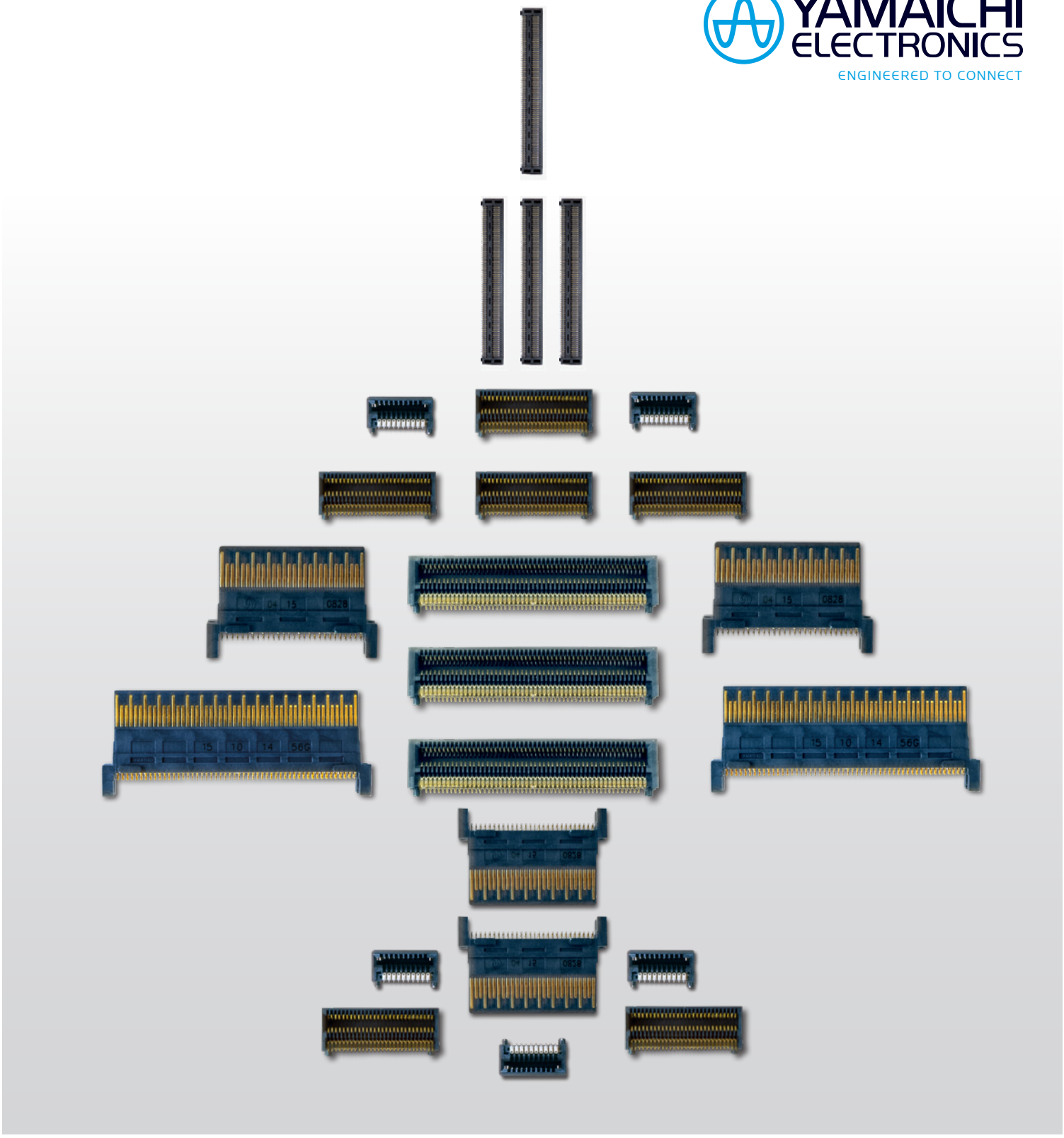
YAMAICHI ELECTRONICS

ENGINEERED TO CONNECT



HIGH-SPEED DATA NETWORKING

The technical data and specifications of the products shown in this catalogue are for reference only, and apply to products available at the time of catalogue printing in November 2018. Product modification often involves changes to technical data and size, and it is therefore recommended that the buyer request the latest technical data and specifications before placing a purchasing contract.

Future updates to this printed catalogue can be found at
https://www.yamaichi.de/downloads/product-catalogues.html

Technische Daten und Maßangaben der im Katalog aufgeführten Produkte beziehen sich auf Referenzprodukte aus dem Produktsortiment bei Erscheinen des Katalogs im November 2018. Produktänderungen, insbsondere aufgrund technischer Weiterentwicklung, bedingen regelmäßig veränderte technische Daten und Maße. Dem Besteller wird daher dringend empfohlen, vor Vertragsabschluss technische Daten und Maßangaben gesondert nachzufragen.

Zukünftige Updates dieses gedruckten Katalogs finden Sie auf
https://www.yamaichi.de/de/downloads/produktkataloge.html

DATA NETWORKING

OPTICAL TRANSCEIVER CONNECTORS

CFP FAMILY

YAMAICHI ELECTRONICS FACTS & FIGURES

Foundation:	Headquarters, Tokyo: 1956
	European Headquarter, Aschheim near Munich: 1986
Turnover:	Worldwide 230 m € p.a., Europe 75 m € p.a.
Employees:	Over 2,100, in Europe 285
Certification:	DIN EN ISO 9001:2015 (HQ and production EU)
	ISO 14001:2015 (production in Frankfurt/Oder)
	ISO/TS 16949 (selected production sites)
Locations:	Worldwide 7 production sites, 6 design centers,
	13 sales locations

as of May 2018

YAMAICHI ELECTRONICS ZAHLEN & FAKTEN

Firmengründung:	Konzernsitz, Tokyo: 1956
	Europäische Zentrale, Aschheim bei München: 1986
Umsatz:	weltweit 230 Mio € p.a., Europa 75 Mio € p.a.
Mitarbeiter:	über 2.100 weltweit, 285 in Europa
Zertifizierung:	DIN EN ISO 9001:2015 (HQ und Produktion EU)
	ISO 14001:2015 (Produktion in Frankfurt/Oder)
	ISO/TS 16949 (ausgewählte Produktionsstandorte)
Standorte:	weltweit 7 Produktionsstandorte, 6 Design-Zentren,
	13 Vertriebszentren

Mai 2018

PRODUCT RANGE

Yamaichi Electronics designs, manufactures and markets high performance interconnection devices, also for use in the most demanding applications of electronic systems: with high temperature environments, protected interconnections for harsh environments and high-speed interconnections for data networking applications. The portfolio covers high precision fine pitch IC sockets, connectors, cable assemblies and flexible printed circuits.

YAMAICHI EUROPE

Yamaichi Electronics Deutschland GmbH, located in Aschheim near Munich, is your European partner for connectivity solutions covering Industrial, Automotive, Measurement & Testing, Data Networking, Medical and Embedded & Semiconductor applications.

Two Divisions:

Connector Solutions: Portfolio: Connectors for Industrial use, for example circular connectors Y-Circ M (M12) and Y-Circ P (Push-Pull), Y-Con Series (RJ45 and USB). Automotive connectors FAKRA/HSD, Quadlock (Y-QUAD) and others, card connectors, High-Speed connector systems and latest input /output connectors. Internal connectors for high end applications (Y-Lock series). Data networking connectors, cables and cable assemblies as well as production sockets.

Test Solutions: Portfolio: IC semiconductor test & burn-in sockets, modular test contactors, test adapter systems for computer-on-modules, receptacles, spring probe pins, PCB design.
In all product areas we offer customer specific solutions.

ENGINEERING

Two design centers in Munich (Germany) and Sousse (Tunisia) react quickly to market challenges and work with the most modern technologies for the realisation of customer needs from product ideas to qualified mass production. Two fully equipped inhouse test laboratories allow internal product qualification and guarantee convincing product quality.

PRODUCTION FOR THE EUROPEAN MARKET

In our production facility in Frankfurt (Oder) we have been manufacturing connectors and complex cable assemblies for e.g. industrial or medical applications since 2006. In the area of test solutions we produce high end test contactors, module test adapters and receptacles. We offer special know-how in overmolding, welding, resistance welding and machining technologies. To ensure highest quality and short delivery times we have a high grade of vertical range of manufacturing and established a reliable European supplier network.

LEISTUNGSSPEKTRUM

Yamaichi Electronics entwickelt, produziert und vermarktet hochleistungsfähige elektromechanische Komponenten, auch für anspruchsvollste Anwendungen in elektronischen Systemen: für den Hochtemperaturbereich, geschützt für den Einsatz unter rauhen Umgebungsbedingungen und High-Speed Verbindungstechnik für Datanetworking Anwendungen. Das Portfolio umfasst hochpräzise Fine pitch IC Sockel, Steckverbinder, Kabelassemblierungen und flexible Leiterplatten.

YAMAICHI EUROPA

Yamaichi Electronics Deutschland Gmbh, mit Sitz in Aschheim bei München, ist Ihr europäischer Ansprechpartner für Verbindungstechnik. Lösungen für Applikationen in: Automatisierung, Automotive, Mess- und Prüftechnik, Data Networking, Medizintechnik und Halbleiterindustrie.

Zwei Bereiche:

Connector Solutions: Portfolio: Industriesteckverbinder, z.B. Rundsteckverbinder Y-Circ M (M12) und Y-Circ P (Push-Pull), Y-Con (RJ45 and USB). Automotive Steckverbinder FAKRA/HSD, Quadlock (Y-QUAD) und andere spezielle Automotive Lösungen, Kartensteckverbinder, High-Speed Steckverbindersysteme und neueste Input/Output Steckverbinder. Interne Steckverbinder für High End Applikationen (Y-Lock Serie). Data Networking Steckverbinder, Kabel und Kabelassemblierungen, Produktionssockel.

Test Solutions: Portfolio: IC Halbleiter Test & Burn-In Sockel, modulare Test Contactoren, Test Adapter Systeme für Computer-on-Modules, Receptacles, Federkontaktstifte, PCB Design.
In allen Produktbereichen bieten wir kundenspezifische Lösungen an.

ENGINEERING

Mit zwei Design-Zentren in München und Sousse (Tunesien) ist die schnelle Reaktion auf Marktanforderungen und Kundenwünsche sichergestellt. Unser Entwicklungsteam arbeitet mit den modernsten Technologien zur Realisierung von Kundenanforderungen. Umfangreich ausgestattete hauseigene Testlabore ermöglichen die interne Qualifizierung von Produkten und gewährleisten überzeugende Produktqualität.

PRODUKTION FÜR DEN EUROPÄISCHEN MARKT

An unserem Fertigungstandort in Frankfurt (Oder) werden seit 2006 Steckverbinder und komplexe Kabelassemblierungen z.B. für Industrie- oder Medizinanwendungen hergestellt. Im Bereich Test Solutions werden High End Test Contactors, Modultestadapter und Receptacles gefertigt. Wir bieten Spezial-Know How in den Fertigungstechnologien Spritzguss, Schweißen, Widerstandsschweißen und Zerspanungstechnik. Die hohe Fertigungstiefe sowie in Europa ansässige zuverlässige Zulieferfirmen garantieren hochwertige Produkte und kurze Lieferzeiten.

OPTICAL TRANSCEIVER CONNECTORS

SFP28 – 28* GBIT/S

DSFP – 56*/112** GBIT/S

QSFP28 – 112*/224** GBIT/S

QSFP56 – 224*/400** GBIT/S

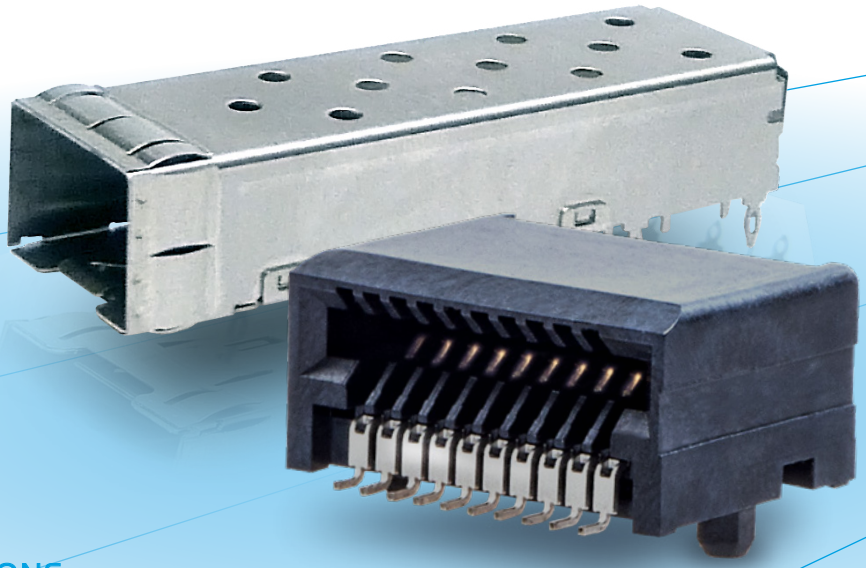
QSFP-DD – 200*/400** GBIT/S

OSFP – 200*/400** GBIT/S

The small form-factor pluggable (SFP) is a compact, hot-pluggable optical module transceiver used for both telecommunication and data communications applications. The form factor and electrical interface are specified by a multi-source agreement (MSA) under the auspices of the Small Form Factor Committee. It is a popular industry format jointly developed and supported by many network component vendors.

An SFP interface on networking hardware is a modular (plug-and-play) slot for a variable, media-specific transceiver in order to connect a fiber optic cable or sometimes a copper cable. SFP transceivers exist supporting SONET, Gigabit Ethernet, Fibre Channel and other communications standards. Due to its smaller size, the SFP has replaced the gigabit interface converter (GBIC) in most applications and is sometimes referred to as a Mini-GBIC by some vendors, but this name is not officially defined in the MSAs.

*NRZ
**PAM4

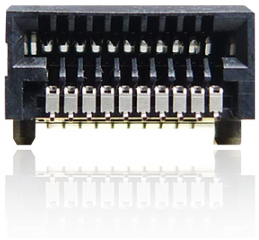


APPLICATIONS

- Complies with W7SFF-8683
- Optional single or double light pipes
- Heatsink with 3 different heights (4.2, 6.5 and 13.5 mm)
- Mechanical kit (Style A: Planning, Style B available)
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

SFP28 HOST CONNECTOR

The enhanced small form-factor pluggable (SFP+) connector supports data rates at 28Gbps.
The design is in accordance with the Multi-Source Agreement (MSA).



