

# MINIFLEX® 3-BFNH

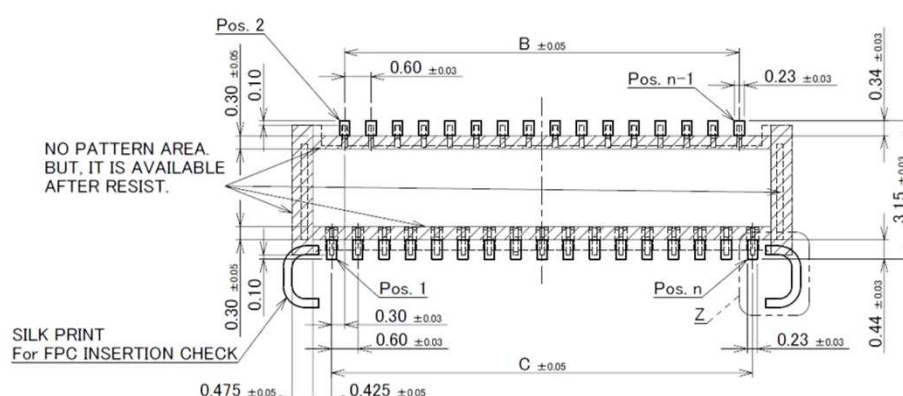
Improved retention force, footprint compatibility, 0.3 mm pitch, horizontal

Product Specifications:			Short Actuator		Long Actuator		Applicable FPC/FFC:		
Board Pitch (mm)			0.3					FPC/FFC Contact Pitch	0.3
Wiping Length (mm)			Contact A: 1.0					FPC/FFC Contact Point	Top and Bottom
			Contact B: 0.45						
Size (mm)	Height	0.90 +/- 0.10					FPC/FFC Thickness (mm)	0.2 +/- 0.03	
	Width	1.5 + (0.3 * ?p)							
	Depth	2.95				3.5			
		3.15							
Pin counts	Range	7-71 (odd)				33-71 (odd)			
	Available	7,9,11,21,23,31,35,39,41,45				51, 61, 71			

\* Please inquire for pin counts not listed or outside of the pin count range.

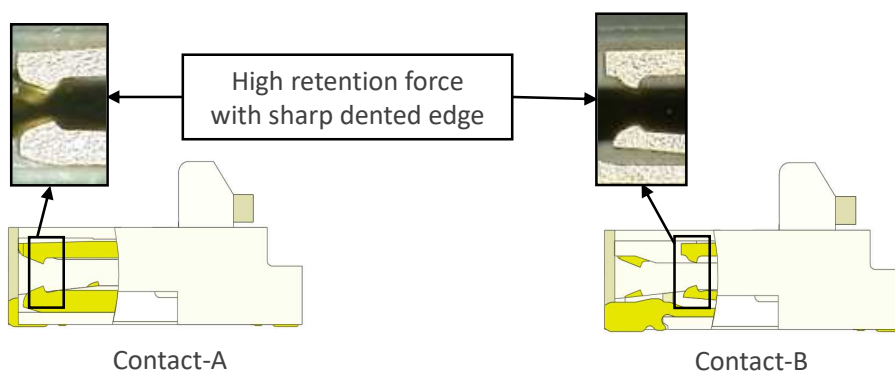


## ► Footprint compatible with industry standard products



Short actuator			Long actuator		
Pos.	B	C	Pos.	B	C
7P	1.20	1.80	51P	14.40	15.00
9P	1.80	2.40	61P	17.40	18.00
11P	2.40	3.00	71P	20.40	21.00
21P	5.40	6.00			
23P	6.00	6.60			
31P	8.40	9.00			
35P	9.60	10.20			
39P	10.80	11.40			
41P	11.40	12.00			
45P	12.60	13.20			

