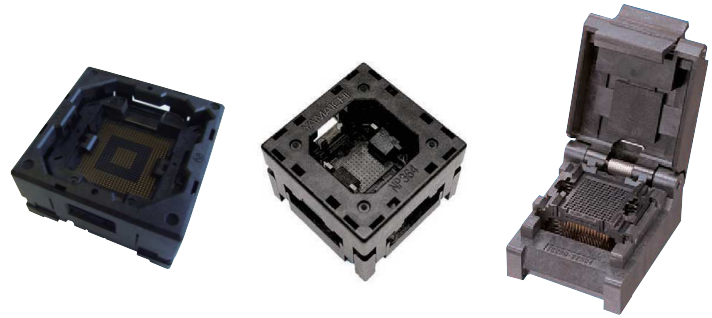
BGA (0.65mm Pitch)



NP378 Series

IC280 Series

BGA (0.8mm Pitch)

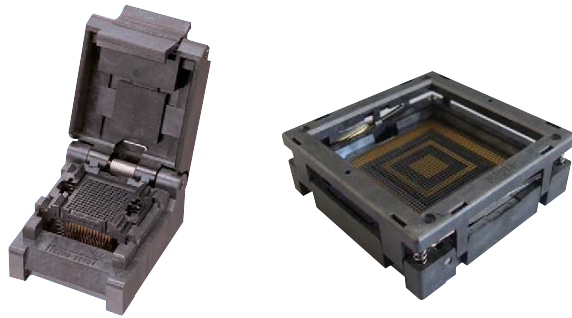


NP566 Series

NP364 Series

IC280 Series

BGA (1.0mm Pitch)



IC280 Series

NP483 Series

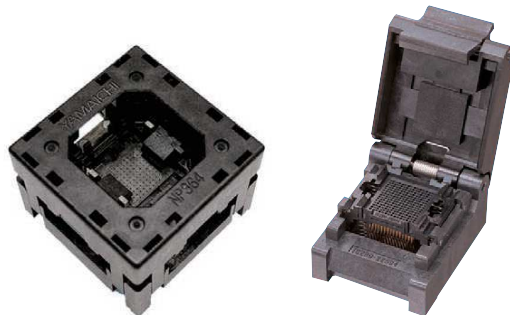
NP486 Series

BGA (1.27mm Pitch)



NP276 Series

LGA (0.65, 0.75, 0.80, 1.00mm Pitch)



NP364 Series

IC280 Series

High Power Socket (0.65, 0.80, 1.00mm Pitch)



IC567 Series

Burn-in Sockets

Sockets for Lead Frame Package

QFN



NP506 Series



IC609 / IC610 Series

QFP



IC357 Series



IC51 Series

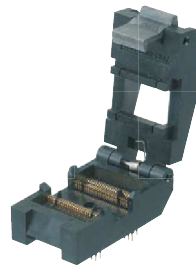
SOP / TSOP



IC354 Series

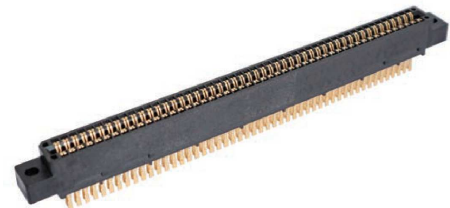


IC369 Series



IC51 Series

Card Edge



PS Series

DIP



IC37 Series



IC59 Series



IC121 Series

SIP / ZIP



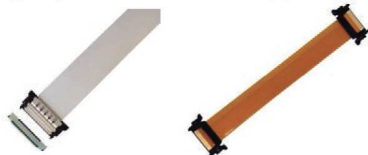
IC70 Series



IC39 Series

Flexible Printed Circuit Board (YFLEX[®]) assembled with Liquid Crystal Polymer (LCP) as Dielectric Substrate. Excellent characters for loss properties in high frequency(HF) area and dimension stabilities realize accurate characteristic impedance matching for FPC.

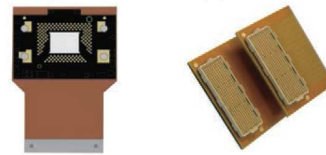
High-speed transmission applications



High-flex applications

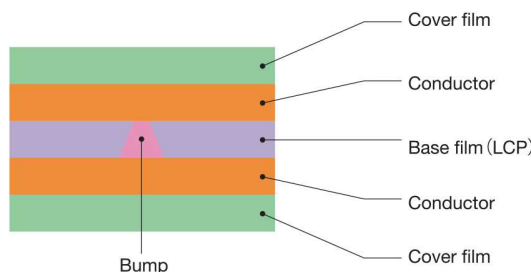


Implementation applications



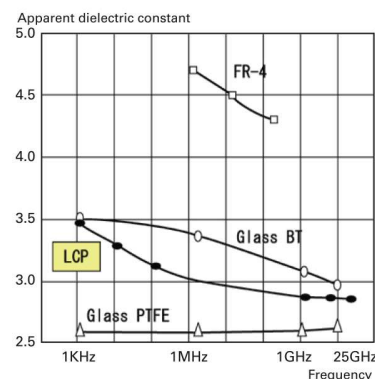
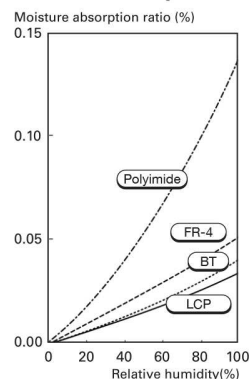
Basic Structure (Double-layer)