PART NUMBER CONNECTOR

CN1095 - 020 - 0 * 01

- Series
- No. of Contacts
- Packing: No. Mark = 750 pcs. / Reel
  1 = 100 pcs. / Reel
- Contact Plating 01 = 0.76 µm Au

SPECIFICATIONS

Voltage Rating:	120 V AC maximum per contact
Operating Temp. Range:	–20°C to +85°C
Contact resistance:	35 m ohm max raised at max.100 mA and max. 20 m V.
Mating cycle (Insertion/extraction):	100 times
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Test Standard:	EIA-364

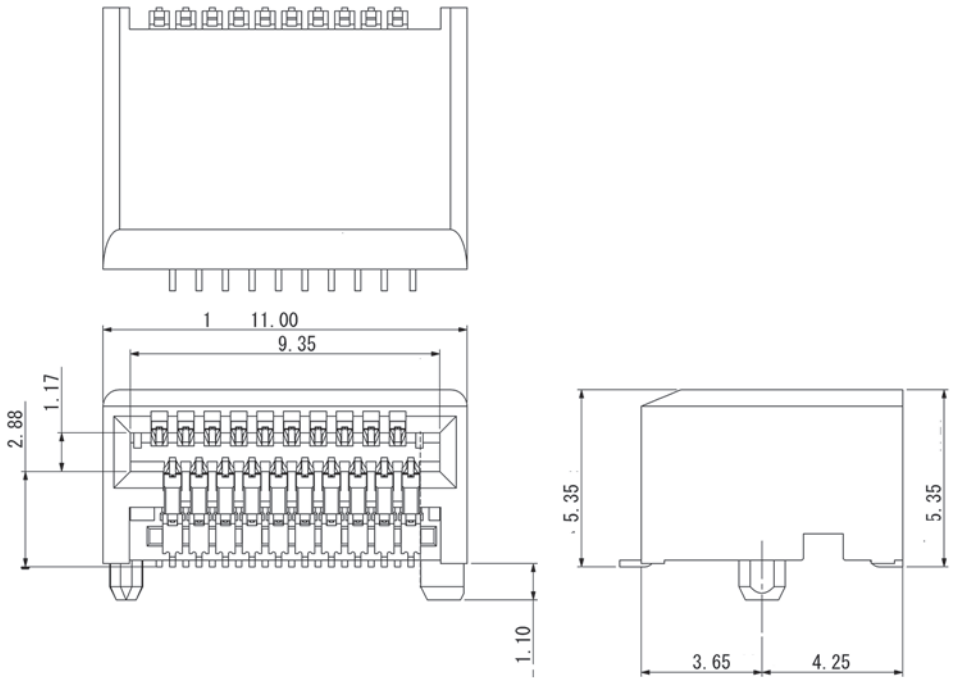
FEATURES

- High-speed 28Gbps
- Pitch: 0.8 mm
- Pin count: 20 pins
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

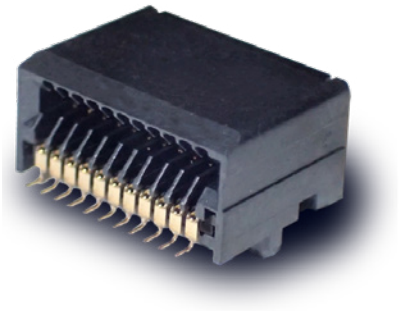
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy
Contact Area:	Ni-Au

OUTLINE DIMENSIONS CN1095 - 020 - 0 * 01



DSFP HOST CONNECTOR



PART NUMBER CONNECTOR

CN109S - 022 - 0001

- Series
- No. of Contacts
- Packing: No. Mark = 750 pcs. / Reel
- Contact Plating 01 = 0.76 µm Au

SPECIFICATIONS

Voltage Rating:	120 V AC maximum per contact
Operating Temp. Range:	–20°C to +85°C
Contact resistance:	35 m ohm max raised at max.100 mA and max. 20 m V.
Mating cycle (Insertion/extraction):	100 times
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Test Standard:	EIA-364

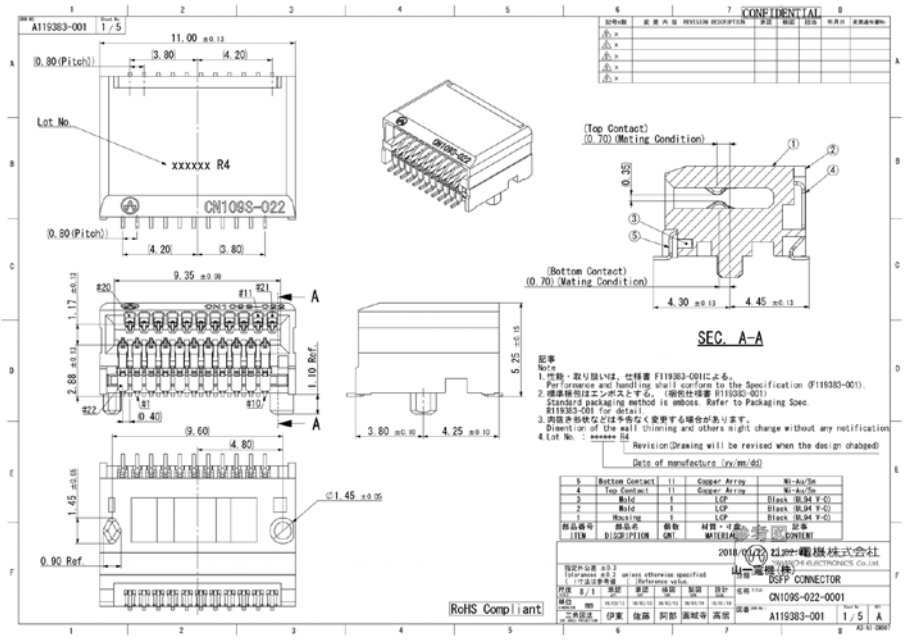
FEATURES

- High-speed 56Gbps (NRZ) 112Gbps (PAM4)
- Pitch: 0.8 mm
- Pin count: 22 pins
- Compatible with existing SPF+ module
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy
Contact Area:	Ni-Au

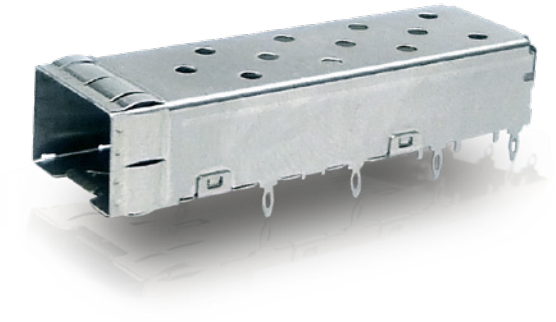
OUTLINE DIMENSIONS CN109S - 022-0001



SFP AND DSFP HOST CONNECTOR MECHANICAL PARTS

PART NUMBER MECHANICAL KIT

CN109A-0002



SPECIFICATIONS

Operating Temp. Range: - 20° to 85° C
Durability: 100 cycles

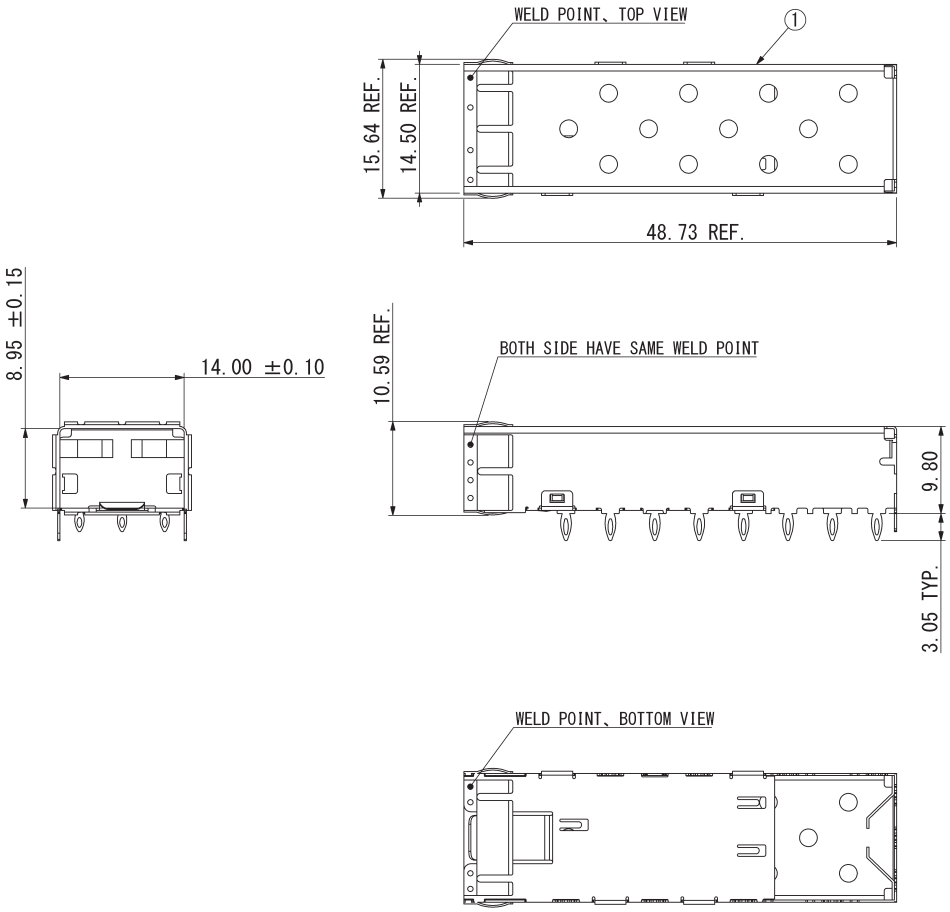
MATERIALS AND FINISH

Cage: Stainless, Degreasing

FEATURES

- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS CN109A-0002



QSFP28 HOST CONNECTOR

The enhanced QSFP+ (eQSFP+) connector and mechanical kit is supports data rates up to 56Gbps per channel. All products are designed in accordance with the Multi-Source Agreement (MSA).

PART NUMBER 28GBPS

CN120 - 038 - 0 00 *

- Series
- No. of Contacts
- 0 = Style B
- Contact Plating 1 = 0.76 µm Au, 2 = 0.40 µm Au

SPECIFICATIONS

Operating Temp. Range:	- 20° to 85° C
Durability:	100 cycles
Plug in Force:	55 N max. with Heatsink
Pull-out Force:	45 N max. with Heatsink
Press fit insertion force:	140 N min.
Test Standard:	EIA-364

MATERIALS AND FINISH

Contact:	Copper Alloy
Contact area:	Ni-Au
Soldering area:	Sn
Insulator:	LCP

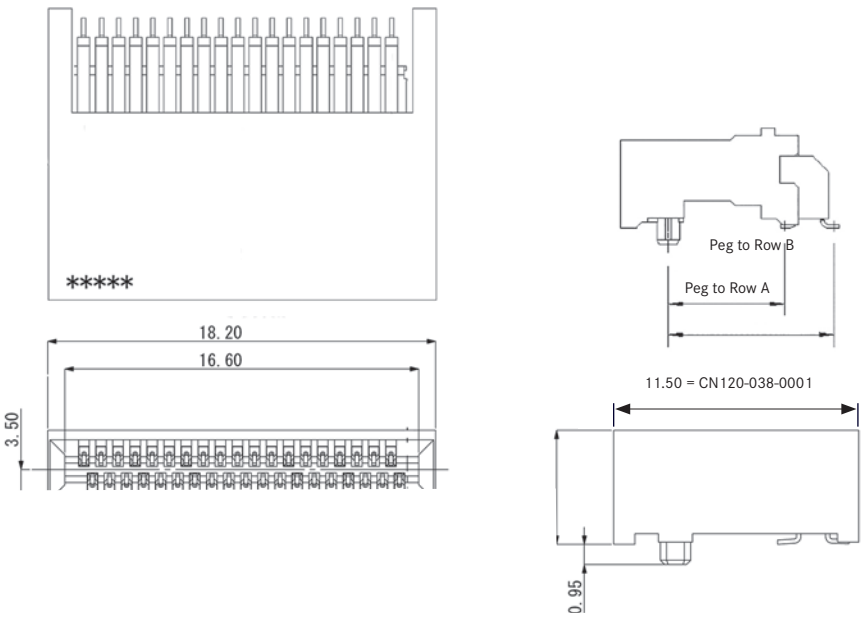
FEATURES

- High speed up to 28Gbps (NRZ) 56Gbps (PAM4)
- Pitch: 0.8 mm
- Pin Count: 38 Pins
- Compatible with existing QSFP (Infiniband: QDR / FDR / EDR) module
- Fully compatible foot pattern with existing QSFP connector
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

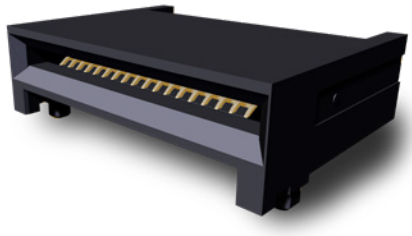
STYLE DEFINITION

Style	SFF Spec.	Peg to Row B
B	SFF 8672	7.69

OUTLINE DIMENSIONS CN120 - 038 -0 00 *



QSFP56 HOST CONNECTOR



PART NUMBER 56GBPS

CN120 - 038 - 2001

- Series
- No. of Contacts
- Style A 56G
- Contact Plating 1 = 0.76 µm Au

SPECIFICATIONS

Operating Temp. Range:	- 20° to 85° C
Durability:	100 cycles
Plug in Force:	55 N max. with Heatsink
Pull-out Force:	45 N max. with Heatsink
Press fit insertion force:	140 N min.
Test Standard:	EIA-364

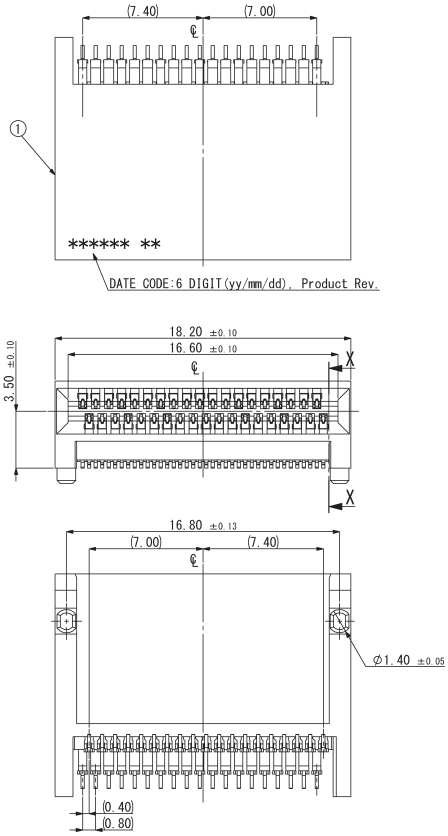
MATERIALS AND FINISH

Contact:	Copper Alloy
Contact area:	Ni-Au
Soldering area:	Sn
Insulator:	LCP

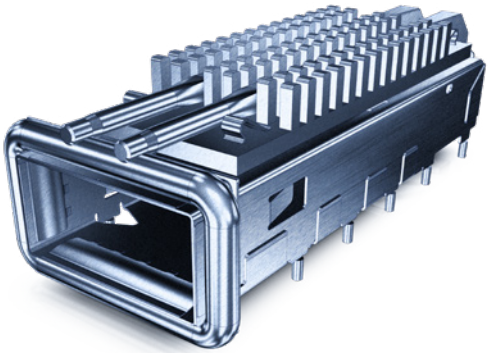
FEATURES

- High speed up to 56Gbps (NRZ) 112Gbps (PAM4)
- Pitch: 0.8 mm
- Pin Count: 38 Pins
- Compatible with existing QSFP (Infiniband: QDR / FDR / EDR) module
- Fully compatible foot pattern with existing QSFP connector
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS CN120 - 038 - 2001