## ► Designed with sharp edge for stronger FPC retention force

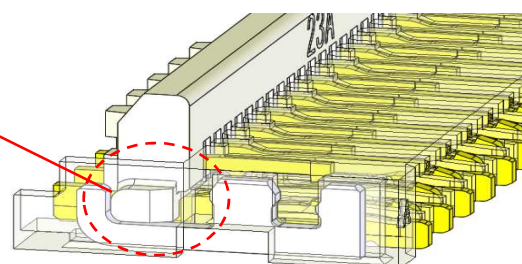


FPC retention force (39 p)	
16.058 N	

## ► Unique actuator holder design prevents actuator drop-off

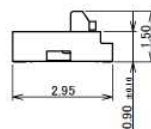
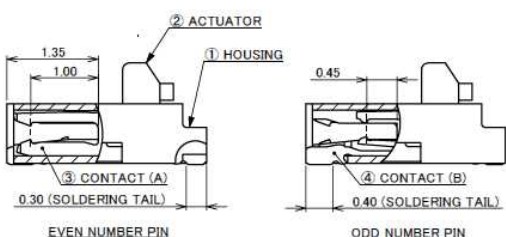
Actuator holder parts act as a guard against actuator peel-off action

Actuator peel-off force (Actuator pulled outwards at 2 mm position from actuator edge.)	
8.35 N	



[illegible]

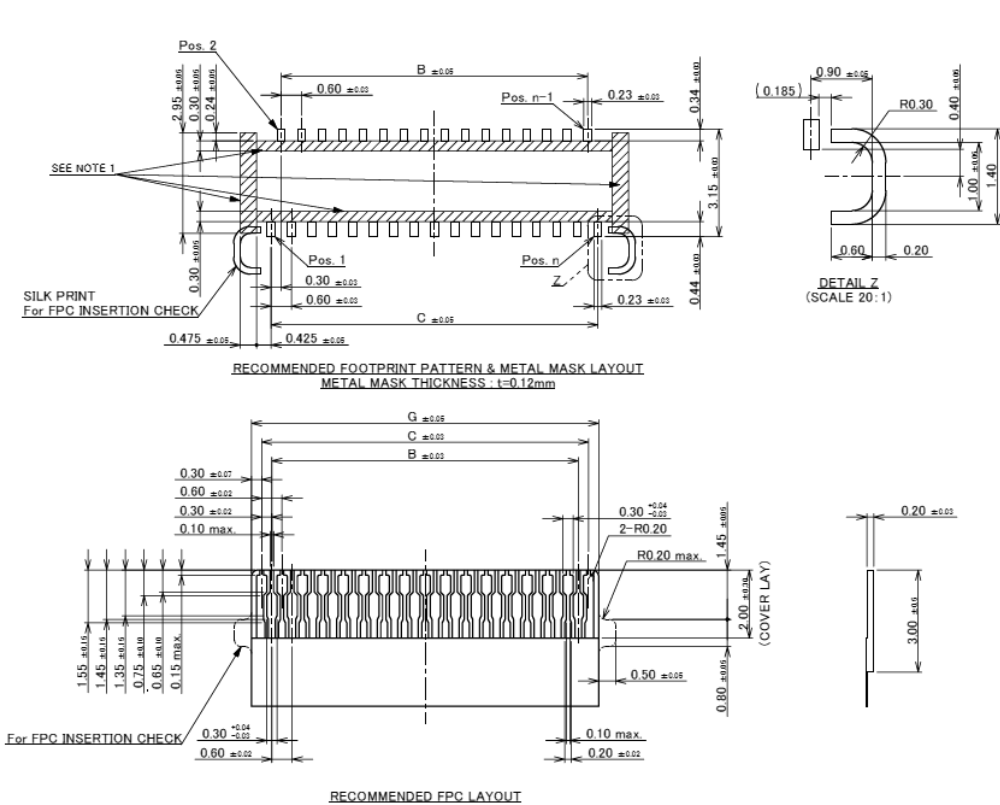
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◆ MARK MEANS NOT AVAILABLE