Structure of double-sided YFLEX



LCP

Moisture absorption & dielectric constant



Material

Base film	Liquid crystal polymer (Thickness:25μm, 50μm)
Conductor	Copper (Thickness:9μm, 12μm, 18μm, 35μm)
Inter-layer connection(Conductive bump)	Ag conductive paste
Cover film	Thermosetting resist, Photo resist, Polyimide film

Test data

Item	Condition	Result
Resistance value per bump	Room temperature, normal humidity	Within 6mΩ
Temperature cycle test	+55°C~+125°C, 1,000cyc	Resistance change:Within 10%
High temperature test	+85°C, 1,000h	Resistance change:Within 10%
Low temperature test	-40°C, 1,000h	Resistance change:Within 10%
High temperature constant humidity test	+85°C, 90%RH, 1,000h	Resistance change:Within 10%
Ion migration test	+40°C, 90%RH, 60VDC, 1,000h	No change
Peeling test	90°peels	0.8KN/m or above
Solder resistance test	+260°C, 20sec	No change
Moisture adsorption	+23°C, 24h	0.04% or below
Thermal expansion coefficient	TMA method	Longitudinal:17ppm, Lateral:17ppm
Dielectric constant (1GHz)	Bridge method #2	2.8
Dissipation factor (1GHz)	Bridge method #2	0.0025

JIS C6481-1996

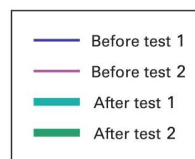
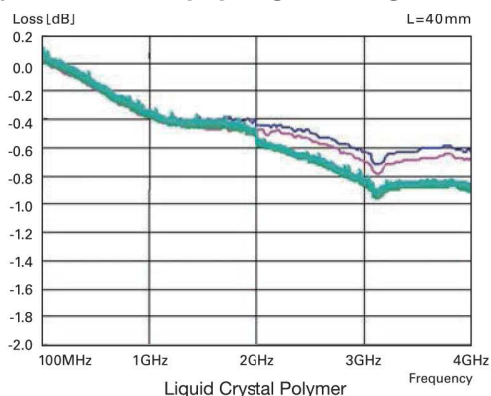
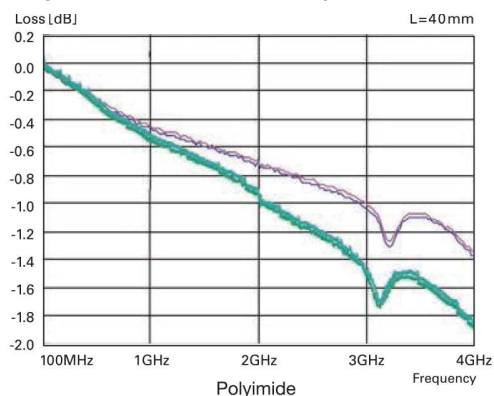
※2=JIS C6481-1996

Values are for reference only.

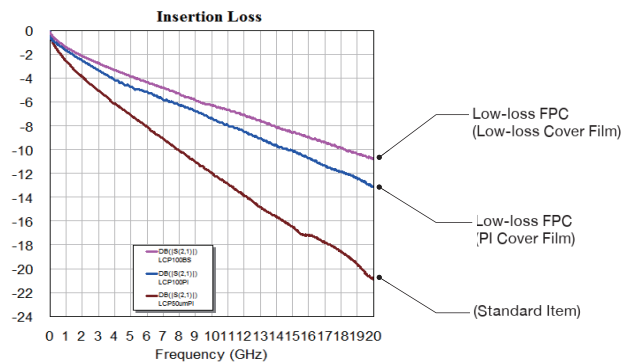
Design Specs(Bouble-layer)

Item	Standard	Minimum
Wire width/space	60/60μm	25/35μm
Bump diameter	250μm	150μm
Land diameter	400μm	250μm
Maximum current per bump	100mA (bump:φ250μm)	50mA (bump:φ150μm)

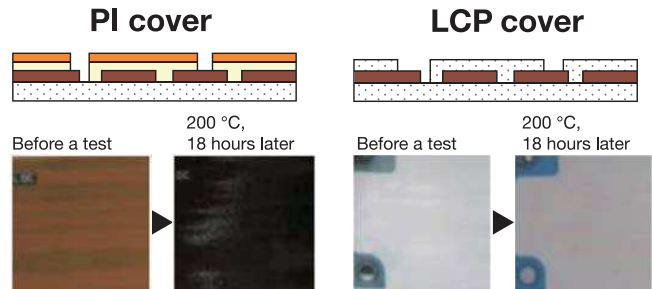
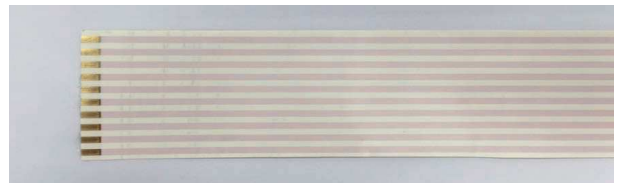
Comparison of insertion loss (Before/After temperature-humidity cycling test using a network analyzer)