QSFP28 + 56 MECHANICAL PARTS



PART NUMBER MECHANICAL KIT

CN120A - ** 0 * - * *

- Series
- Cage Assembly Type:
  11 = 1 x 1 Assembly
  14 = 1 x 4 Assembly
- Product Type:
  1 = EMI Elastomer Gasket
  2 = Through Bezel (Spring Finger)
- Heatsink:
  0 = No Heatsink
  1 = With Heatsink (Height = 13.5 mm)
  2 = With Heatsink (Height = 6.5 mm)
  3 = With Heatsink (Height = 4.2 mm)
- Light Pipe:
  0 = No Light Pipe
  1 = Single Light Pipe (Cut-out ⌀2.11)
  2 = Dual Light Pipe (Cut-out ⌀2.11)
  3 = Single Light Pipe (Cut-out ⌀2.54)
  4 = Dual Light Pipe (Cut-out ⌀2.54)
  5 = Single Light Pipe (Cut-out ⌀2.67)
  6 = Dual Light Pipe (Cut-out ⌀2.67)

SPECIFICATIONS

Operating Temp. Range:	- 20° to 85° C
Durability:	100 cycles
Plug in Force:	55 N max. with Heatsink
Pull-out Force:	45 N max. with Heatsink
Press fit insertion force:	140 N min.
Test Standard:	EIA-364

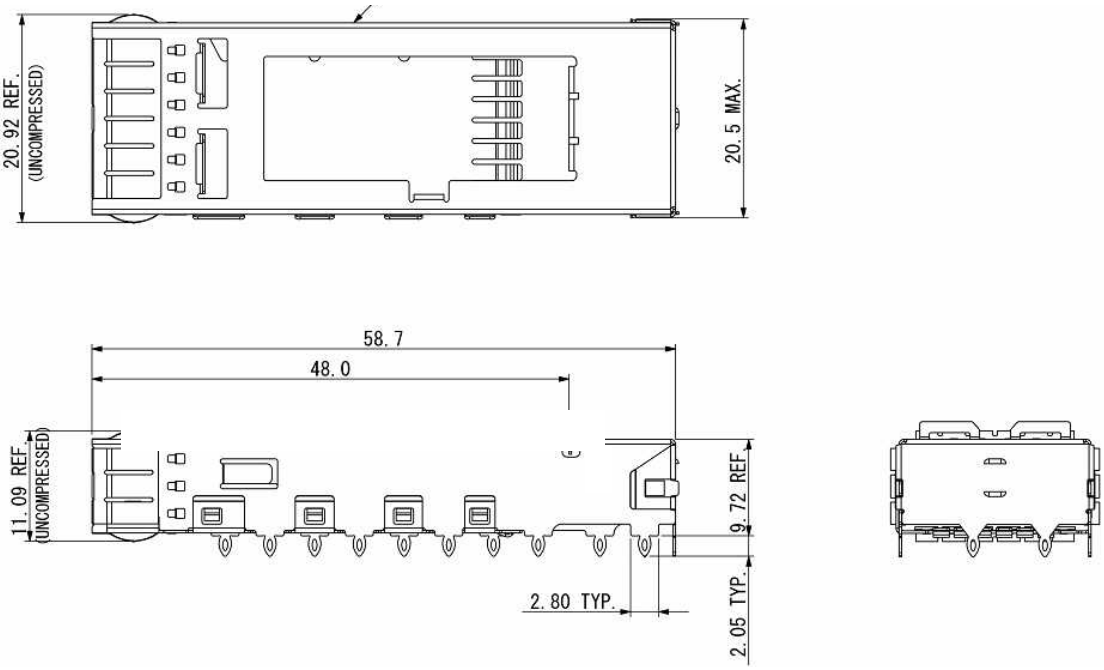
MATERIALS AND FINISH

Cage:	Stainless, Degreasing
Heatsink:	Aluminium, Anodizing Treatment
Clip:	Stainless, Degreasing
Light Pipe:	Polycarbonate

FEATURES

- Complies with W7SFF-8683
- Optional single or double light pipes
- Heatsink with 3 different heights (4.2, 6.5 and 13.5 mm)
- Mechanical kit (Style A: Partially available, Style B available)
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS CN120A



QSFP-DD HOST CONNECTOR

PART NUMBER 28GBPS

CN1745-076-0001

SPECIFICATIONS

Operating Temp. Range:	- 20° to 85° C
Durability:	100 cycles
Plug in Force:	50N max.
Pull-out Force:	50N
Test Standard:	EIA-364

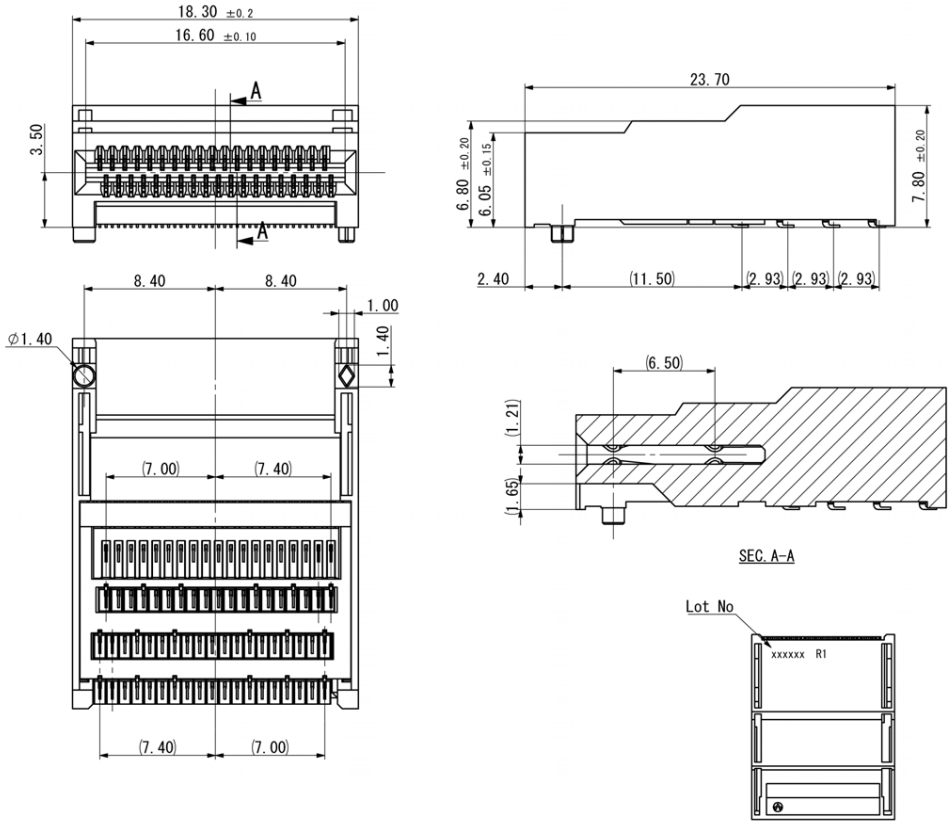
MATERIALS AND FINISH

Contact:	Copper Alloy
Contact area:	Ni-Au
Soldering area:	Sn
Insulator:	LCP

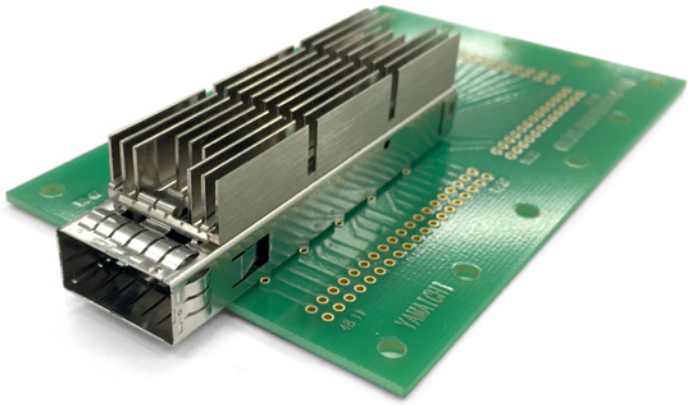
FEATURES

- High speed up to 200Gbps (NRZ) 400Gbps (PAM4)
- Pitch: 0.8 mm
- Pin Count: 76 Pins
- Compatible with existing QSFP (Infiniband: QDR / FDR / EDR) module
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS CN1745-076-0001



QSFP-DD MECHANICAL PARTS



PART NUMBER CAGE
CN174C-1001-01

PART NUMBER CLIP
CN174M-076-0002

PART NUMBER HEATSINK
CN174F-076-0002 (FRONT TO BACK)

PART NUMBER HEATSINK
CN174F-076-0004 (FIN TYPE)

SPECIFICATIONS

Operating Temp. Range:	-20° to 85° C
Durability:	100 cycles
Press fit insertion force:	140N min.
Test Standard:	EIA-364

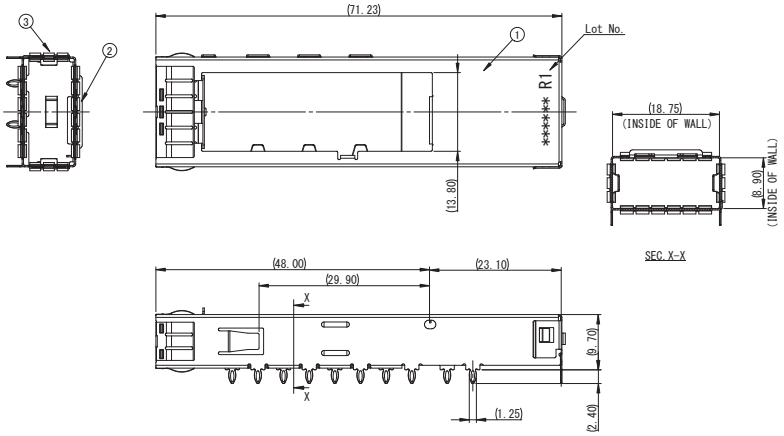
FEATURES

- Complies with QSFP-DD MSA
- Heatsink with 3 different heights (4.2, 6.5 and 13.5 mm)
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

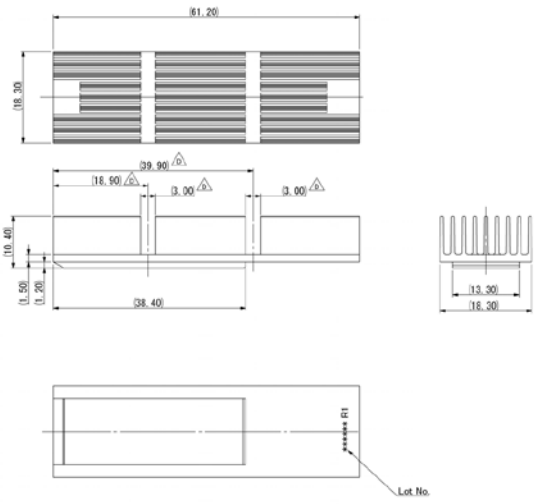
MATERIALS AND FINISH

Cage:	Stainless, Degreasing
Heatsink:	Aluminium, Anodizing Treatment
Clip:	Stainless, Degreasing

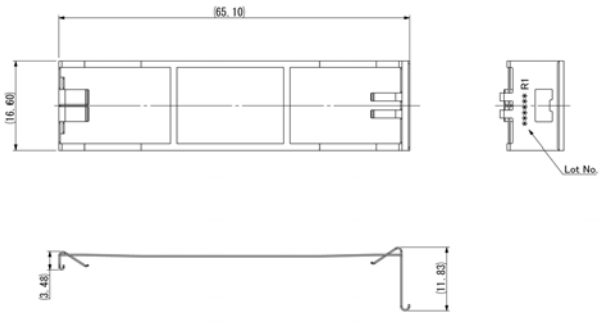
OUTLINE DIMENSIONS CAGE



OUTLINE DIMENSIONS HEATSINK



OUTLINE DIMENSIONS CLIP



OSFP HOST CONNECTOR

PART NUMBER HOST CONNECTOR

CN176S-060-0001

PART NUMBER CAGE

CN176C-060-0001

SPECIFICATIONS

Operating Temp. Range:	- 20° to 85° C
Durability:	100 cycles

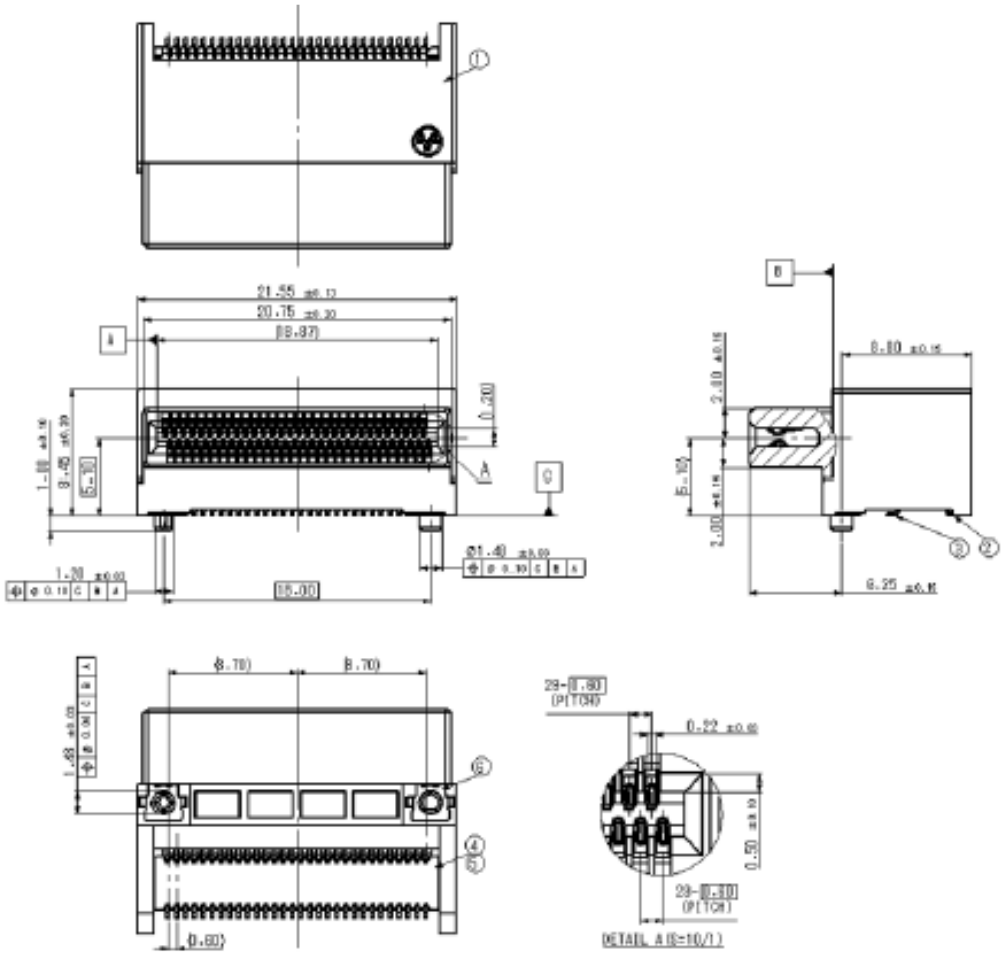
FEATURE

- High speed up to 200Gbps (NRZ) 400Gbps (PAM4)

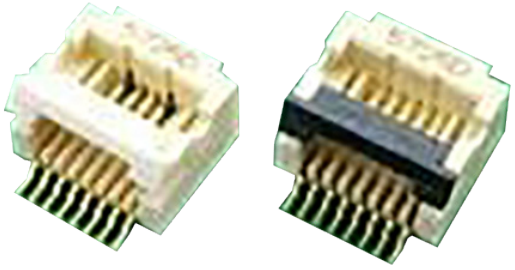
MATERIALS AND FINISH

Contact:	Copper Alloy
Contact area:	Ni-Au
Soldering area:	Sn
Insulator:	LCP

OUTLINE DIMENSIONS CN176S-060-0001



HIGH SPEED FPC CONNECTOR



PART NUMBER ACTUATOR WHITE
CN132R-008-0001

PART NUMBER ACTUATOR BLACK
CN132T-008-0001

SPECIFICATIONS

Voltage:	120V AC
Current rating:	0,57A DC : power supply contact (+3,3V)
Operating temperature:	-55 to +85 °C
Mating cycle:	10 cycles max.