5	ACTUATOR HOLDER	NICKEL SILVER	
4	CONTACT(B)	PHOSPHOR BRONZE	CONTACT AREA : $A_{0.01} 0.1 \mu\text{m MIN. OVER Ni } 1.0 \mu\text{m MIN.}$ SOLDERING AREA : $A_{0.03} 0.3 \mu\text{m MIN. OVER Ni } 1.0 \mu\text{m MIN.}$
3	CONTACT(A)	PHOSPHOR BRONZE	CONTACT AREA : $A_{0.01} 0.1 \mu\text{m MIN. OVER Ni } 1.0 \mu\text{m MIN.}$ SOLDERING AREA : $A_{0.03} 0.3 \mu\text{m MIN. OVER Ni } 1.0 \mu\text{m MIN.}$
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE
NO	DISCRIPTION	MATERIAL	REMARKS

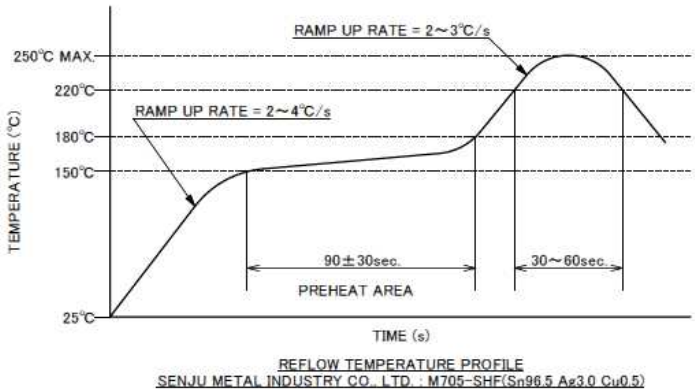
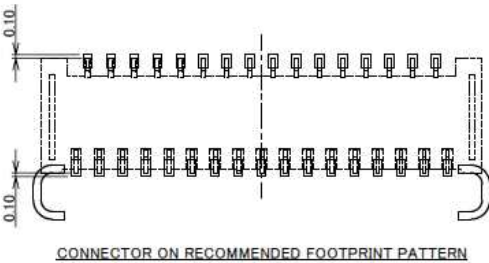
Connector Assembly



PART No.	Pos.	B	C	G
20613-007E-02	7P	1.20	1.80	2.40
20613-009E-02	9P	1.80	2.40	3.00
20613-011E-02	11P	2.40	3.00	3.60
◆20613-013E-02	13P	3.00	3.60	4.20
◆20613-015E-02	15P	3.60	4.20	4.80
◆20613-017E-02	17P	4.20	4.80	5.40
◆20613-019E-02	19P	4.80	5.40	6.00
20613-021E-02	21P	5.40	6.00	6.60
20613-023E-02	23P	6.00	6.60	7.20
20613-025E-02	25P	6.60	7.20	7.80
◆20613-027E-02	27P	7.20	7.80	8.40
◆20613-029E-02	29P	7.80	8.40	9.00
20613-031E-02	31P	8.40	9.00	9.60
20613-033E-02	33P	9.00	9.60	10.20
20613-035E-02	35P	9.60	10.20	10.80
◆20613-037E-02	37P	10.20	10.80	11.40
20613-039E-02	39P	10.80	11.40	12.00
20613-041E-02	41P	11.40	12.00	12.60
◆20613-043E-02	43P	12.00	12.60	13.20
20613-045E-02	45P	12.60	13.20	13.80
◆20613-047E-02	47P	13.20	13.80	14.40
◆20613-049E-02	49P	13.80	14.40	15.00
◆20613-051E-02	51P	14.40	15.00	15.60
◆20613-053E-02	53P	15.00	15.60	16.20
◆20613-055E-02	55P	15.60	16.20	16.80
◆20613-057E-02	57P	16.20	16.80	17.40
◆20613-059E-02	59P	16.80	17.40	18.00
◆20613-061E-02	61P	17.40	18.00	18.60
◆20613-071E-02	71P	20.40	21.00	21.60

◆MARK MEANS NOT AVAILABLE

NOTE  
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA.