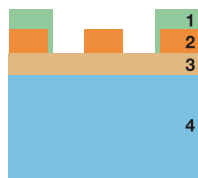
FPC Low-loss FPC



FPC High heat and high humidity-resistant FPC

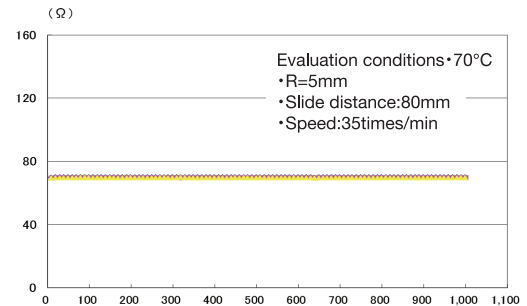


FPC Transparent FPC

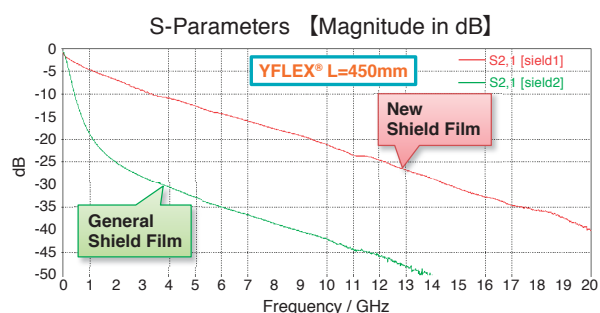
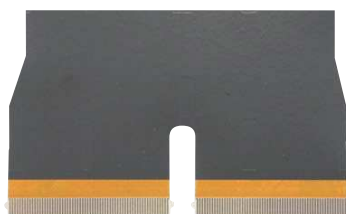


		Material	Thickness
1	Transparent resist	Epoxy	10μm
2	Conductor layer	Copper foil	12μm
3	Adhesive layer	Epoxy	10μm
4	Insulating layer	PEN PEN	100μm

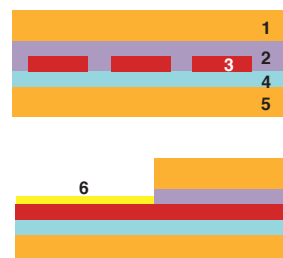
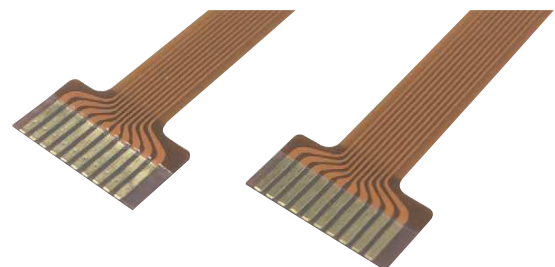
FPC High-flex FPC



FPC Noise-resistant and Low-Loss FPC



FPC Oil resistant FPC



1			25μm
2			35μm
3			35μm
4			-
5			25μm
6		Ni-Au	-

High Speed Connectors

CFP CFP Series Connectors and Mechanical-units

CFP Multi-Source Agreement (MSA)

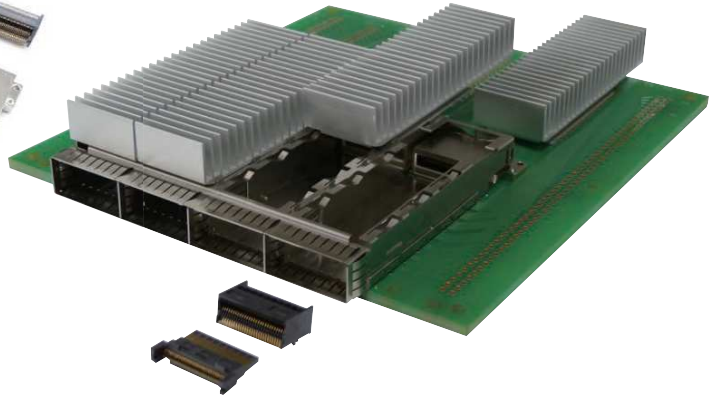
CFP Multi-Source Agreement (MSA) Compliant

40Gbps, 100Gbps, 200Gbps, 400Gbps

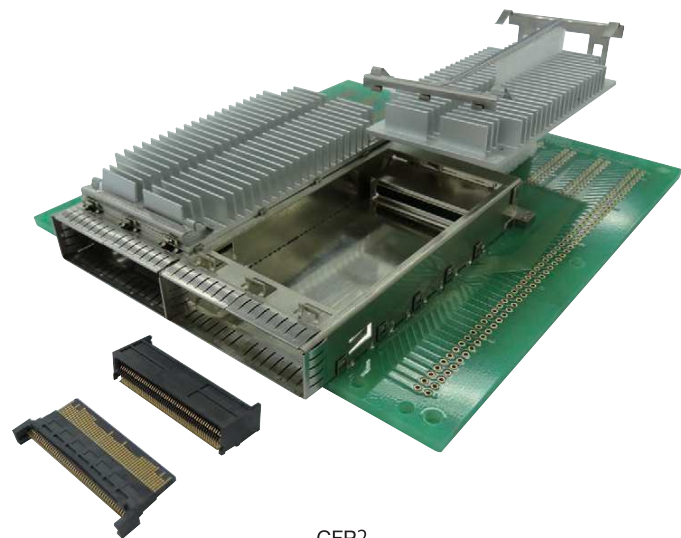
CFP Family Connector and mechanical-unit for 40Gbps, 100Gbps, 200Gbps & 400Gbps Ethernet.



