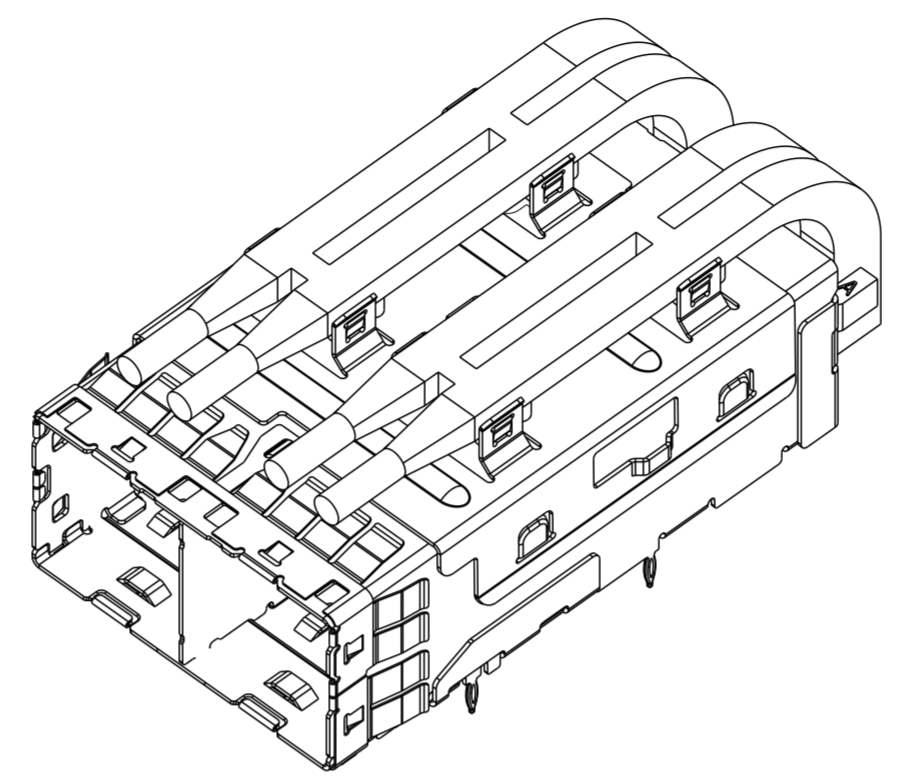
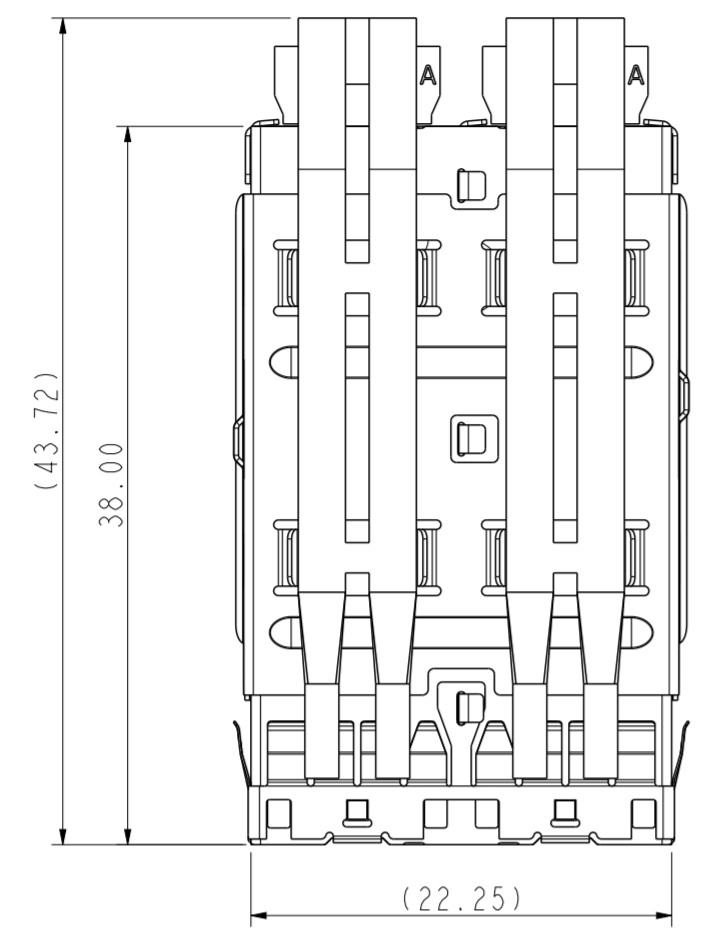


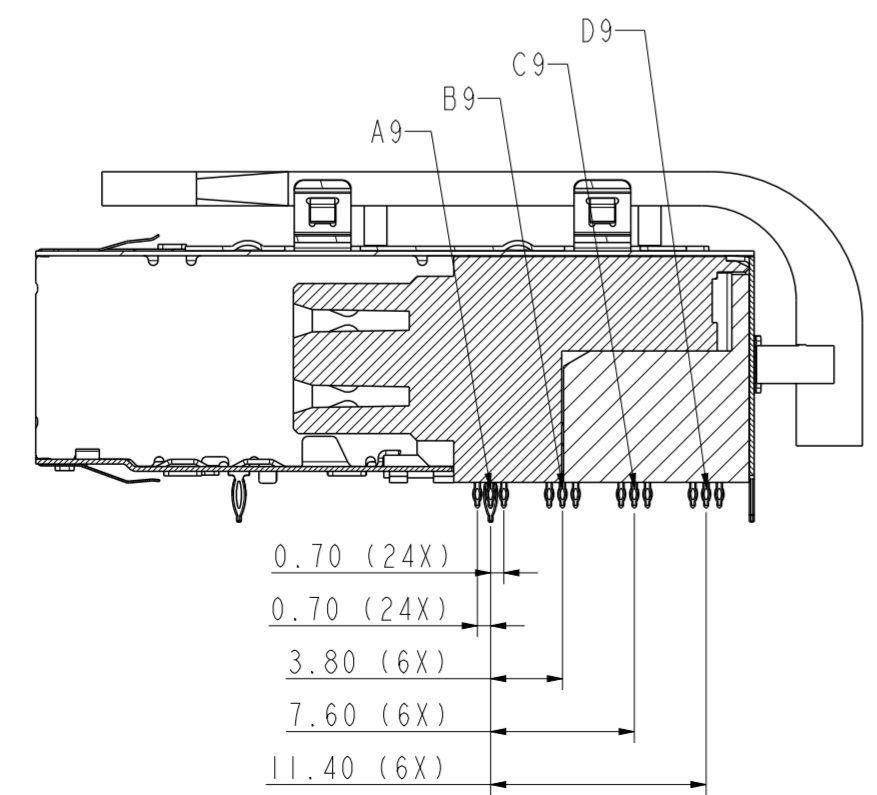
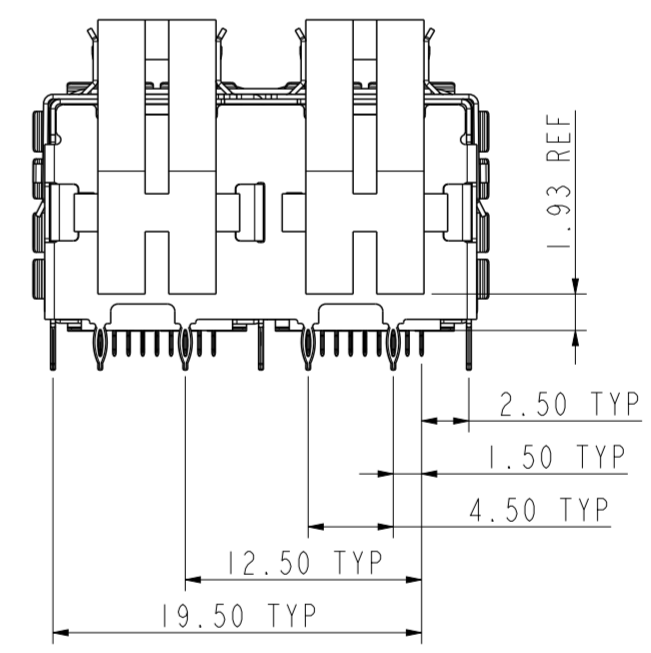
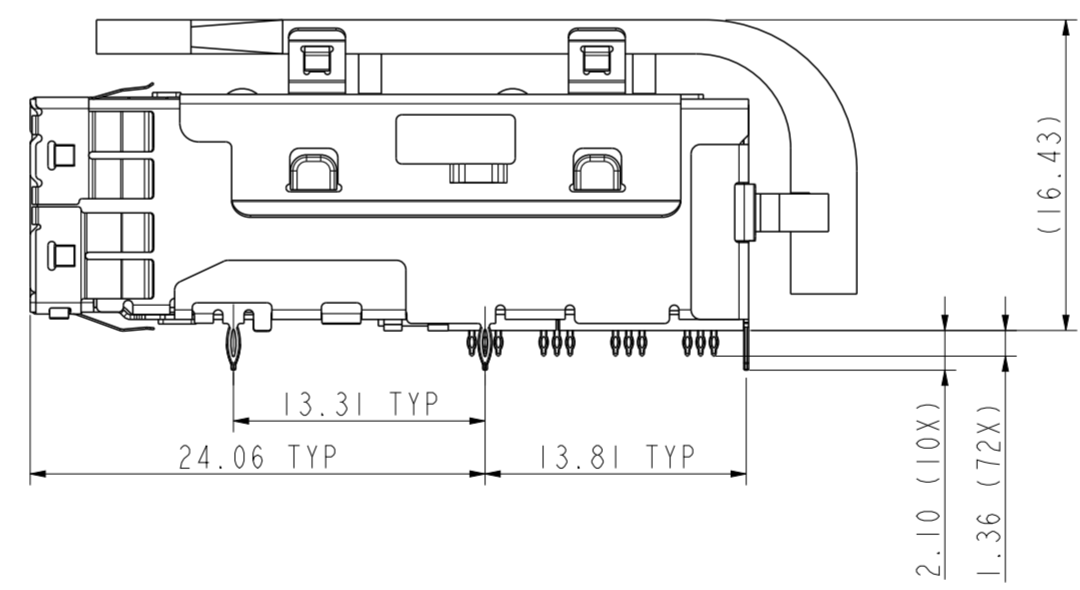
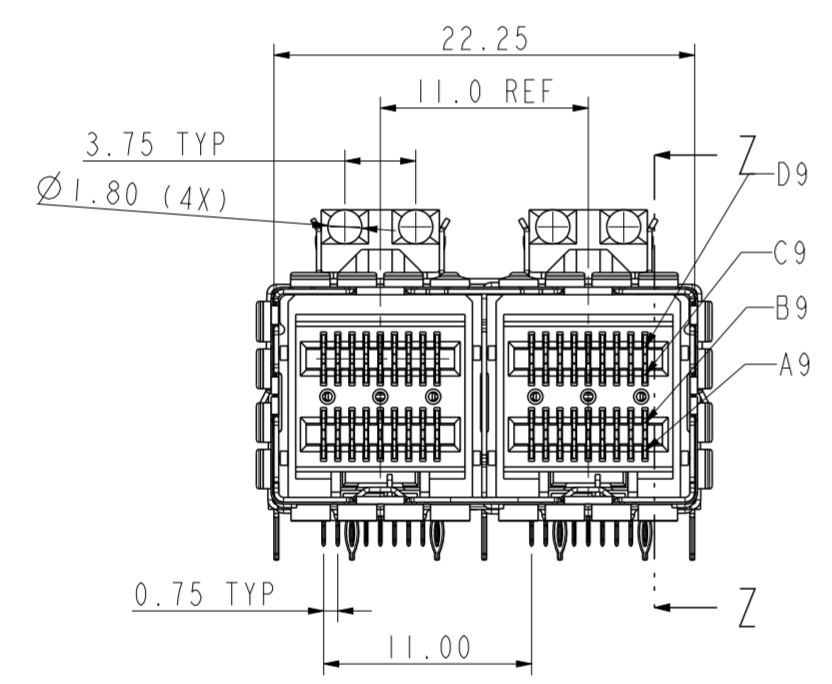
PRODUCT NUMBER	TAIL PLATING OPTION, SEE NOTE 2	1X2 EXTERNAL ASSEMBLY	1X2 LIGHT PIPE SUB-ASSEMBLY WITH MOUNTING CLIP	DESCRIPTION