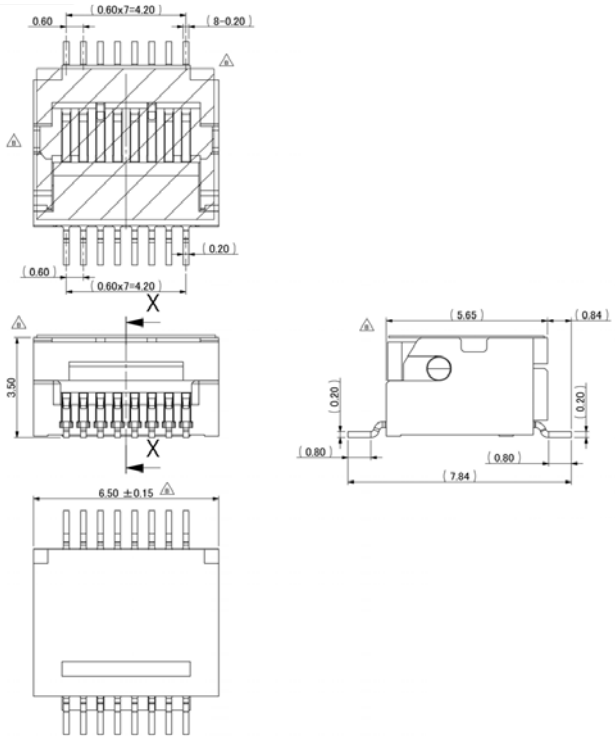
FEATURES

- 8pins FPC connector, 28Gbps transmission capability
- Flip lock type
- Easy recognition by colour variation

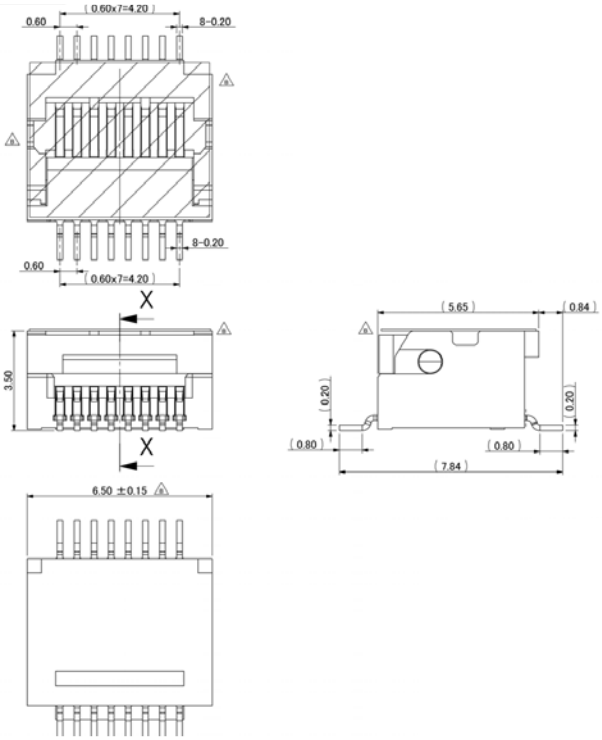
MATERIALS AND FINISH

Insulator:	LCP
Contact:	PB
Contact area:	Ni-Au

OUTLINE DIMENSIONS CN132R-008-0001



OUTLINE DIMENSIONS CN132T-008-0001



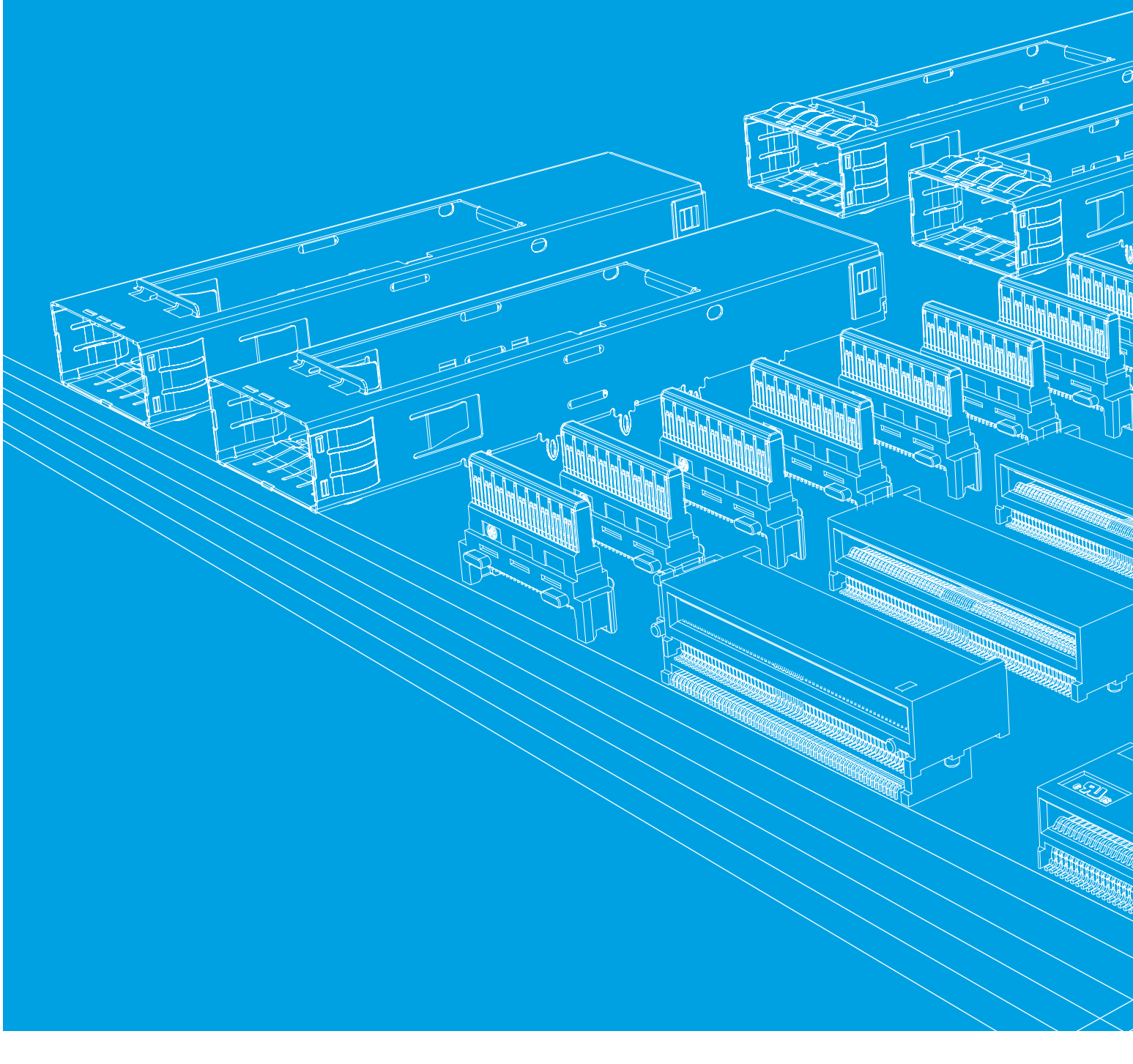
CFP FAMILY

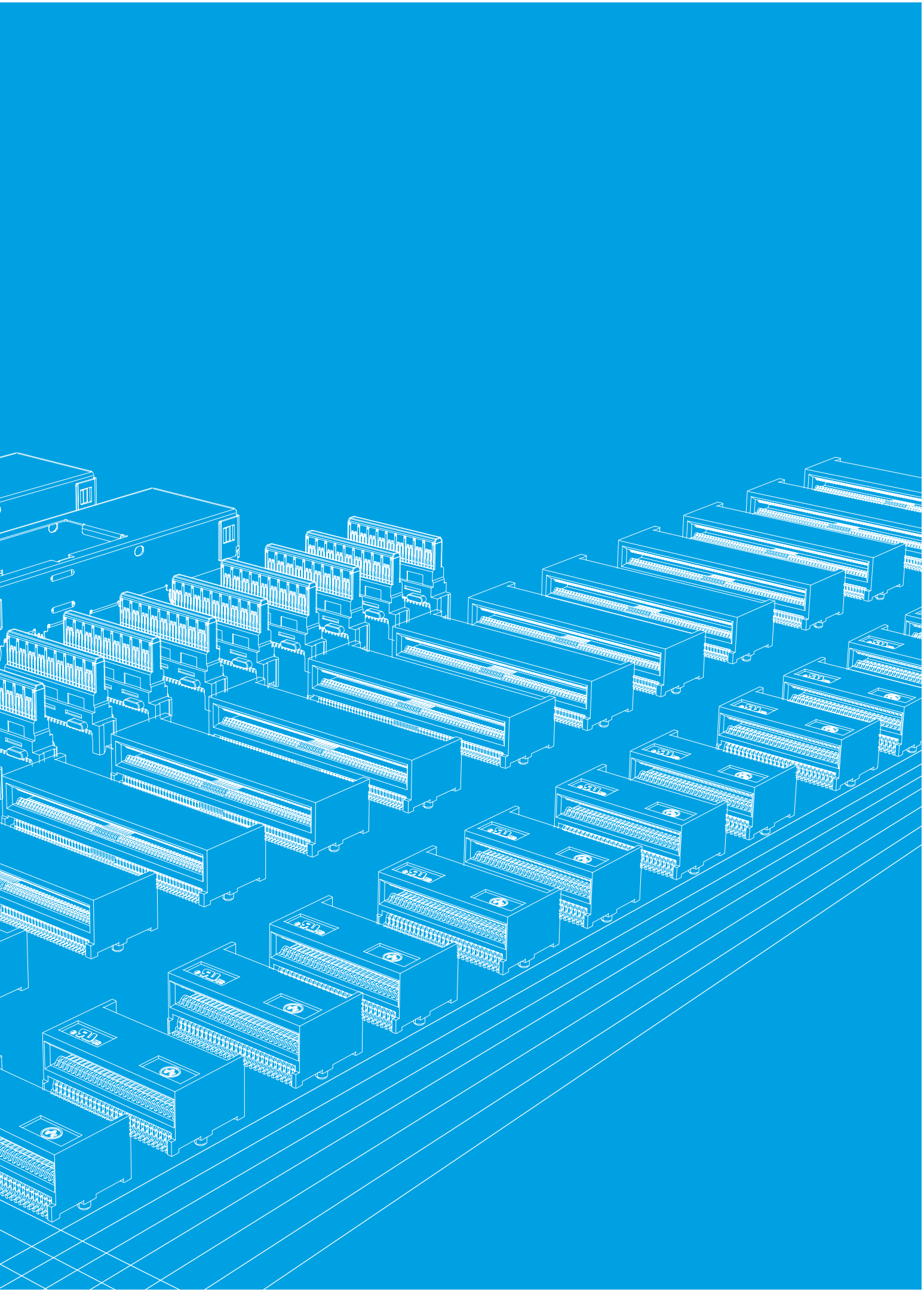
CFP8

CFP4

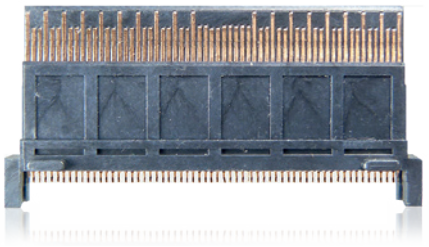
CFP2

CFP





CFP8 PLUG CONNECTOR



PART NUMBER PLUG

CN168 P - 124 - 000*

- Series
- P = Plug (Straddle Mount Type)
- No. of Contacts
- 1 = 1,0mm PCB thickness

SPECIFICATIONS

Voltage Rating:	31.5V AC
Operating Temp. Range:	-55°C to +85°C
Contact Resistance:	10 m ohm max raised at max.100mA and max. 20 mV.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

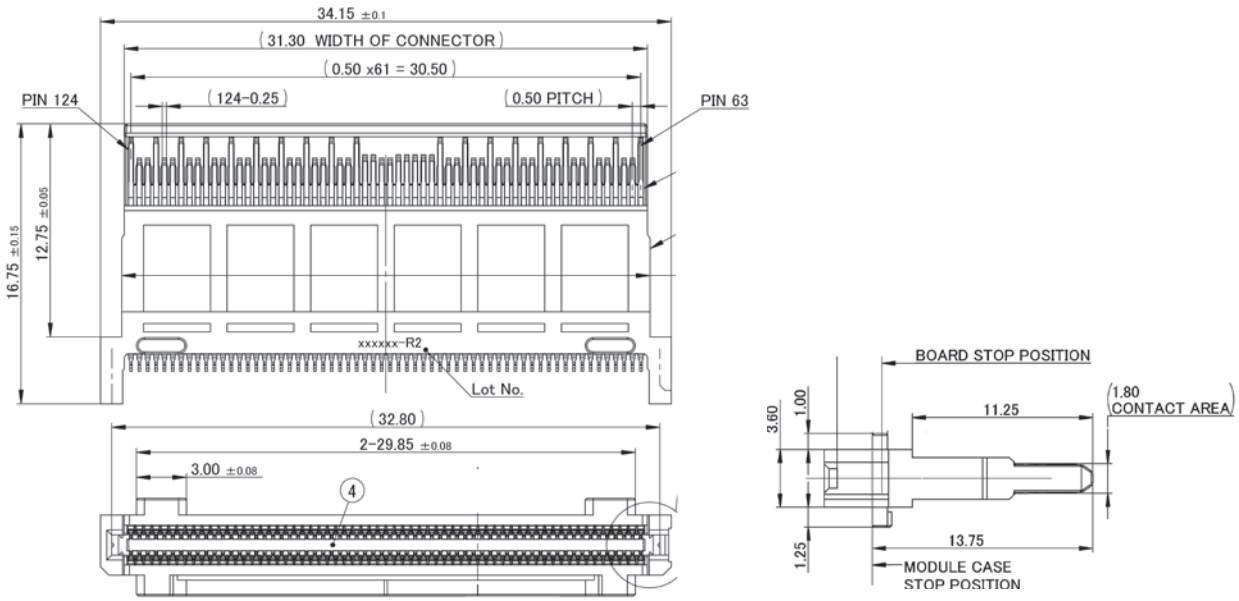
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au