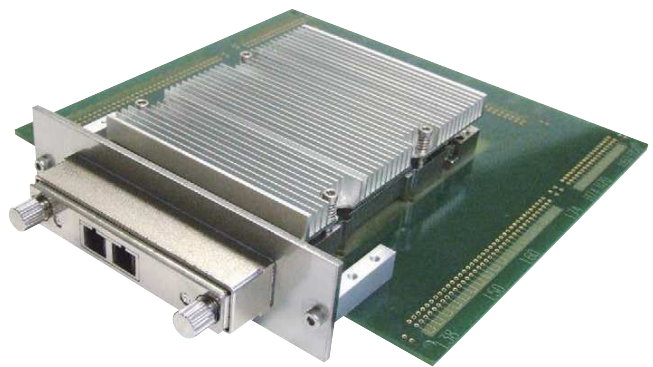
CFP8
CN168 Series



CFP4
CN121-056 Series



CFP2
CN121-104 Series



CFP
CA009 Series

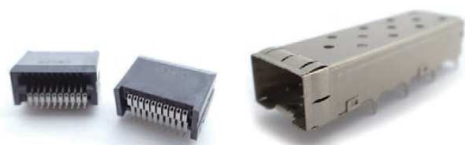
SFP/DSFP/QSFP/QSFP-DD

SFF/QSFP-DD MSA

SFP/DSFP/QSFP/QSFP-DD Host Connectors & Mechanical-units

SFF Committee Compliant / QSFP-DD MSA Compliant

SFP28 Host Connector & Mechanical-unit



CN109S-020 Series

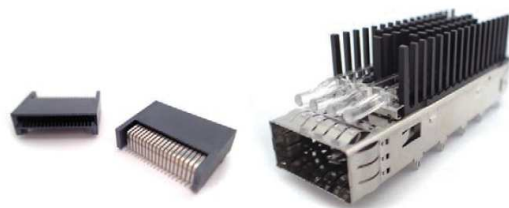
DSFP Host Connector & Mechanical-unit



CN109S-022 Series

QSFP28/56 Host Connector & Mechanical-unit

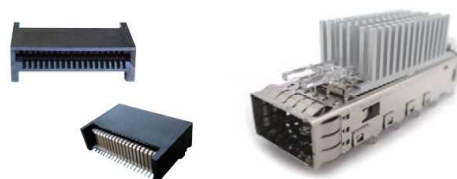
【Style "A"】



CN120 Series

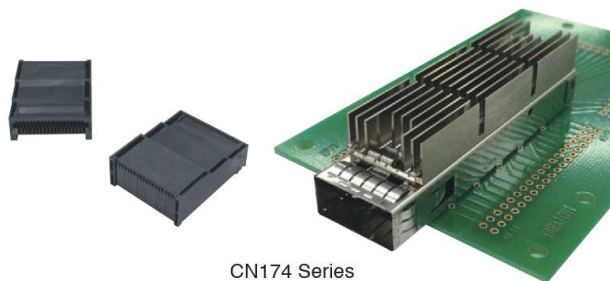
QSFP28 Host Connector & Mechanical-unit

【Style "B"】



CN120 Series

QSFP-DD Host Connector & Mechanical-unit



CN174 Series

Advanced MC Connector CN074, CN080 & CN084 Series

PICMG AMC, 0-Advanced MC

PICMG AMC, 0-Compliant Advanced MC Connector

AdvancedMC Connector for AdvancedTCA



CN074 Series

AdvancedMC Connector for Micro TCA



CN080 Series

AdvancedMC Connector



CN084 Series

Connectors for In-vehicle Equipments

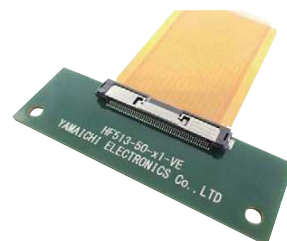


230
230 Pin Card Edge Connector
CN113 Series



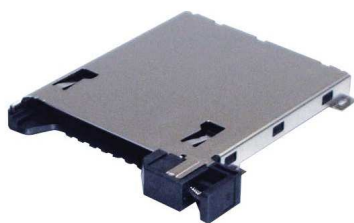
FPC/FFC
FPC/FFC Connector Flip Lock Type
125°C Heat-resistant Type