10120959-101	OPTION 1	10112627-101	10121257-001LF	WITH SAME LENGTH LIGHT PIPES
10120959-101LF	OPTION 2	10112627-101LF		
10120959-102LF	OPTION 2	10112627-101LF	10121257-002LF	WITH DIFFERENT LENGTH LIGHT PIPES

NOTES:

- MATERIALS:**  
CONNECTOR HOUSING: HIGH TEMPERATURE THERMOPLASTIC  
GLASS FILLED, UL 94V-0  
EMI CAGE: NICKEL SILVER ALLOY  
EMI FINGERS: COPPER ALLOY  
TERMINALS: COPPER ALLOY  
LIGHT PIPE CLIP: STAINLESS STEEL  
LIGHT PIPE: POLYCARBONATE
- FINISHES:**  
EMI FINGERS: 0.50um MIN NICKEL  
CONTACT AREA: 0.76um MIN GOLD OVER 2.54um MIN NICKEL  
TAIL AREA:  
OPTION 1: 0.76um - 1.52um TIN/LEAD (90/10) OVER 2.54um MIN NICKEL  
OPTION 2: 0.76um - 1.52um TIN (LEAD FREE) OVER 2.54um MIN NICKEL
- PRODUCT SPECIFICATION:** GS-12-65I
- PRODUCT PACKING SPECIFICATION:** GS-14-1490  
EXTERNAL ASSEMBLY WILL BE IN ONE BOX.  