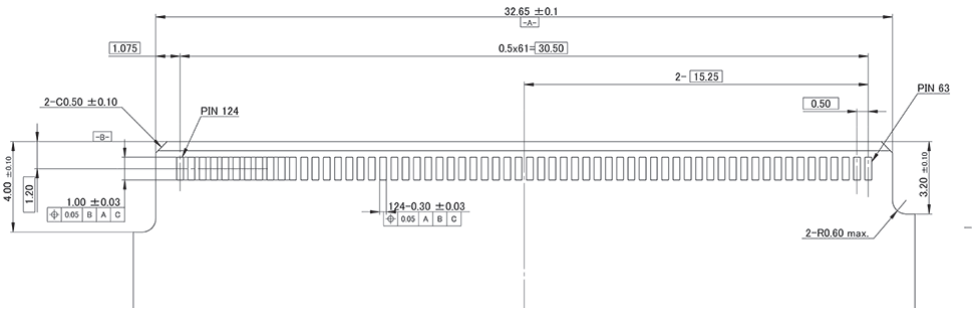
FEATURES

- High-speed transmission: 400G 28 Gbps/ch x 16 ch
- Pitch: 0.5 mm
- PCB thickness:1.0 mm, and other
- Pin count:124 pins
- Same size with CFP2, but 4x higher performance
- First connector in the world for 400 Gbps Ethernet
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

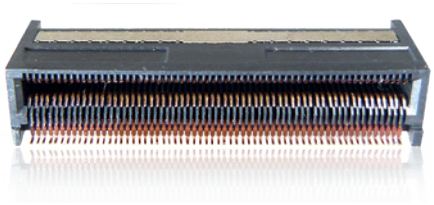
OUTLINE DIMENSIONS - CN168P-124-0001 PLUG



RECOMMENDED PCB LAYOUT



CFP8 HOST CONNECTOR (SMT)



PART NUMBER HOST CONNECTOR

CN168 S - 124 - 0001

- CN168 — Series
- S = Host (Surface Mount Type)
- 124 — No. of Contacts
- 0001

SPECIFICATIONS

Voltage Rating:	31.5 V AC
Operating Temp. Range:	-55°C to +85°C
Contact Resistance:	10 m ohm max raised at max.100 mA and max.20 mV.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

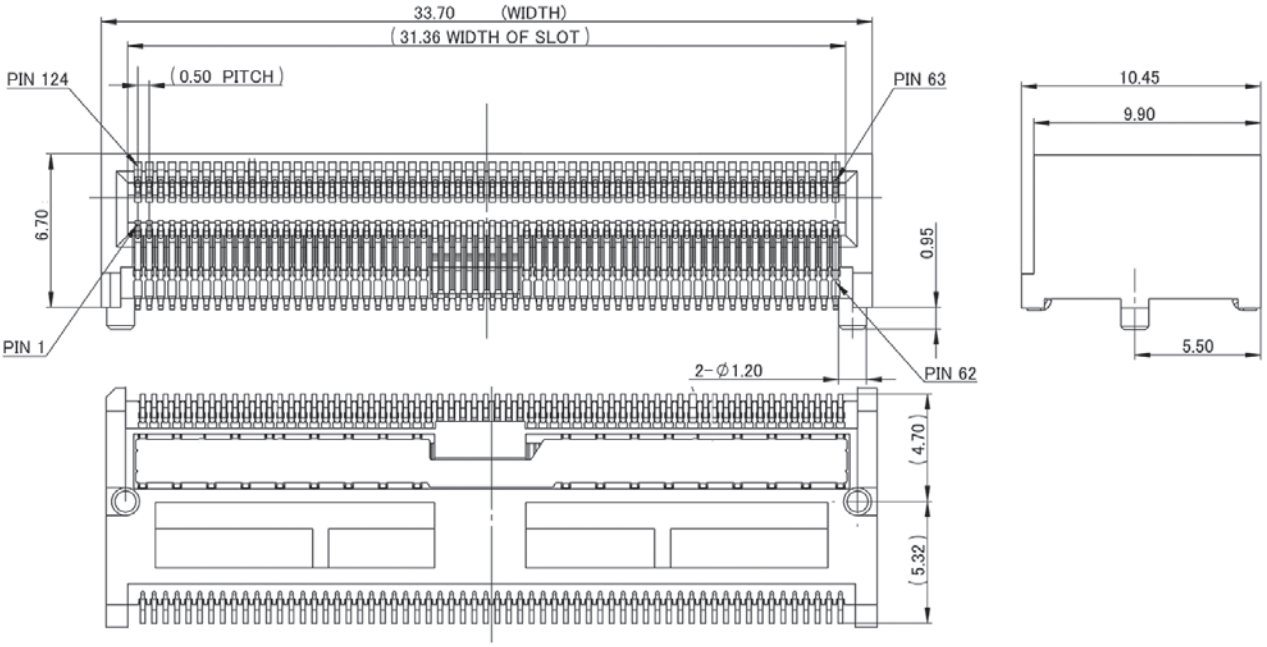
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au

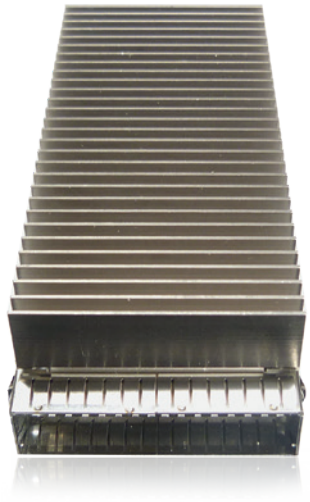
FEATURES

- High speed transmission: 400 G 28 Gbps/ch x 16 ch
- Pitch: 0.5 mm
- Pin count:124 pins
- Same size with CFP2, but 4x higher performance
- First connector in the world for 400 Gbps Ethernet
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS - CN1685-124-0001 HOST CONNECTOR



CFP8 MECHANICAL PARTS



PART NUMBER MECHANICAL COMPONENTS

CN168 - * - 124 - 000 *

- Series
- G = Connector Cover
  C = Cage (with EMI Finger)
- No. of Contacts
- 1 = Dual Slot (MSA Standard) 2 = Single Slot

PART NUMBER HEATSINK

CN168 - F - 124 - 000*

- Series
- F = Heatsink
- No. of Contacts
- 1 = side to side fin type
  4 = front to back fin type

SPECIFICATIONS

Operating Temp. Range:	- 55° to 85°C
Plug-in Force:	80 N max.
Pull-out Force:	80 N max.
Test Standard:	EIA-364

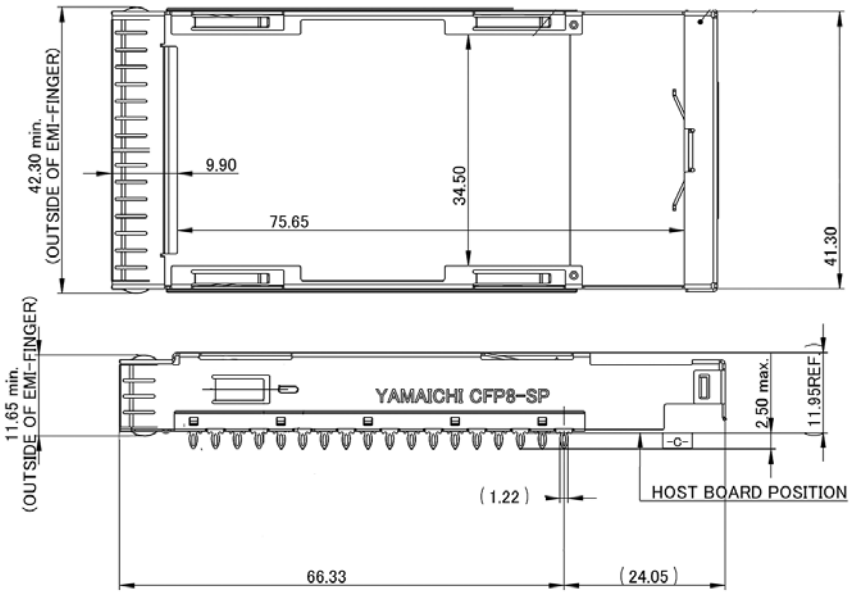
MATERIALS AND FINISH

Cage:	Stainless Steel, Degreasing
Connector Cover:	Zinc Alloy, Cu-Ni
Gasket:	Urethane, Silicone
Screw:	Stainless Steel
Heatsink:	Aluminium

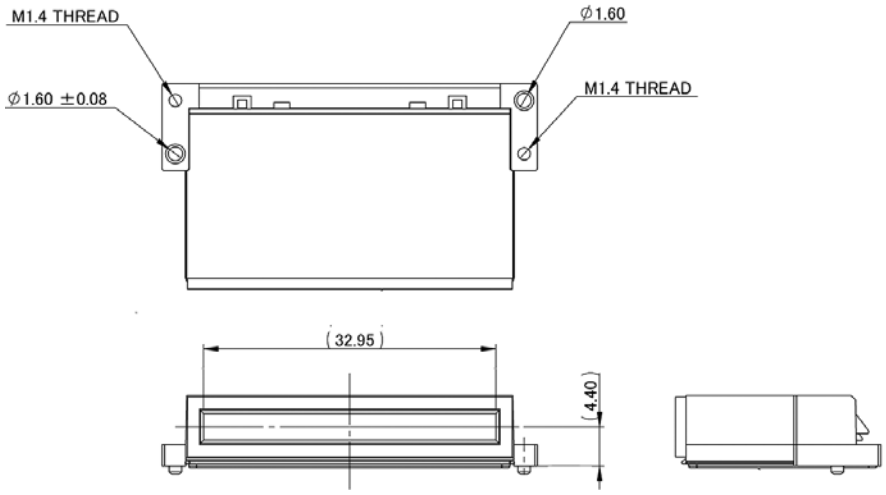
FEATURES

- Dual slot: MSA standard
- Complete kit for dual slot requires 1 x dual cage, 1 x dual cover, 2 x heatsink
- Complete kit for single slot requires 1x single cage, 1 x single cover, 1 x heatsink
- Clipless design to fold heatsink
- Optional sealing on bottom of cage for insulation via kapton tape
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

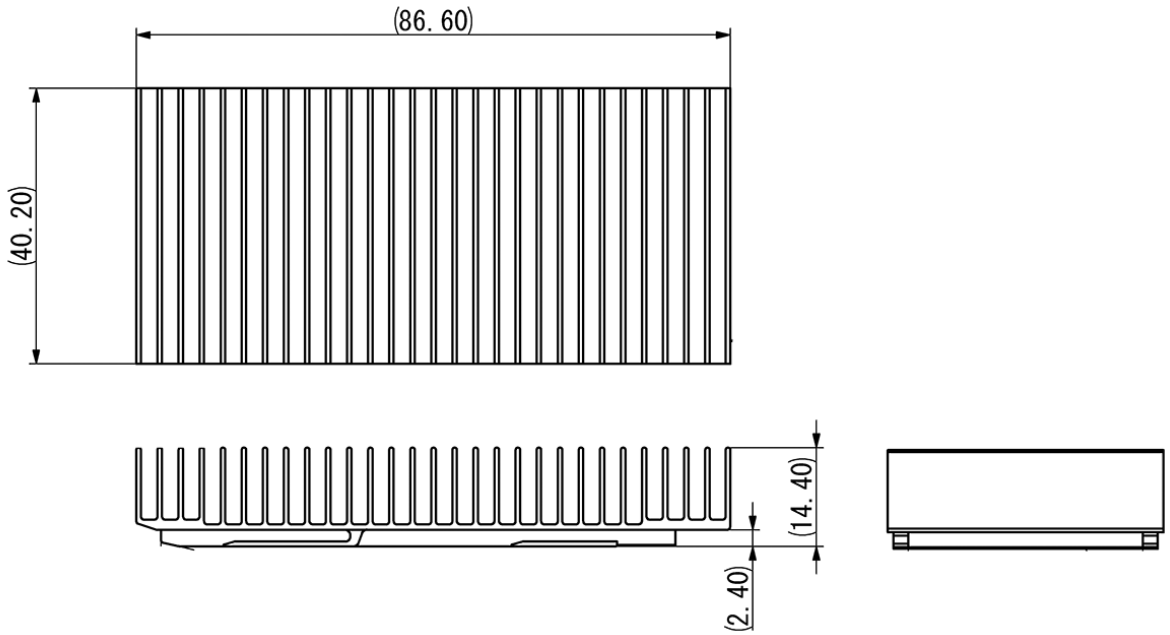
OUTLINE DIMENSIONS - CN168C-124-0002 CAGE



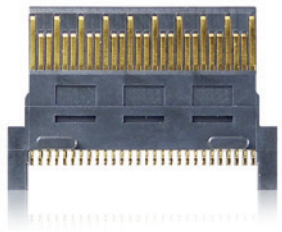
OUTLINE DIMENSIONS - CN168G-124-0002 COVER



OUTLINE DIMENSIONS - CN168F-124-0001 HEATSINK



CFP4 PLUG CONNECTOR



PART NUMBER PLUG CONNECTOR

CN121P - 056 - 0004

- Series
- Plug (Straddle Mount Type)
- No. of Contacts

SPECIFICATIONS

Voltage Rating:	31.5 VAC
Contact Resistance:	10 m ohm max raised at max. 100 mA and max.20 mV.
Operating Temp. Range:	-55°C to +85°C
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

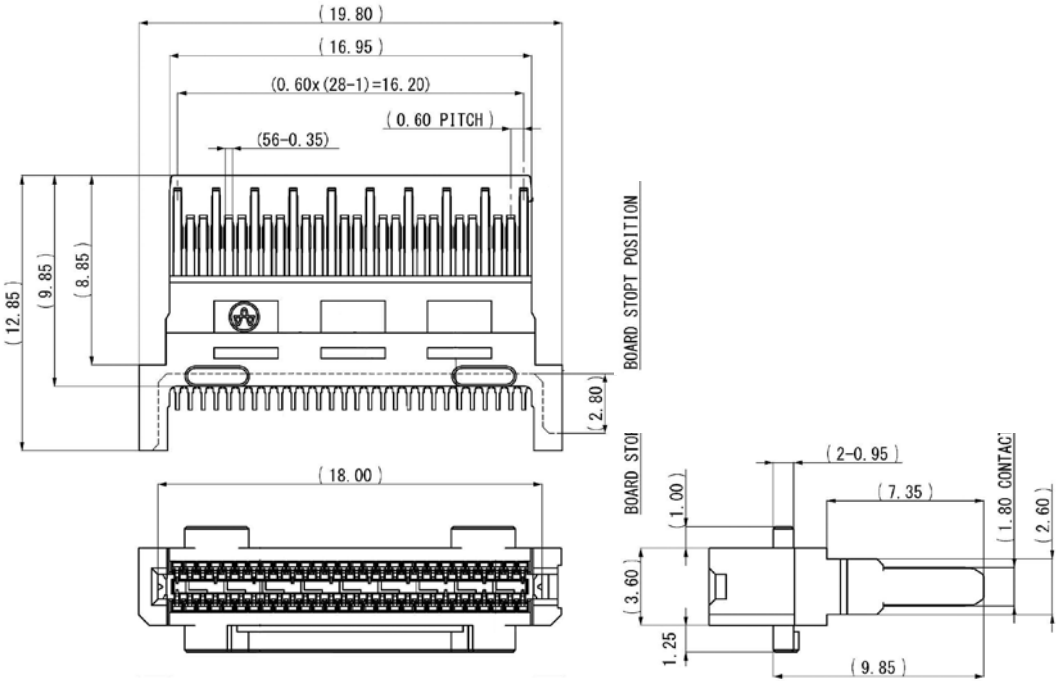
FEATURES

- High-speed transmission:100 G 28 Gbps/ch x 4 ch
- Pitch: 0.6 mm
- PCB thickness:1.0 mm, and other
- Pin count: 56 pins
- Dust cap available for EMI protection
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