HF601 Series



FPC/FFC Non-ZIF
FPC/FFC Connector Non-ZIF Type
125°C Heat-resistant Type

HF513 Series



SD Card Connector for In-Vehicle
One Action Lock Type
FPS009-4200 Series



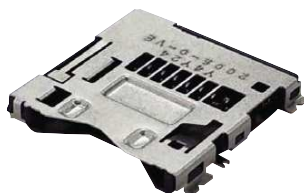
micro SD Card Connector for In-Vehicle
One Action Lock Type
PJS008-4100 Series



SIM Card Connector for In-Vehicle
One Action Lock Type
FMS006-2340 Series



SD Card Connector for In-Vehicle
Push-in/Push-out Type
FPS009-2920 Series



microSD card connector In-Vehicle
Push-in/Push-out Type
PJS008-2004 & 2005



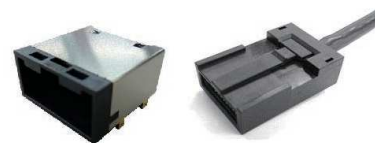
Low Coaxial Connector In-Vehicle Equipment
HF201 Series



FAKRA Coaxial Connector Series
HF106 & HF110 Series



HSD Connector EMI Ring Type
HF107 Series



HDMI Type "E" Connector
PKS/PKP Series

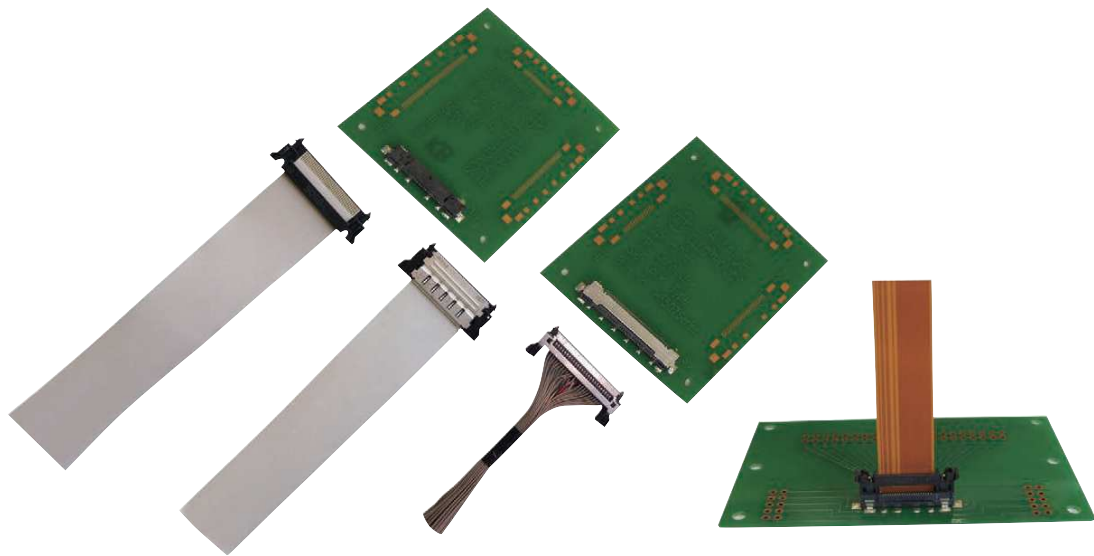


HSD Connector with 2Power Pin Type
HF108 Series



HSD Connector STD. Type
HF109 Series

High-Speed Connection System - YFLEX® cable & connector -



Connectors for High-Speed Transmission

Plug (Side-Lock Type)



YFLEX®+HF507 Series



Discreet Adapter+HF507 Series



High-Speed FFC+HF507 Series

Receptacle HF507 Series



HF507S-**-01~04 Series



HF507-**-06 Series



HF507S-**-72 Series

Receptacle (Flip-Lock Type) HF601 Series



HF601-22-03 Series



HF601-**-12 Series

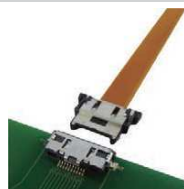


HF601-**-02 Series

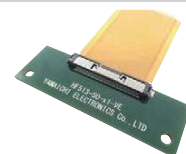
FPC/FFC Connector with Lock Type



Center-Lock Type
HF512 Series



HF509 Series



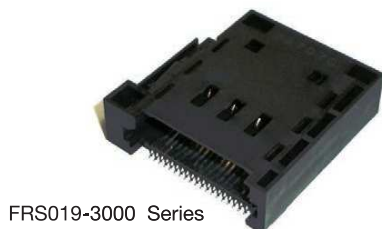
FPC/FFC Non-ZIF
FPC/FFC Connector Non-ZIF Type 125°C Heat-resistant Type
HF513 Series

Memory Card Connectors

Combination Card Connectors FRS Series

3 in 1 (Memory Stick Duo, SD, MMC)

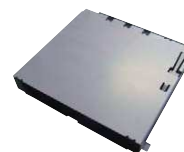
2 in 1 (Memory Stick Duo, SD)