LIGHT PIPE SUB-ASSEMBLY WITH MOUNTING CLIP WILL BE IN ONE BOX.  
BOTH BOXES WILL BE IN A MASTER CARTON.
- APPLICATION SPECIFICATION:** GS-20-0327
- MOUNTING HARDWARE:** M2X0.4 BUTTON HEAD SCREW  
MOUNTING SCREW LENGTH: BOARD THICKNESS + 1.4mm MAX (0.9mm MIN).  
2 REQUIRED PER ASSEMBLY.  
MOUNTING HARDWARE NOT SUPPLIED.
- THIS CONNECTOR IS DESIGNED TO MEET THE REQUIREMENTS OF INDUSTRY SPECIFICATION SFF-8644.
- LIGHT PIPE SUB-ASSEMBLY WITH MOUNTING CLIP FINAL ASSEMBLY AFTER EXTERNAL ASSEMBLY APPLIED TO PCB.
- A  $\triangle B$  SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE THAT HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.



10120959-101 & 101LF SHOWN WITH SAME LENGTH LIGHT PIPES SCALE 2.500



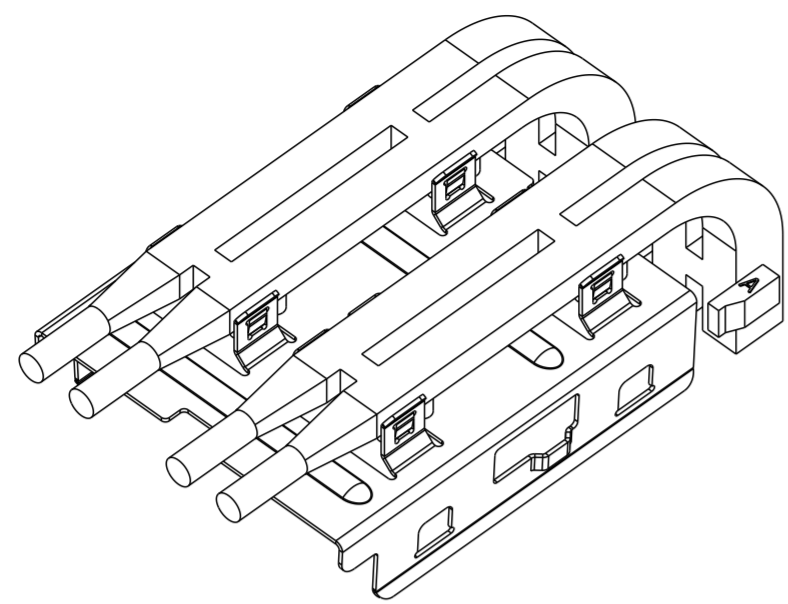
MATES WITH MINI-SAS HD ENDS IN:

10112041 SERIES (4X)
10117771 SERIES (4X)
10117946 SERIES (4X)
10117949 SERIES (4X)
10117947 SERIES (8X)