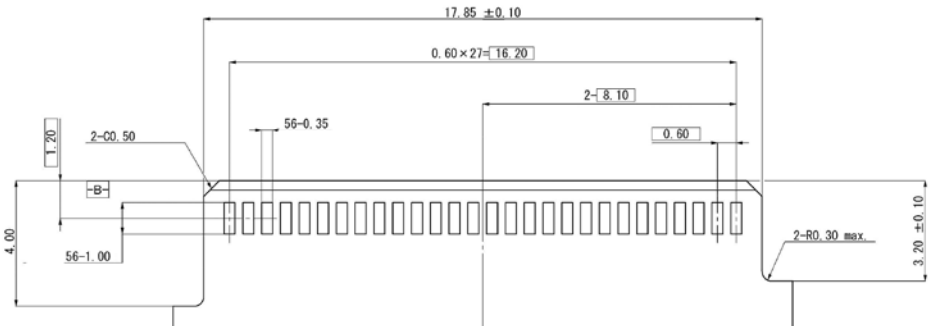
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au

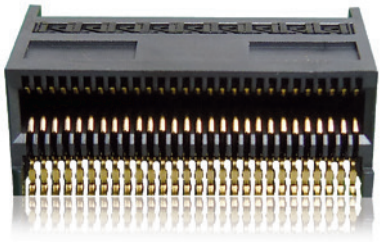
OUTLINE DIMENSIONS - CN121P-056-0004



RECOMMENDED PCB LAYOUT



CFP4 HOST CONNECTORS



PART NUMBER HOST CONNECTOR

CN1215 - 056 - *00*

- Series
- Plug (Straddle Mount Type)
- No. of Contacts
- 0001 = 28G
  1001 = CFP4 ACO

SPECIFICATIONS

Voltage Rating:	31.5 VAC
Contact Resistance:	10 m ohm max raised at max. 100 mA and max.20 mV.
Operating Temp. Range:	-55°C to +85°C
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

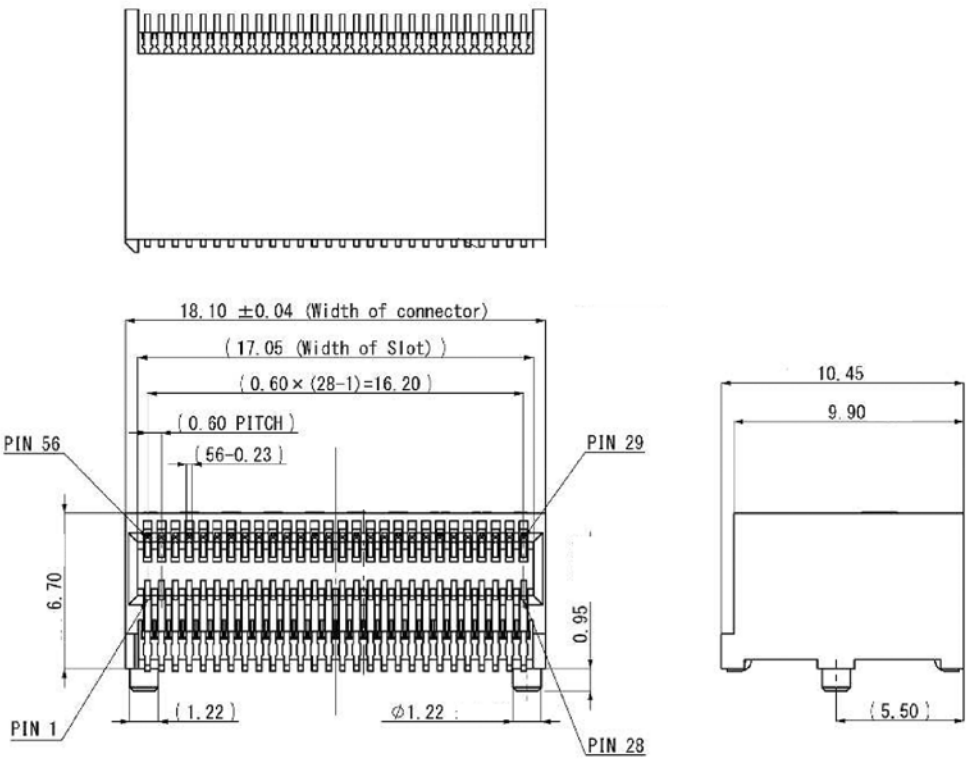
FEATURES

- High speed transmission:100 G 28Gbps/ch x 4 ch
  56Gbps per channel is also available for ACO
- Pitch: 0.6 mm
- Pin count: 56 pins
- Dust cap available for EMI protection
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006
- Plan to launch connector for CFP4ACO (Analog Coherent) module

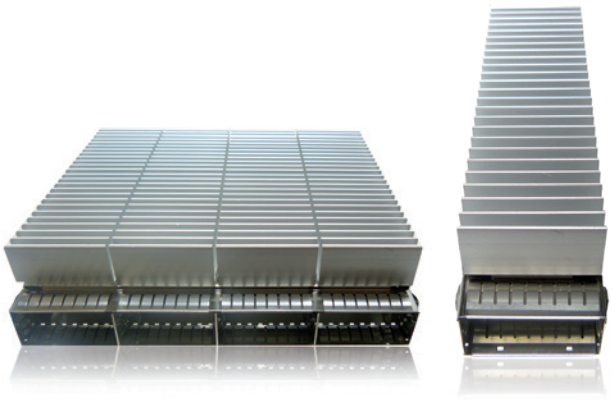
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au

OUTLINE DIMENSIONS - CN1215-056-0001



CFP4 MECHANICAL COMPONENTS



PART NUMBER MECHANICAL COMPONENTS

CN121 - * - 056 - 000 *

- Series
- G = Connector Cover, C = Cage
- No. of Contacts
- 1 = Quad Slot (MSA Standard) 2 = Single Slot

PART NUMBER HEATSINK

CN121 - F - 056 - 000 *

- Series
- F = Heatsink
- No. of Contacts
- 1 = Side-to-Side 2 = Front-to-Back

SPECIFICATIONS

Operating Temp. Range:	-55°C to +85°C
Plug-in force:	50 N max.
Pull-out force:	30 N max.
Test Standard:	EIA-364

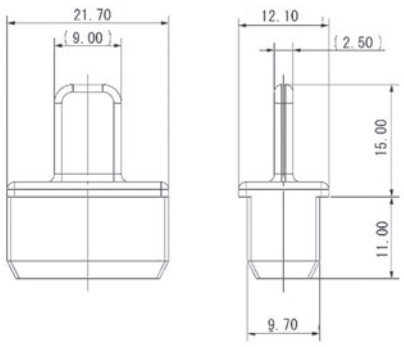
MATERIALS AND FINISH

Cage:	Stainless Steel, Degreasing
Connector Cover:	Zinc Ni-Cu
Gasket:	Silicone
Screw:	Stainless Steel, Degreasing
Heatsink:	Aluminium, Anodizing Treatment

FEATURES

- Quad slot: MSA standard
- Complete kit for quad slot requires 1 x quad cage, 1 x quad cover, 4 x heatsink
- Complete kit for single slot requires 1x single cage, 1 x single cover, 1 x heatsink
- Clipless design to fold heatsink
- Press fit tool available for cage
- Dust cap available for EMI protection
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS - CN121D-056-0003



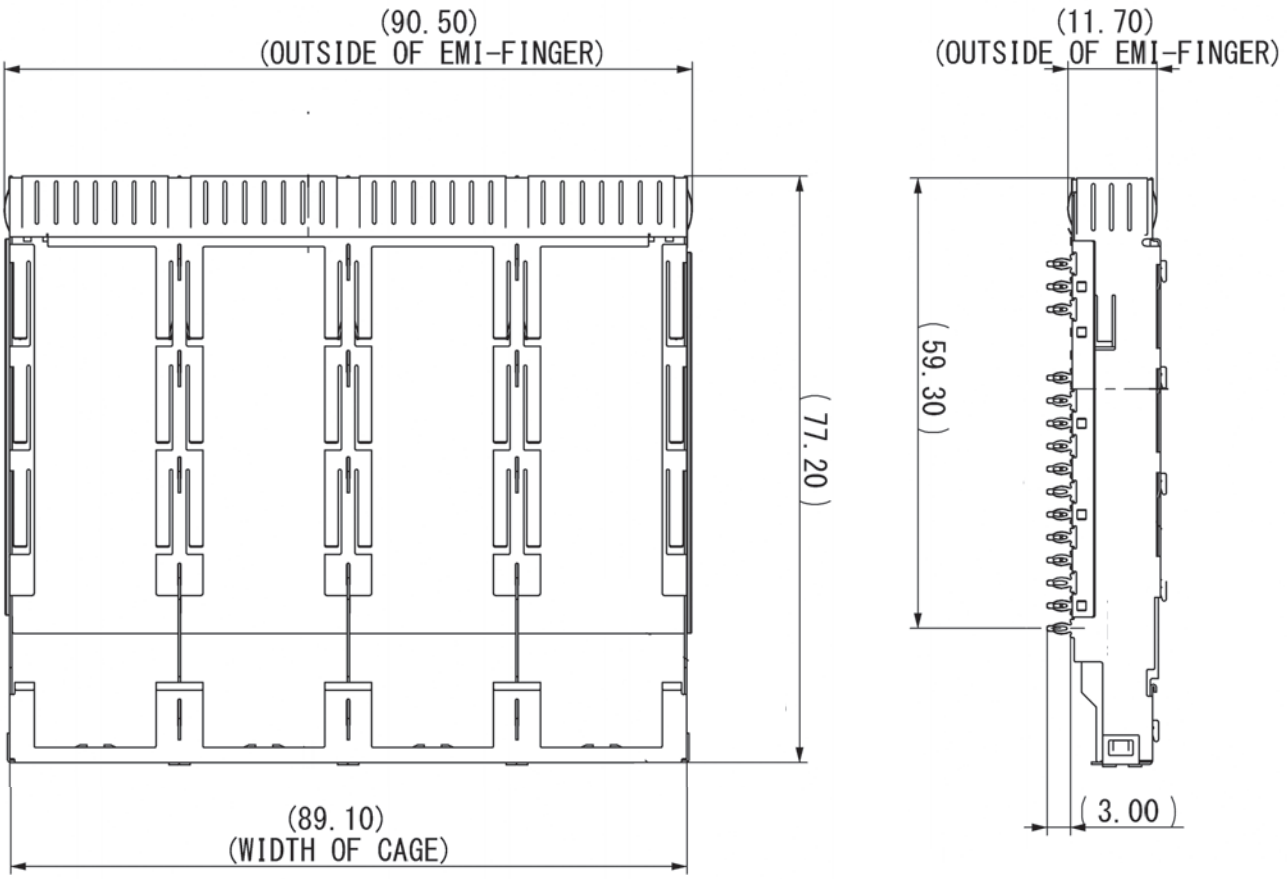
PART NUMBER DUST CAP

CN121D - 056 - 000 3

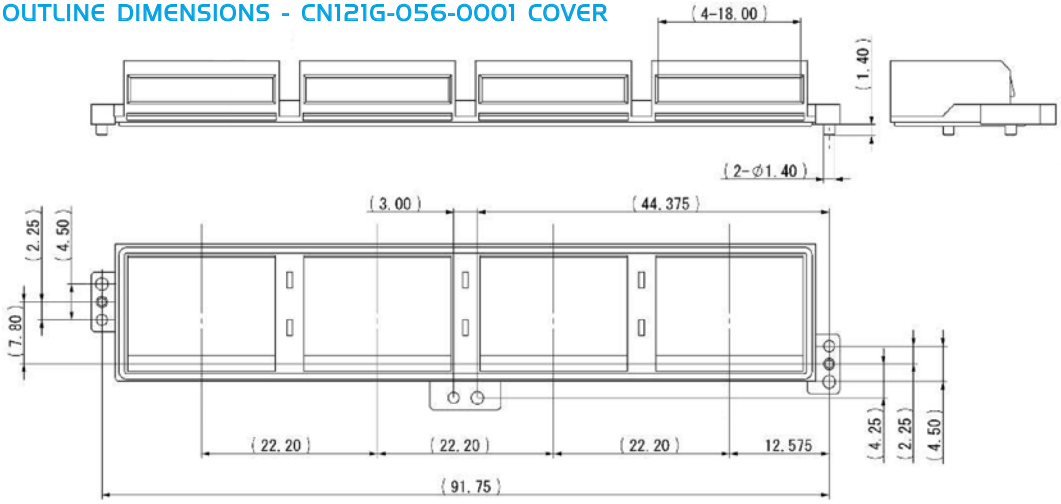
- Series
- Design No.
- 3 = Dust Cap

CFP4 MECHANICAL COMPONENTS

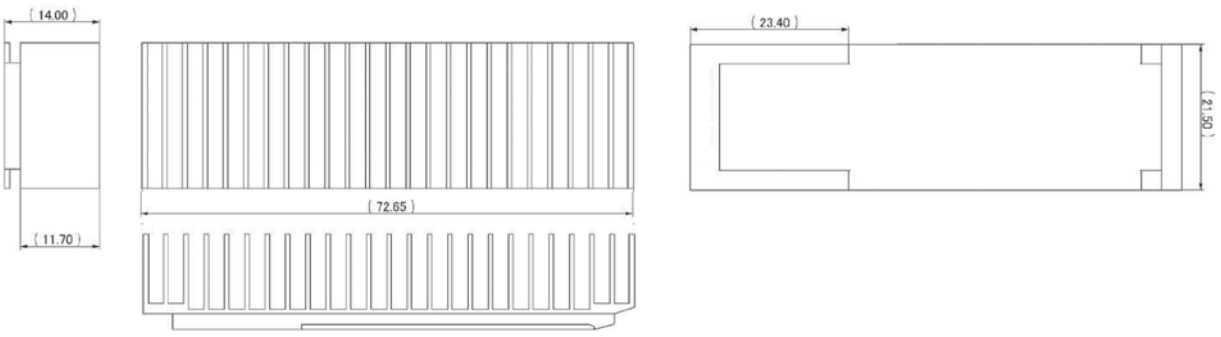
OUTLINE DIMENSIONS - CN121C-056-0001 CAGE