FRS019-3000 Series

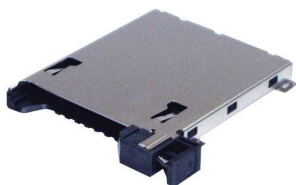


FRS020-3100 Series



FRS018-20 Series

SD Card Connectors FPS009 Series



FPS009-4200 Series



FPS009-2920 Series



FPS009-2913 Series

SD Card Connectors FPS009 Series



FPS009-230* Series



FPS009-2960 Series



FPS009-290* Series

micro SD Card Connectors PJS008 Series



PJS008-2004 & 2005



PJS008-21*0 Series



PJS008-4100 Series

Micro SIM Card Connectors FUS006 Series

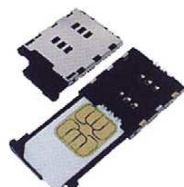


FUS006-8500 Series



FUS006-3210 Series

SIM Card Connectors FMS Series



FMS006-3*** Series



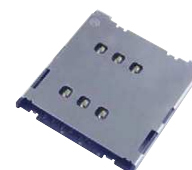
FMS008-600* Series



FMS006-234* Series

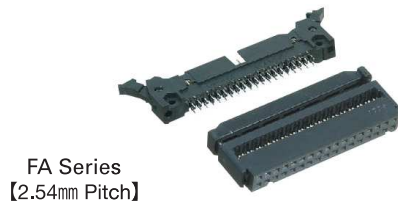


FMS006-5*** Series

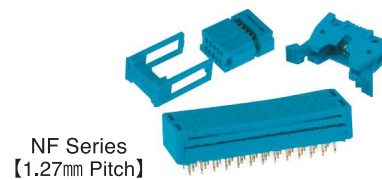
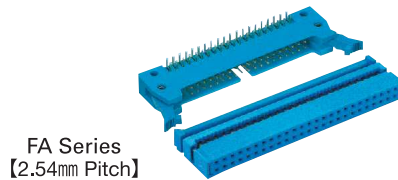