# Connector Assembly

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT PIN)
RATING AMPERAGE	0.3A DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20TH CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL : 0.35N(31gf) $\times$ n MAX. / 20TH CYCLES : 0.35N(31gf) $\times$ n MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL : 0.02N(2gf) $\times$ n MIN. / 20TH CYCLES : 0.02N(2gf) $\times$ n MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL : 0.13N(13gf) $\times$ n MIN. / AFTER TEST : 0.10N(10gf) $\times$ n MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1846
TEST REPORT	TR-13104
PACKING STANDARD	PST-13054
INSTRUCTION MANUAL	HIM-14004
APPEARANCE CRITERIA No.	QLS-A***

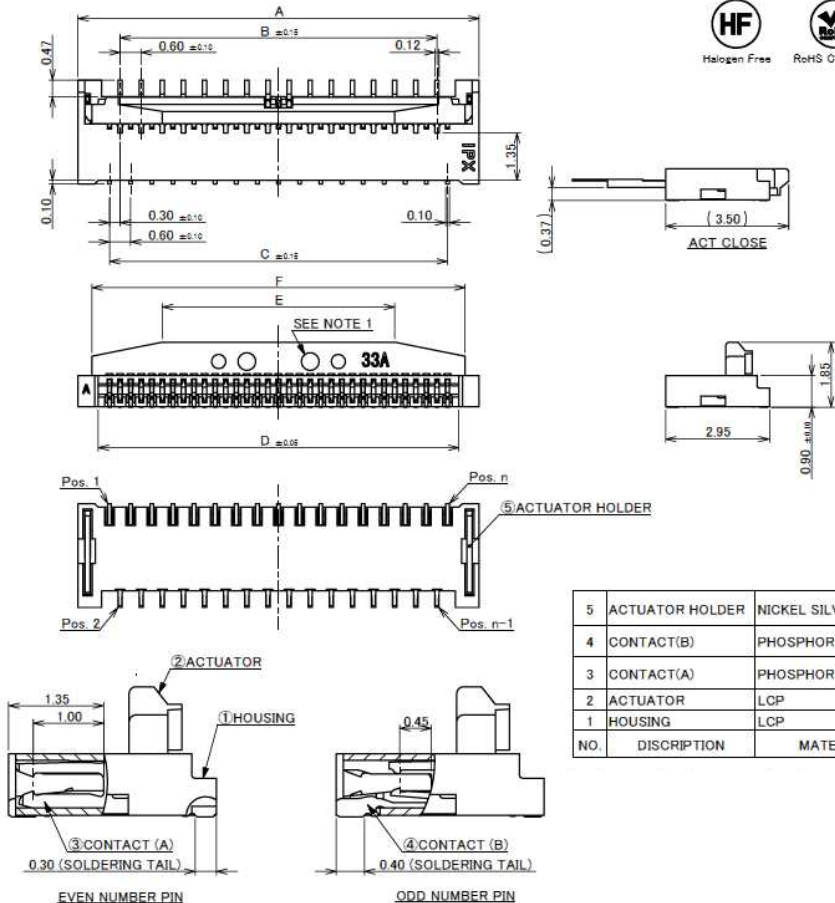
※ "n" IS THE NUMBER OF PIN



PLEASE BE SURE TO READ AND UNDERSTAND "INSTRUCTION MANUAL" BEFORE YOU USE OUR PRODUCTS.

Rev.16

Recommended P/N 20605-0\*\*E-02



Halogen Free



RoHS Compliant

PART No.	Pos.	A	B	C	D	E	F
◆20605-033E-02	33P	11.40	9.00	9.60	10.25	6.25	10.60
◆20605-035E-02	35P	12.00	9.60	10.20	10.85	6.85	11.20
◆20605-037E-02	37P	12.60	10.20	10.80	11.45	7.45	11.80
◆20605-039E-02	39P	13.20	10.80	11.40	12.05	8.05	12.40
◆20605-041E-02	41P	13.80	11.40	12.00	12.65	8.65	13.00
◆20605-043E-02	43P	14.40	12.00	12.60	13.25	9.25	13.60
◆20605-045E-02	45P	15.00	12.60	13.20	13.85	9.85	14.20
◆20605-047E-02	47P	15.60	13.20	13.80	14.45	10.45	14.80
◆20605-049E-02	49P	16.20	13.80	14.40	15.05	11.05	15.40
◆20605-051E-02	51P	16.80	14.40	15.00	15.65	11.65	16.00
◆20605-053E-02	53P	17.40	15.00	15.60	16.25	12.25	16.60
◆20605-055E-02	55P	18.00	15.60	16.20	16.85	12.85	17.20
◆20605-057E-02	57P	18.60	16.20	16.80	17.45	13.45	17.80
◆20605-059E-02	59P	19.20	16.80	17.40	18.05	14.05	18.40
◆20605-061E-02	61P	19.80	17.40	18.00	18.65	14.65	19.00
◆20605-071E-02	71P	22.80	20.40	21.00	21.65	16.65	22.00