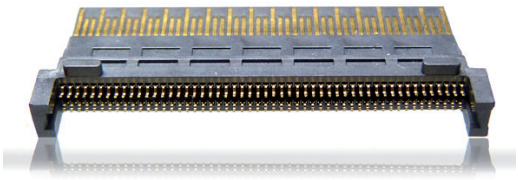
OUTLINE DIMENSIONS - CN121G-056-0001 COVER



OUTLINE DIMENSIONS - CN121F-056-0001 HEATSINK



CFP2 PLUG CONNECTOR



PART NUMBER PLUG

CN121 P - 104 - *00*

- Series
- P = Plug (Straddle Mount Type)
- No. of Contacts
- Plug (Straddle Mount Type)
  - 0003 = 28 Gbps
  - 1003 = CFP2 ACO (Analog Coherent Optics)
  - 2003 = CFP2 DCO (Digital Coherent Optics)

SPECIFICATIONS

Voltage Rating:	31.5 VAC
Contact Resistance:	10 m ohm max raised at max. 100 mA and max.20 mV.
Operating Temp. Range:	-55°C to +85°C
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

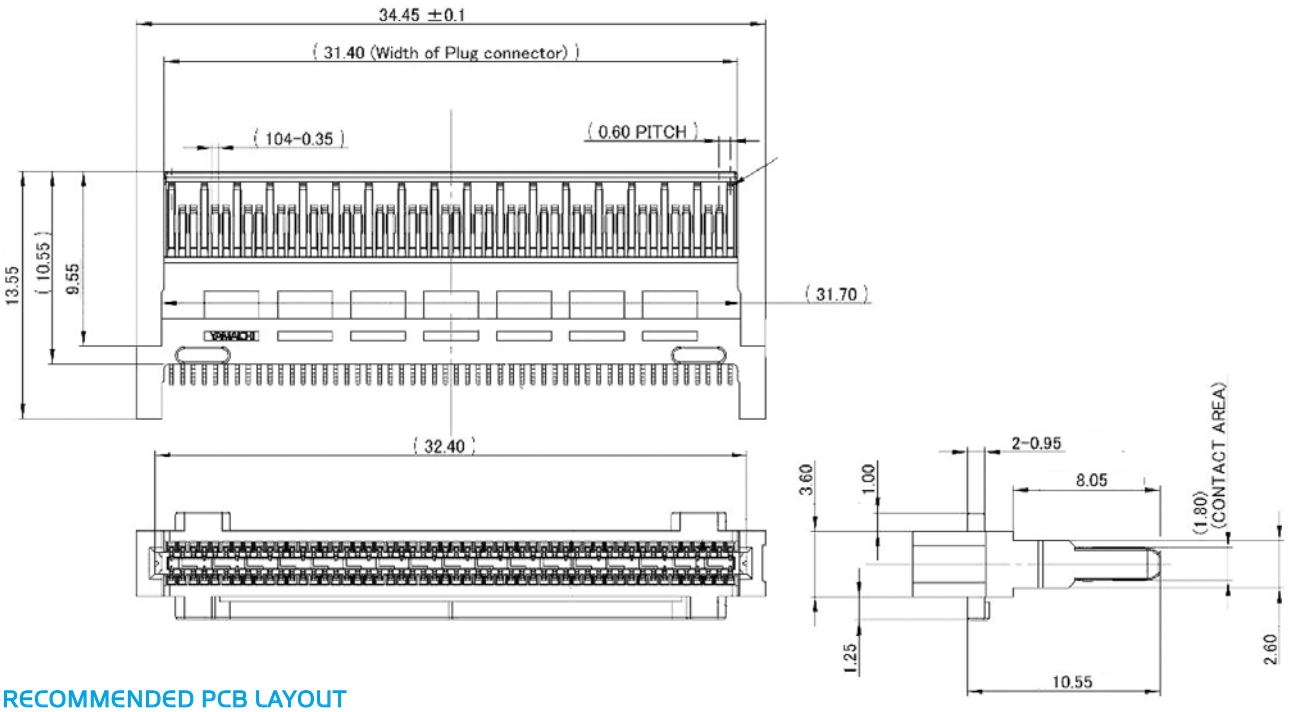
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au

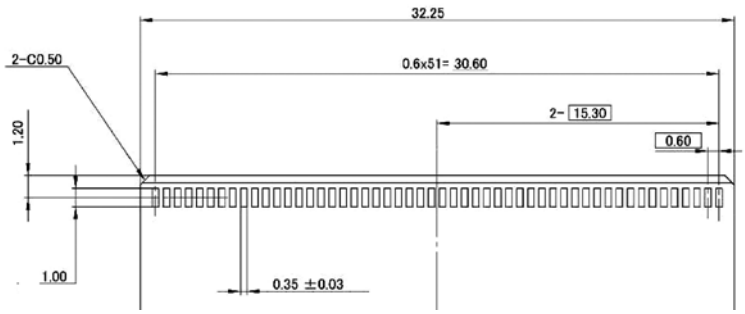
FEATURES

- 2 variations to transmit high speed:
  - 100 G 28 Gbps/ch x 4 ch
  - 56 -64 Gpbs per channel is also available for ACO
- Pitch: 0.6 mm
- PCB thickness:1.0 mm, and other
- Pin count: 104 pins
- Dust cap and dummy module available for EMI protection
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

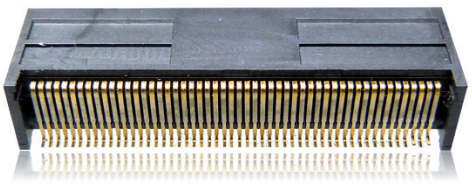
OUTLINE DIMENSIONS - CN121P-104-*00*



RECOMMENDED PCB LAYOUT



CFP2 HOST CONNECTOR



PART NUMBER HOST CONNECTOR

CN121 S - 104 - *00*

- Series
- S = Host (Surface Mount Type)
- No. of Contacts
- 0001 = 28 Gbps
- 0002 = 28 Gbps, 400 pcs. in Reel
- 1001 = CFP2ACO (Anaolg coherent optics)
- 2001 = CFP2DCO (Digital coherent optics)

SPECIFICATIONS

Voltage Rating:	31.5 VAC
Contact Resistance:	10 m ohm max raised at max. 100 mA and max.20 mV.
Operating Temp. Range:	-55°C to +85°C
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

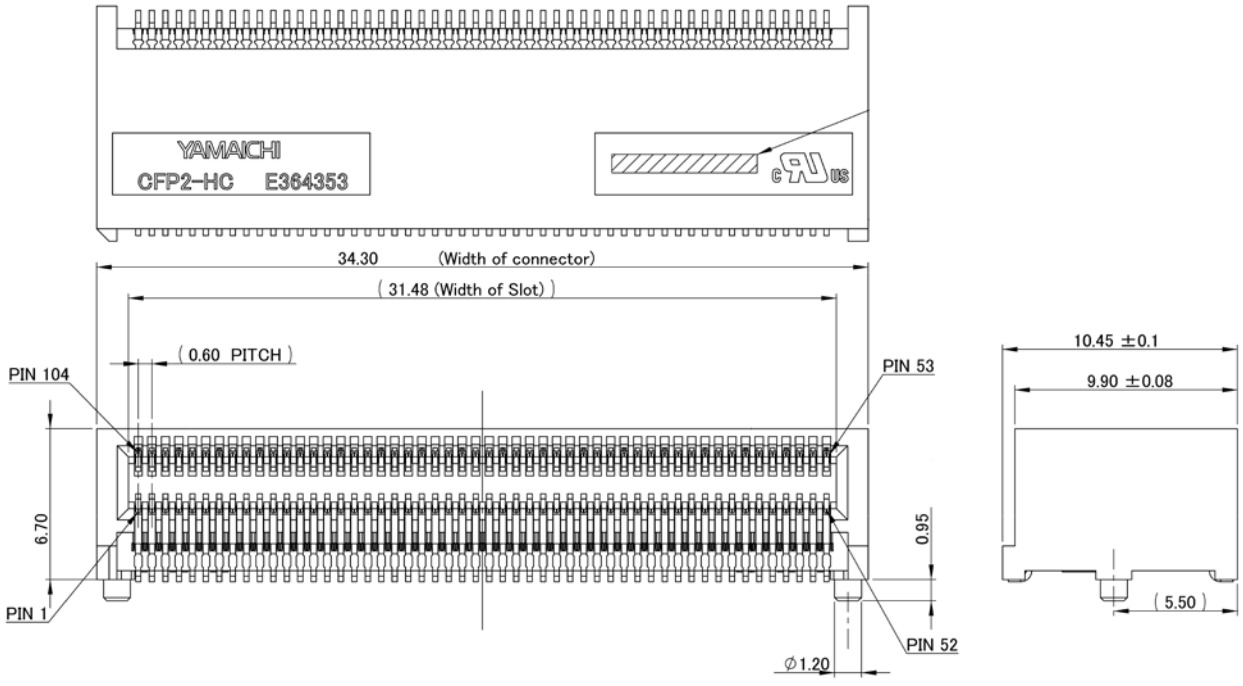
FEATURES

- 2 variations to transmit high speed:
  - 100 G 28 Gbps/ch x 4 ch
  - 56 -64 Gpbs per channel also available for ACO and DCO
- Pitch: 0.6 mm
- Pin count: 104 pins
- Dust cap and dummy module available for EMI protection
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

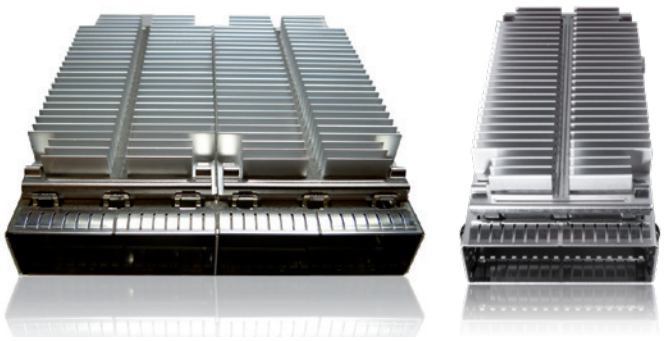
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au

OUTLINE DIMENSIONS - CN121S-104-*00*



CFP2 MECHANICAL COMPONENTS



PART NUMBER MECHANICAL COMPONENTS

CN121 - * - 104 - 000 *

- Series
- G = Connector Cover, C = Cage
- No. of Contacts
- 1 = Dual Slot (MSA Standard) 2 = Single Slot

PART NUMBER FOR HEATSINK AND CLIP

CN121 - * - 104 - 000 *

- Series
- F = Heatsink M = Clip
- No. of Contacts
- For Heatsink 1 = Side-to-Side 2 = Front-to-Back
  For Clip = 8

SPECIFICATIONS

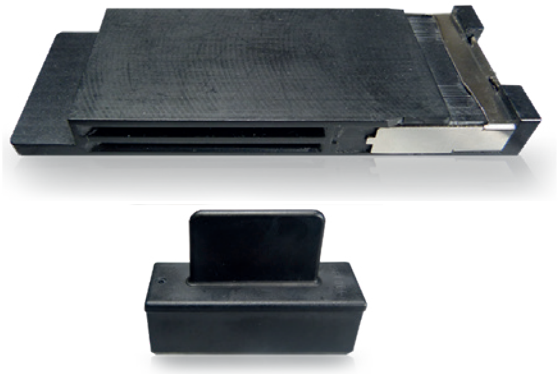
Operating Temp. Range:	-55°C to +85°C
Plug-in Force:	55 N max.
Pull-out Force:	15 N min.
Test Standard:	EIA-364

MATERIALS AND FINISH

Cage:	Stainless Steel, Degreasing Nickel Silver
Connector Cover:	Zinc, Ni-Cu
Gasket:	Silicone
Screw:	Stainless Steel, Degreasing
Heatsink:	Aluminium, Anodizing Treatment
Clip:	Stainless Steel, Degreasing
Accessories:	LCP (conductive material)

FEATURES

- Dual slot: MSA standard
- Complete kit for dual slot requires 1 x dual cage, 1 x dual cover, 2 x heatsink and 2 x clip
- Complete kit for single slot requires 1x single cage, 1 x single cover, 1 x heatsink and 1 x clip
- Optional sealing on bottom of cage for insulation via kapton tape