10112359 SERIES (8X)
10117950 SERIES (8X)
10117948 SERIES (8X)

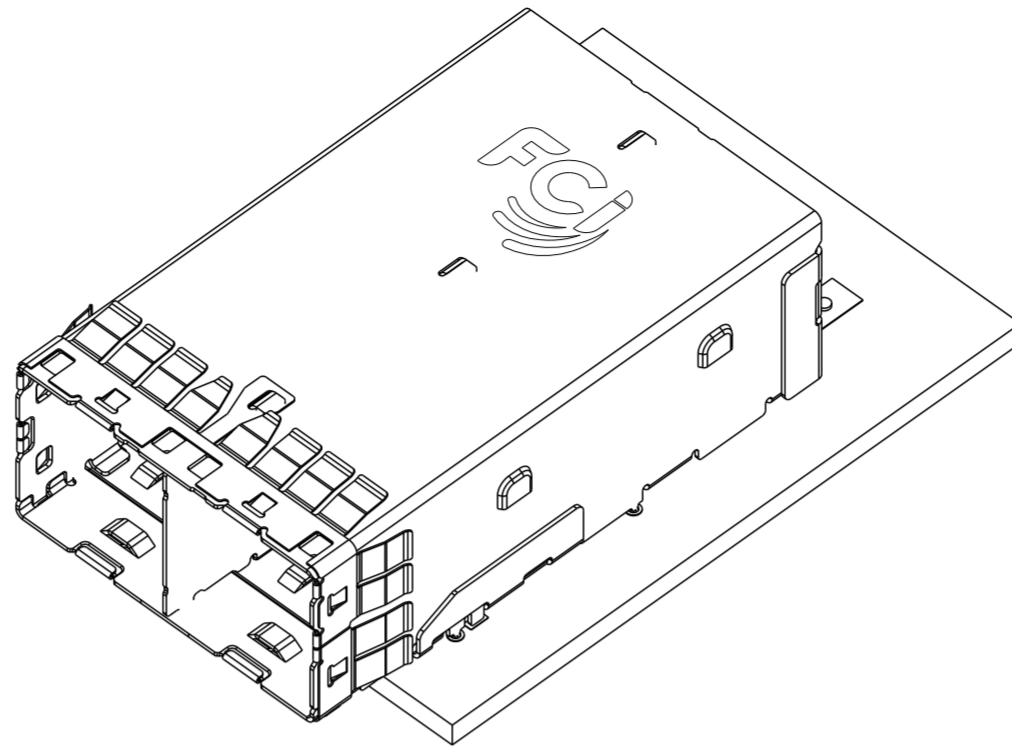
spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	2.500
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15			ecn no	ELX-DG-28824-1	rel level	Released
surface	-	chr	Stone Li	2018/01/15						
		appr	Heaven Cen	2018/01/18						
TOLERANCES UNLESS OTHERWISE SPECIFIED		<b>Amphenol FCI</b>		<b>1X2 EXTERNAL ASSEMBLY WITH LIGHT PIPE</b>		<b>MINI-SAS HD</b>		<b>10120959</b>		<b>rev B</b>