◆ MARK MEANS NOT AVAILABLE

## NOTES

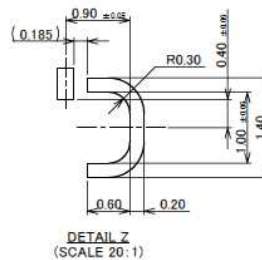
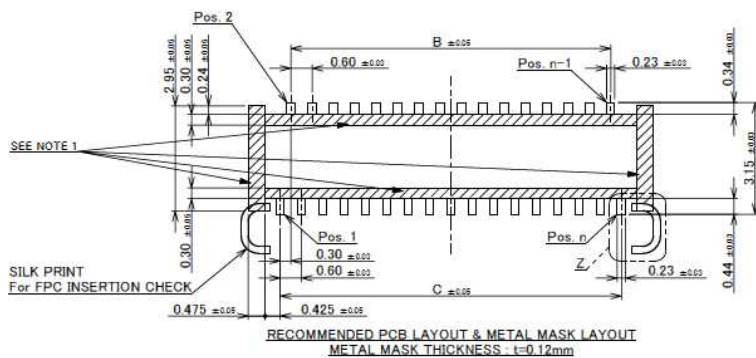
- THIS DENT SHAPE IS PURPOSED FOR GOOD INJECTION QUALITY. THIS DENT SHAPE WILL NOT AFFECT CONNECTOR FUNCTION. DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE. DENT SHAPE AND QUANTITY MIGHT CHANGE FROM DIFFERENT PIN COUNT AND DIFFERENT TOOLING.
- CONTACT POINT: TOP AND BOTTOM CONTACT

NO.	DISCRIPTION	MATERIAL	REMARKS
5	ACTUATOR HOLDER	NICKEL SILVER	
4	CONTACT(B)	PHOSPHOR BRONZE	CONTACT AREA : Au 0.1 $\mu$ m MIN. OVER Ni 1.0 $\mu$ m MIN. SOLDERING AREA : Au 0.03 $\mu$ m MIN. OVER Ni 1.0 $\mu$ m MIN.
3	CONTACT(A)	PHOSPHOR BRONZE	CONTACT AREA : Au 0.1 $\mu$ m MIN. OVER Ni 1.0 $\mu$ m MIN. SOLDERING AREA : Au 0.03 $\mu$ m MIN. OVER Ni 1.0 $\mu$ m MIN.
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE