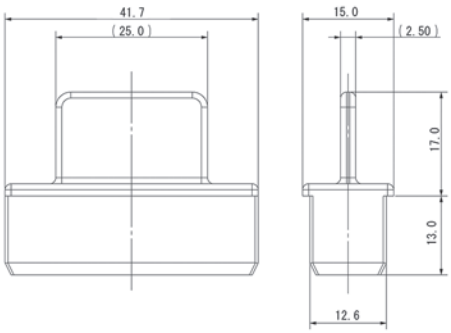


PART NUMBER DUMMY MODULE & DUST CAP

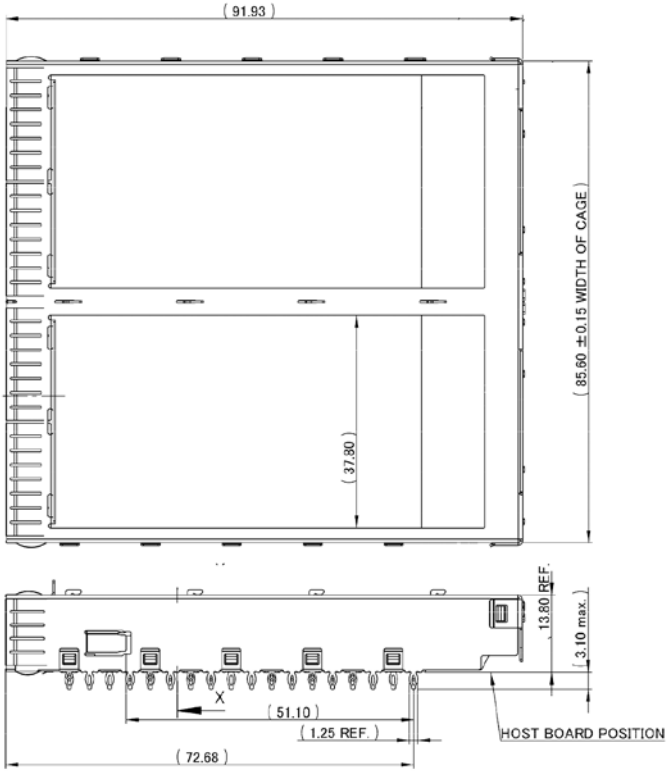
CN121D - 104 - 000 *

- Series
- Design No.
- 1 = Dummy Module 2 = Dust Cap

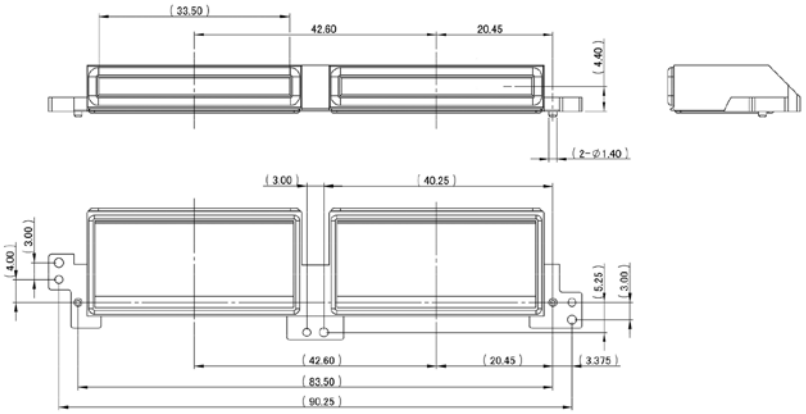
OUTLINE DIMENSIONS - CN121D-104-0001



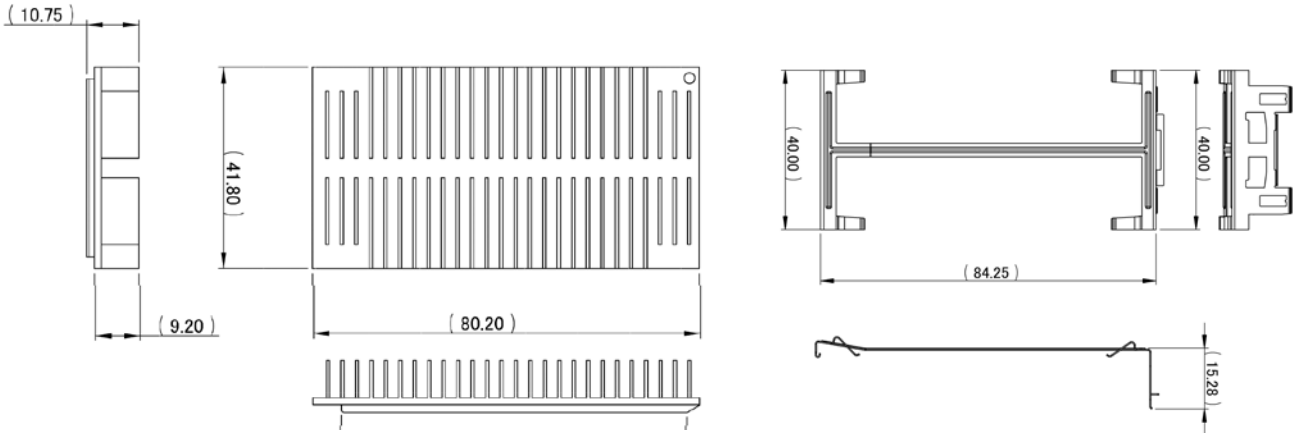
OUTLINE DIMENSIONS - CN121C-104-0001 CAGE



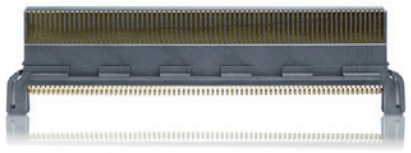
OUTLINE DIMENSIONS - CN121G-104-0001 COVER



OUTLINE DIMENSIONS - CN121F-104-0001 HEATSINK AND CN121M-104-0008 CLIP



CFP PLUG CONNECTOR



PART NUMBER PLUG

CA009 - P003 - 001

- Series
- Plug (Straddle Mount Type)

SPECIFICATIONS

Voltage Rating:	120 V
Contact Resistance:	10 m ohm max raised at max.100 mA and max.20 mV.
Operating Temp. Range:	-55°C to +85°C
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

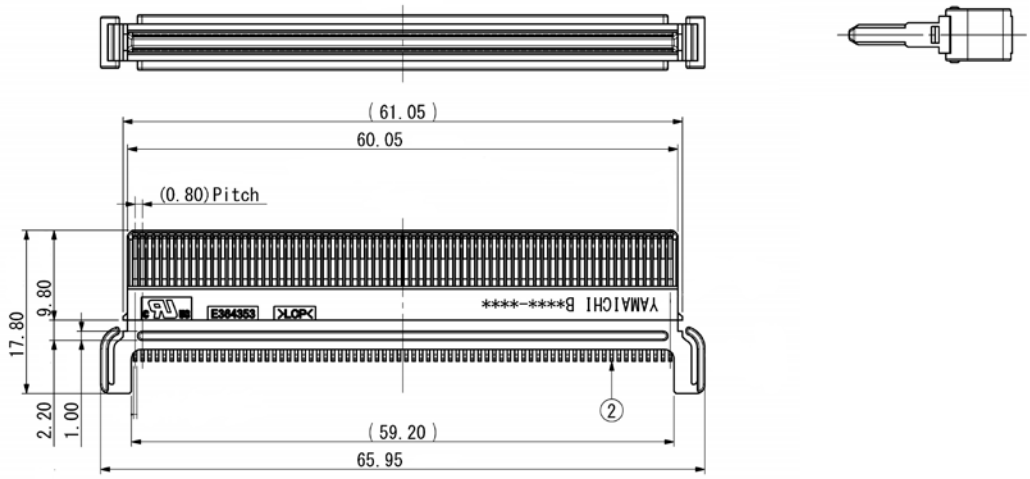
FEATURES

- High-speed transmission: 10 Gbps/ch, (for 40 Gbps/100 Gbps)
- Pitch: 0.8 mm
- Pin count:148 pins
- Heatsink with thermal interposer available for efficient thermal dissipation
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

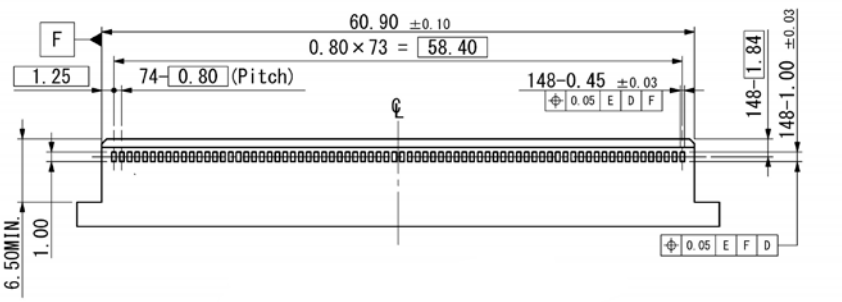
MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy, Ni-Au
Metal Parts:	Copper Alloy

OUTLINE DIMENSIONS - CA009-P003-001



RECOMMENDED PCB LAYOUT



CFP HOST CONNECTOR

PART NUMBER HOST CONNECTOR

CA009 - S001 - 001

- Series
- S = Host (Surface Mount Type)

SPECIFICATIONS

Voltage Rating:	120 V
Contact Resistance:	10 m ohm max raised at max.100 mA and max.20 mV.
Operating Temp. Range:	-55°C to +85°C
Soldering Profile:	Peak temp. 255 degree, 10 sec. 217 - 255 degree 90 sec. max.
Mating Cycles:	200 times max.
Test Standard:	EIA-364

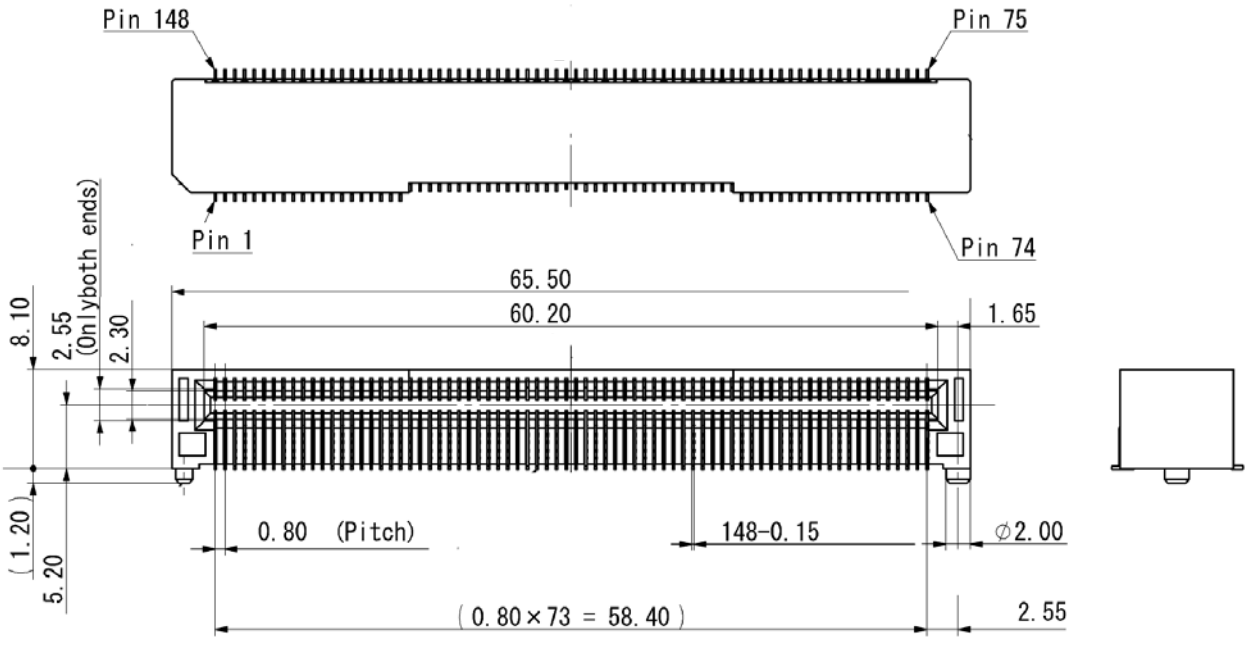
FEATURES

- High speed transmission: 10 Gbps/ch, (for 40 Gbps/100 Gbps)
- Pitch: 0.8 mm
- Pin count:148 pins
- Heatsink with thermal interposer available for efficient thermal dissipation
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

MATERIALS AND FINISH

Insulator:	LCP
Contacts:	Copper Alloy
Metal Parts:	CA009-S01-001

OUTLINE DIMENSIONS - CA009-S001-001



CFP MECHANICAL COMPONENTS

PART NUMBER MECHANICAL COMPONENTS

CA009 - **** - 001

- Series
- 1201 = Guide Rail
  1203 = External Bracket
  1204 = Backend Plate
  1400 = Host Connector Cover
- Design No.

PART NUMBER HEATSINK

CA009 - 1310 - 001

- Series
- Heatsink (MSA Standard)

CA009 - 1300 - 002

- Series
- Long Heatsink w. Thermal Interposer

SPECIFICATIONS

Operating Temp. Range:	-55°C to +85°C
Plug-in Force:	80 N max.
Pull-out Force:	80 N max.
Test Standard:	EIA-364

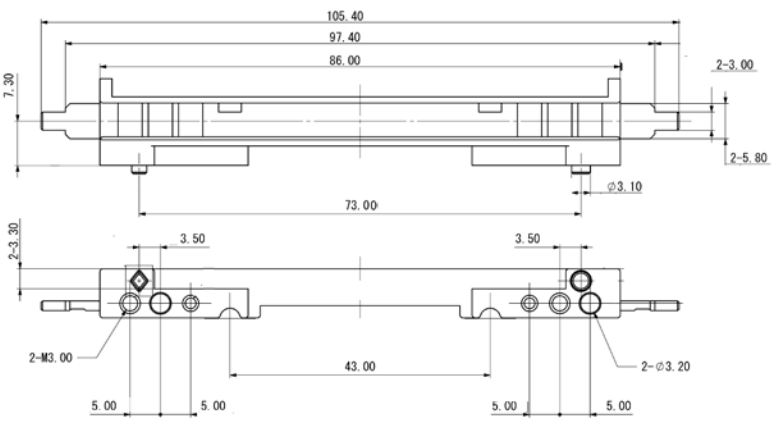
MATERIALS AND FINISH

Cage:	Stainless Steel
Guide Rail:	Zinc Alloy Ni
Connector Cover:	Zinc Alloy Cu-Ni
Screw:	Stainless
Backend Plate:	Zinc Alloy Ni
External Bracket:	Zinc Alloy Ni
Heatsink:	Aluminium Ni

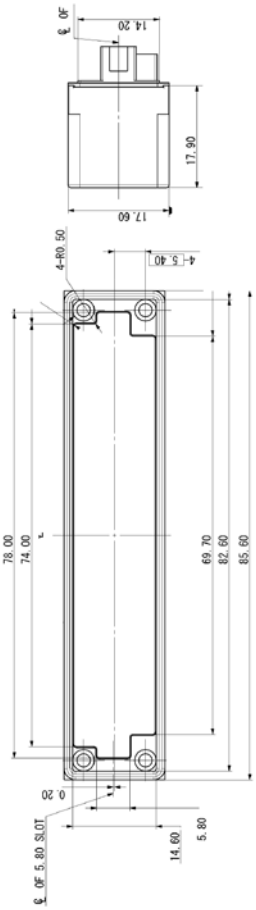
FEATURES

- Complete kit requires , 2 x guide rail, 1 x cover, 1 x backend plate, 1 x external bracket and 1 x heatsink
- Customer must prepare 2 pcs. x 3M screw/each guide rail and cover (total 6 pcs./kit)
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

OUTLINE DIMENSIONS - CA009-1201-001 GUIDE RAIL



OUTLINE DIMENSIONS - CA009-1203-001 EXTERNAL BRACKET



Y-FLEX CABLE

YFLEX is a fully customized flexible circuit cable. Yamaichi Electronics designed the layout to meet customer-specific requests such as transmission loss, data rate and dimensions. This cable can support the high-speed transmission requirements of the data networking market.

PART NUMBER

YF * - A*****

Series
A = Single Layer
B = Dual Layer

Design Number (internal only)

MATERIALS

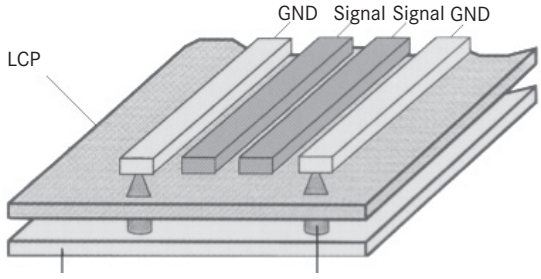
Insulator:	LCP
Conductive:	Copper foil
Bump to connected layers:	AG paste
Cover Layer:	Polymide
Adhesive:	Epoxy

FEATURES

- Available to transmit high-speed in Gbps with low loss
- Effective in the harshest temperature, humidity and EMI conditions
- Customized depending on layout and requirements
- Can match differential impedance
- RoHS2011/65/EU
- REACH conform according to EU Regulation 1907/2006

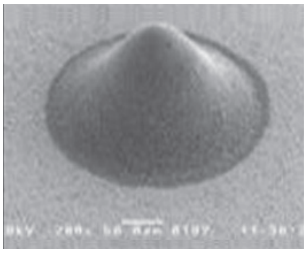
HIGH-SPEED TRANSMISSION STRUCTURE

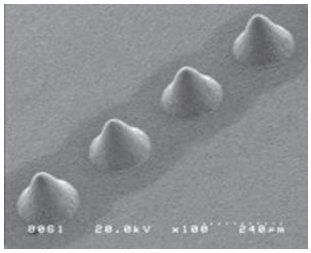
- LCP achieves transmission with low dielectric loss
- GND and copper film ground are connected with silver bumps which also protect from EMI



Copper Film Ground Bump

CLOSEUP IMAGE OF THE BUMP:





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HIGH-SPEED DATA NETWORKING SOLUTIONS

Version November 2018

TECHNICAL DATA ARE SUBJECT TO ALTERATION WITHOUT PRIOR NOTICE

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