ISO 1302	linear	0.X	±0.5	<b>www.fci.com</b>		<b>cat. no.</b>		<b>Product - Customer Drw</b>		<b>sheet 1 of 7</b>
	angular	0°	±3°							

Amphenol FCI

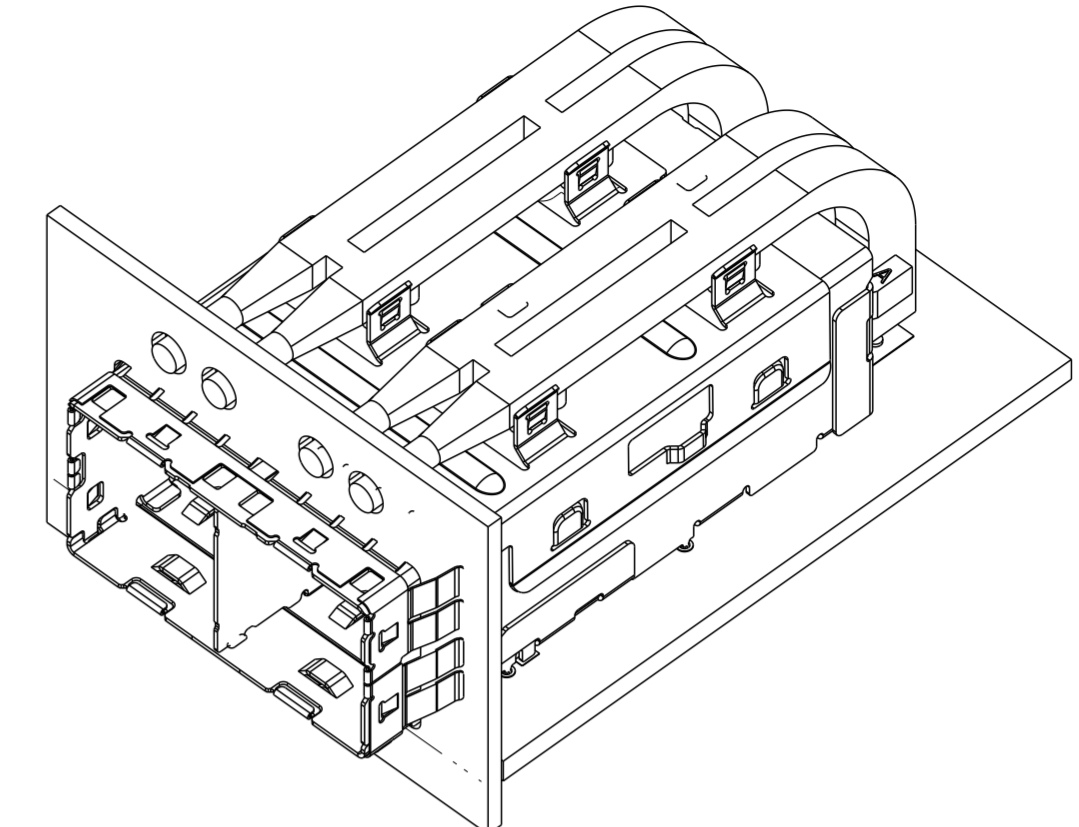
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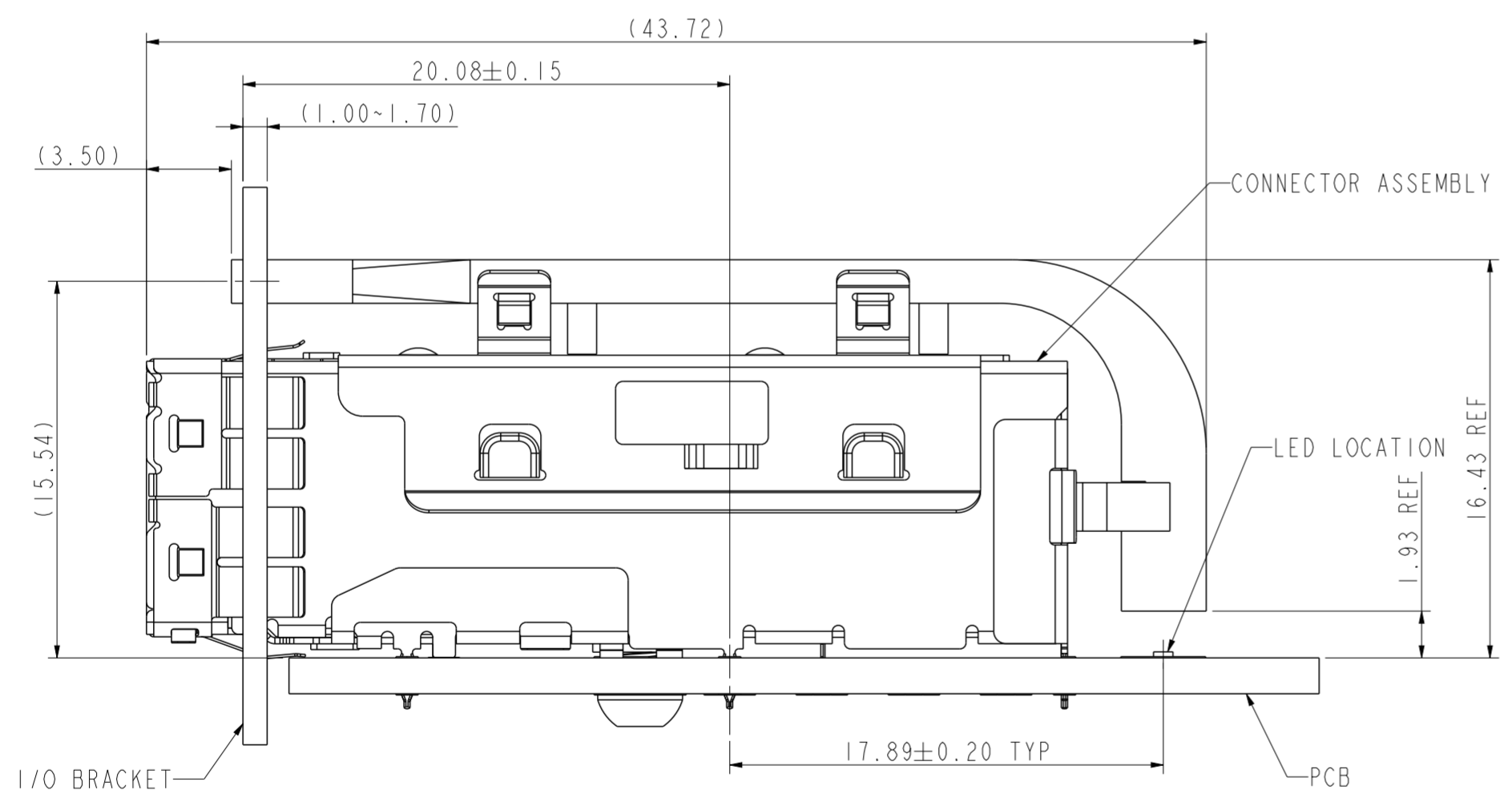
1X2 LIGHT PIPE SUB-ASSEMBLY  
WITH MOUNTING CLIP  
10121257-001LF SHOWN



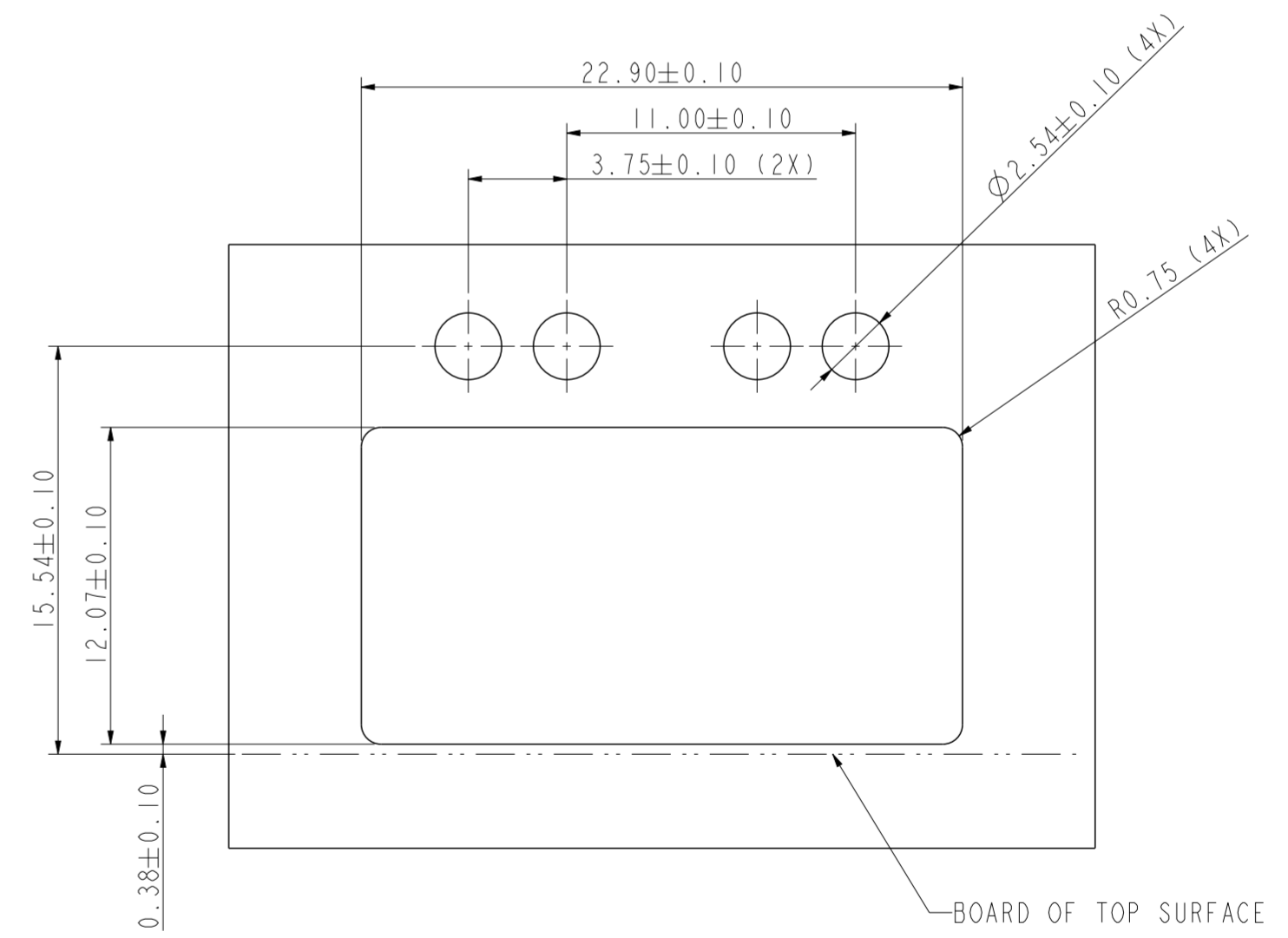