Rev.11

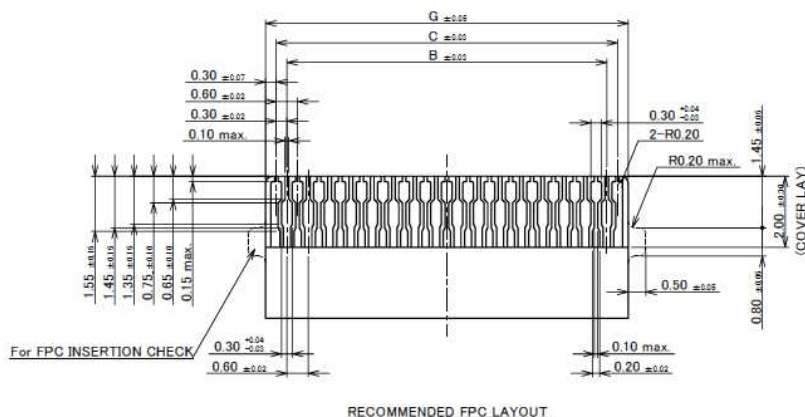


## Connector Assembly



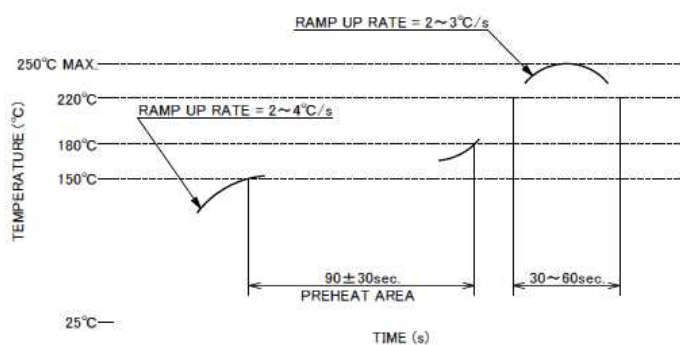
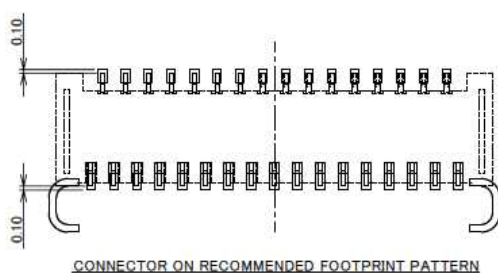
PART No.	Pos.	B	C	G
◆20605-033E-02	33P	9.60	9.60	10.20
◆20605-035E-02	35P	9.60	10.20	10.80
◆20605-037E-02	37P	10.20	10.80	11.40
◆20605-039E-02	39P	10.80	11.40	12.00
◆20605-041E-02	41P	11.40	12.00	12.60
◆20605-043E-02	43P	12.00	12.60	13.20
◆20605-045E-02	45P	12.60	13.20	13.80
◆20605-047E-02	47P	13.20	13.80	14.40
◆20605-049E-02	49P	13.80	14.40	15.00
20605-051E-02	51P	14.40	15.00	15.60
◆20605-053E-02	53P	15.00	15.60	16.20
◆20605-055E-02	55P	15.60	16.20	16.80
◆20605-057E-02	57P	16.20	16.80	17.40
◆20605-059E-02	59P	16.80	17.40	18.00
◆20605-061E-02	61P	17.40	18.00	18.60
◆20605-071E-02	71P	20.40	21.00	21.60

◆MARK MEANS NOT AVAILABLE



**NOTE**  
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA

Rev.11



REFLOW TEMPERATURE PROFILE  
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

# Connector Assembly

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT PIN)
RATING AMPERAGE	0.3A DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX (NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\triangleleft$ 40mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20TH CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL : $0.245\text{N} (24.5\text{gf}) \times n$ MAX. / 20TH CYCLES : $0.245\text{N} (24.5\text{gf}) \times n$ MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL : $0.014\text{N} (1.4\text{gf}) \times n$ MIN. / 20TH CYCLES : $0.014\text{N} (1.4\text{gf}) \times n$ MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL : $0.13\text{N} (13\text{gf}) \times n$ MIN. / AFTER TEST : $0.10\text{N} (10\text{gf}) \times n$ MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1920
TEST REPORT	TR-14022
PACKING STANDARD	PST-14013
INSTRUCTION MANUAL	HIM-14004
APPEARANCE CRITERIA	QLS-A***

※ "n" IS THE NUMBER OF PIN



CAUTION

PLEASE BE SURE TO READ AND UNDERSTAND "INSTRUCTION MANUAL" BEFORE YOU USE OUR PRODUCTS.

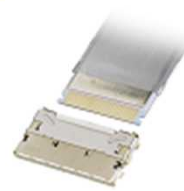
Board to  
Board



High-Density



Autolocking  
FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial  
/ Discrete Cable



High-Speed



RF



High-Frequency



Optical  
Module



High-Speed



Power



High-Power



I/O  
(Input/Output)



Quick charge



Effector



Custom  
Connectors  
Available

Inquiry



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