Industrial & Communication System Connectors

Flat Cable Connector MIL Standard Connector



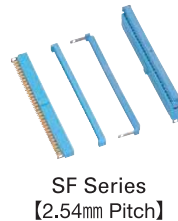
Flat Cable Connectors



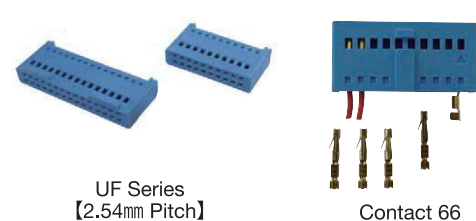
Cable-to-Board Connector



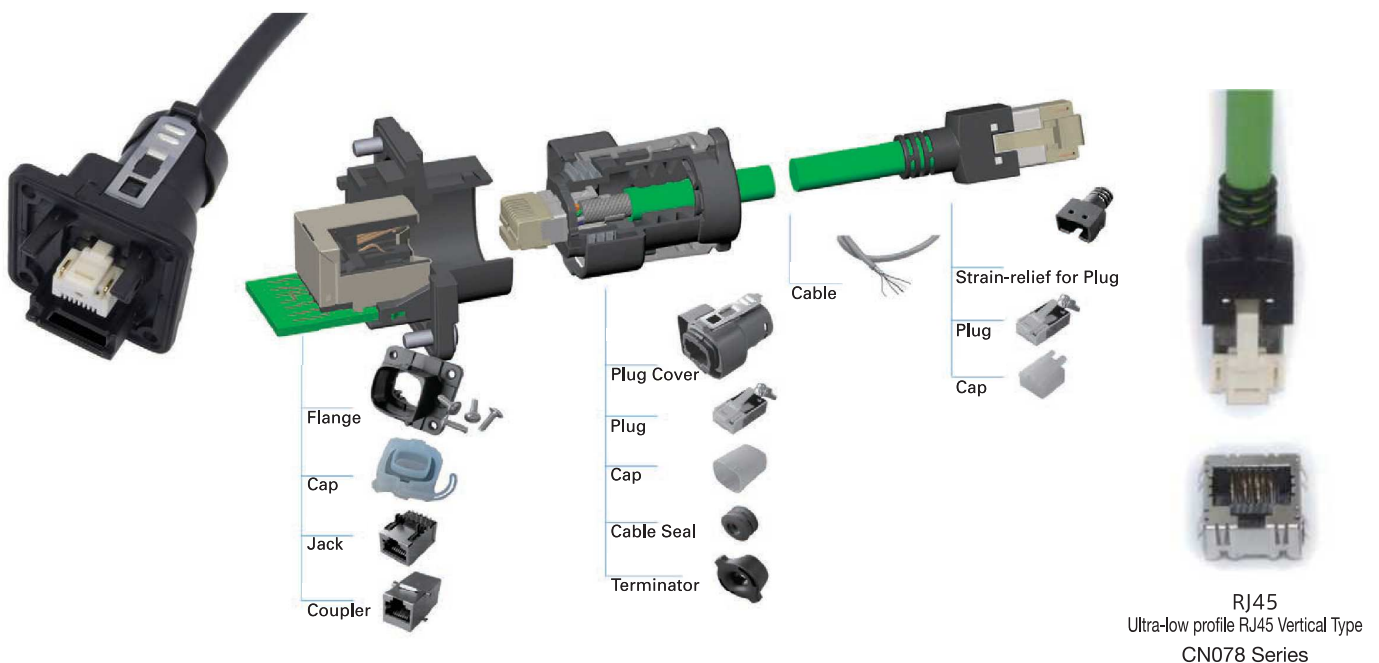
IDC Connector for Cable



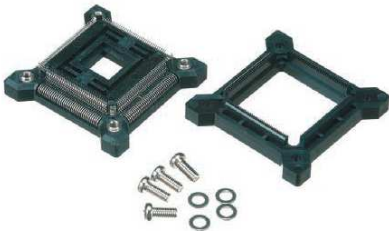
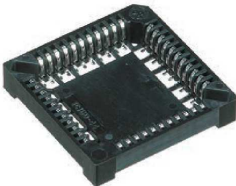
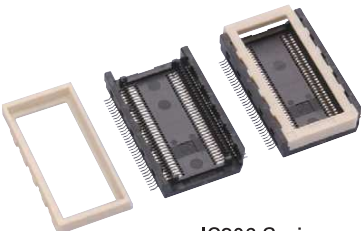
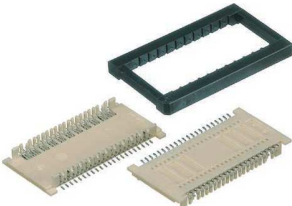
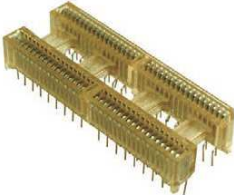
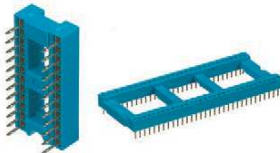
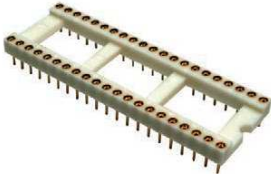
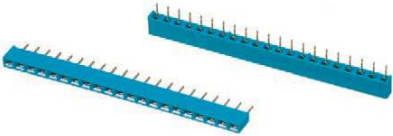
Crimp Connector for Loose Wires



Dust & Water-Proof Modular Connection System CN078 Series



IC Production Sockets

LGA	
 IC307 Series	 IC315 Series
 IC316 Series	
QFP	PLCC
 IC149 Series	 IC160 Series
SSOP	SOP & Insertion-Extraction Tools
 IC306 Series	 IC179 Series
	 IC179 TOOL
SSDIP	SDIP
 IC326 Series	 IC38 Series
	 IC310 Series
DIP	SIP
 IC26V Series	 IC30 Series
	 IC26V Series
	 IC30 Series

Optical Products

Tunable Laser Light Source Products



KLS-201A Series
1um / 1200nm / O/S/C/L/U

Optical Module Products

2port optical filter module



TFM / FC



WTFM / FC

module



FBPF

3port tunable filter module



TMUX

Optical Thin Film Filter Products

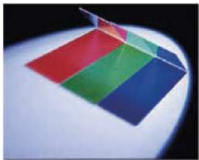
For Visual Equipment Products



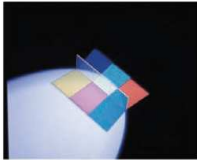
RGB Filter



UV/IR Cut Filter



Dichroic Mirror



Dichroic Filter



Cold Mirror

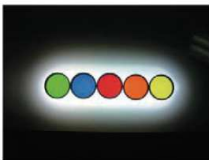
For Analysis Products



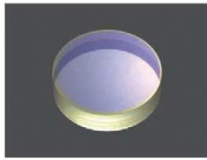
Band-pass Filter



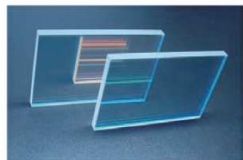
Fluorescence Filter



Fluorescence Filter



3 5 5 nm
Laser Mirror Coating



High-power Laser Mirror

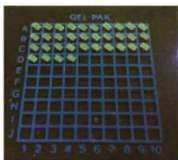
For Optical Communication Products



Anti-Reflection Coating



Band Pass Filter



Short Pass Filter



Polyimide Filter

山一電機株式会社 Yamaichi Electronics Co., Ltd.

本社 Head Office

〒144-8581 東京都大田区南蒲田2-16-2 テクノポート大樹生命ビル
Technoport Taiju Seimei Bldg. 2-16-2, Minamikamata, Ota-ku,
Tokyo 144-8581 JAPAN
Tel: 03-3734-0110 (代表) Fax: 03-3734-0120
<http://yamaichi.co.jp>

事業部

〒144-8566 東京都大田区南蒲田2-16-2 テクノポート大樹生命ビル6F
◇テストソリューション事業部
Tel: 03-6715-9044 Fax: 03-6715-9382
◇コネクタソリューション事業部
Tel: 03-6715-8944 Fax: 03-6715-9082

大阪営業所

〒532-0003 大阪府大阪市淀川区宮原4-5-36 セントラル新大阪ビル9F
Tel: 06-6396-6191 Fax: 06-6396-6192

名古屋事務所

〒464-0075 名古屋市千種区山3-10-17 今池セントラルビル9F
Tel: 052-745-3818 Fax: 052-732-8101

熊本営業所

〒860-0844 熊本県熊本市中央区水道町5-21 小杉不動産水道町ビル8F
Tel: 096-323-5800 Fax: 096-323-5803

佐倉事業所

〒285-0802 千葉県佐倉市大作1-4-1
Tel: 043-498-7000 (代表) Fax: 043-498-7040

諏訪分室

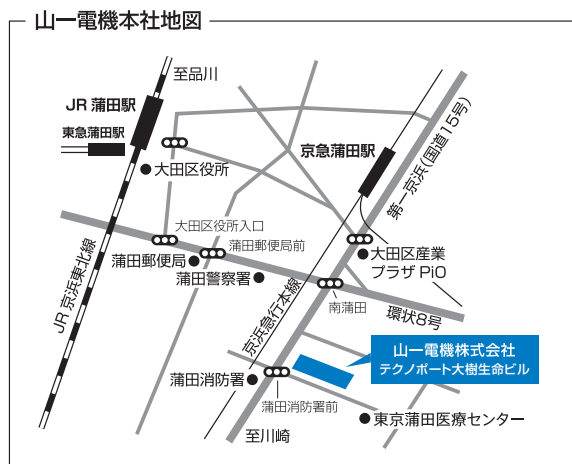
〒391-0116 長野県諏訪郡原村14254
Tel: 0266-70-1011 Fax: 0266-79-7261

岡山分室

〒719-0231 岡山県浅口市鴨方町小坂西3000-1
Tel: 0865-44-9402 Fax: 0865-45-8037

光伸光学工業株式会社 Koshin Kogaku Co., Ltd.

〒259-1302 神奈川県秦野市菩提69-3
69-3 Bodai, Hadano-shi, Kanagawa 259-1302 JAPAN
Tel: 0463-75-3331 Fax: 0463-75-3535
<http://www.koshin-kogaku.co.jp>



YAMAICHI ELECTRONICS U.S.A., INC.

475 Holger Way, San Jose, CA 95134 U.S.A.
Tel: +1-408-715-9100 Fax: +1-408-715-9199
<http://www.yeu.com>

YAMAICHI ELECTRONICS DEUTSCHLAND GMBH

Concor Park, Bahnhofstrasse 20,
85609 Aschheim-Dornach, Germany
Tel: +49-89-45109-0 Fax: +49-89-45109-110
<http://www.yamaichi.de>

YAMAICHI ELECTRONICS GREAT BRITAIN LTD.

6 The Clockhouse, Stratton Park,
Micheldever, Hampshire, SO21 3DP, U.K.
Tel: +44-7808-493377 Fax: +44-1962-774902

YAMAICHI ELECTRONICS ITALIA S.R.L.

Centro Direzionale Colleoni, Via Colleoni, 1, Palazzo Taurus Ing. 1, 20864
Agrate Brianza (MB) Italy
Tel: +39 039 6881-185 Fax: +39 039 6892-150

YAMAICHI ELECTRONICS SINGAPORE PTE. LTD.

72 Bendemeer Road, #04-21 Luzerne, Singapore 339941
Tel: +65-6297-8312 Fax: +65-6297-8141
<http://www.yamaichi.com.sg>

YAMAICHI ELECTRONICS SINGAPORE PTE. LTD. TAIWAN BRANCH

4F-3, No.9, Sanmin Road, East District, Hsinchu City 30043 Taiwan (R.O.C.)
Tel: +886-3-5323-180 Fax: +886-3-5323-810

YAMAICHI ELECTRONICS HONG KONG LTD.

Unit 815-16, 8F Tower 1, Grand Central Plaza, 138 Shatin Rural
Committee Road, Shatin, N.T., Hong Kong
Tel: +852-2687-1968 Fax: +852-2601-9681
<http://www.yamaichi.com.cn/hk>

YAMAICHI ELECTRONICS SHANGHAI CO., LTD.

(YAMAICHI ELECTRONICS HONG KONG LTD. SHANGHAI OFFICE)

Room E404 Sun Plaza, No. 88 Xiaxia Road,
Changning District, Shanghai 200336 P.R.C.
Tel: +86-21-63611231 Fax: +86-21-63410711
<http://www.yamaichi.com.cn/sh>

ASIA YAMAICHI ELECTRONICS INC.

958 Geumil-Ro, SamSeong-Myeon, EumSeong-Gun,
ChungBuk, 27649 Korea
Tel: +82-43-877-3361 Fax: +82-43-877-3360

ASIA YAMAICHI ELECTRONICS INC. SEOUL OFFICE

A-604, Woolim Lions Valley, 168, Gasan Digital 1-Ro,
Geumcheon-Gu, Seoul, 08507 Korea
Tel: +82-2-557-0522 Fax: +82-2-557-0622
<http://yamaichi.co.kr>

PRICON MICROELECTRONICS, INC.

No.14 Ampere Street, Light Industry & Science Park 1,
Barangay Diezmo, Cabuyao, Laguna, 4025 Philippines
Tel: +63-2-843-0870 Fax: +63-2-843-0870 Local 301

TEST SOLUTION SERVICES, INC.

No.5 Circuit Street, Light Industry & Science Park 1,
Barrio Diezmo, Cabuyao, Laguna, 4025 Philippines
Tel: +63-49-539-1222 Fax: +63-49-539-1080

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