1X2 EXTERNAL ASSEMBLY  
APPLIED TO PCB  
10112627-101 & 101LF



1X2 LIGHT PIPE SUB-ASSEMBLY  
APPLIED TO CONNECTOR  
10120959-101 & 101LF SHOWN  
(LIGHT PIPE SUB-ASSEMBLY  
FINAL ASSEMBLY BY CUSTOMER)



10120959-101 & 101LF ASSEMBLED VIEW  
WITH SAME LENGTH LIGHT PIPES  
SCALE 4.000



I/O BRACKET CUT OUT  
(BRACKET NOT INCLUDED)  
SCALE 4.000

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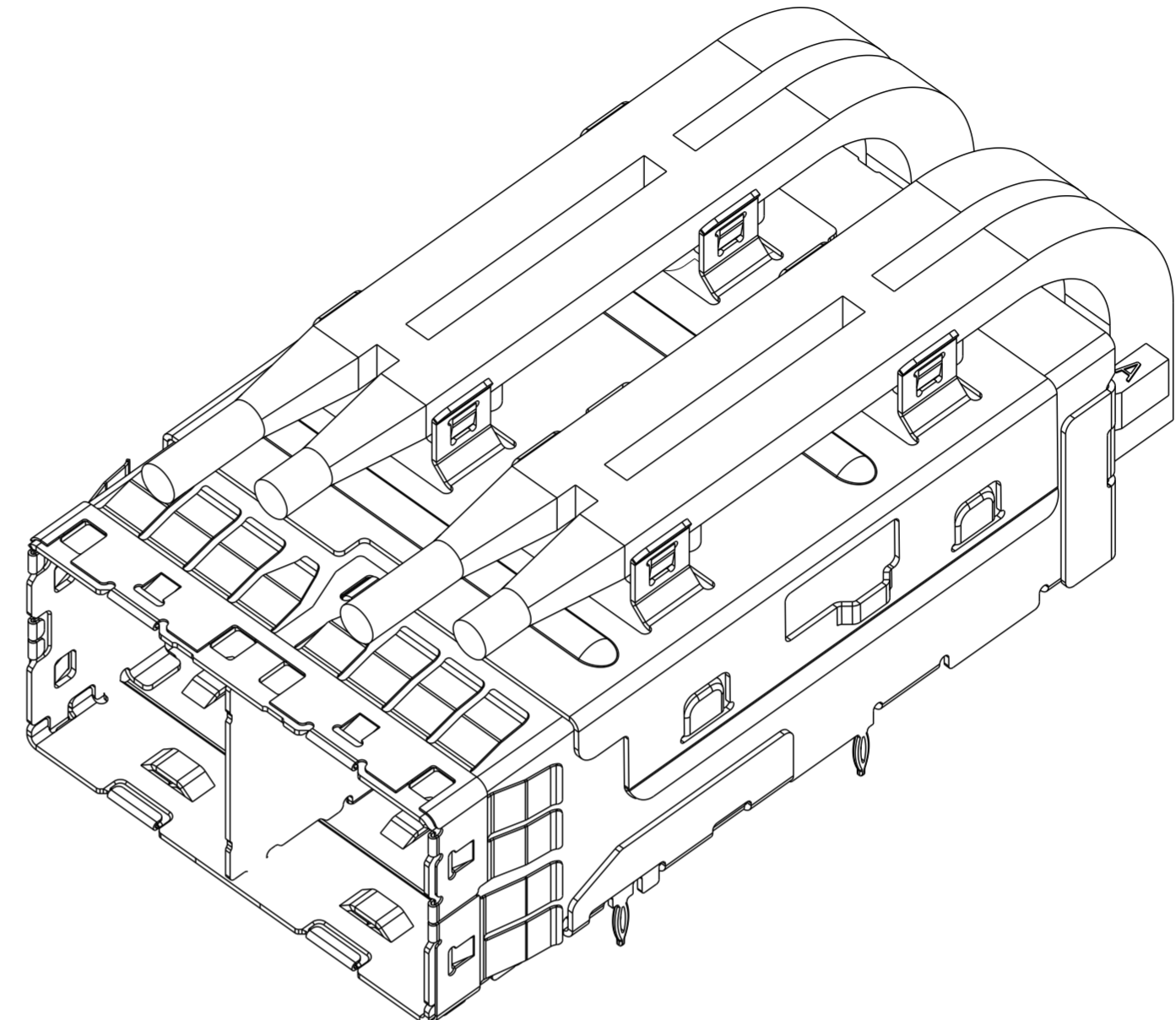
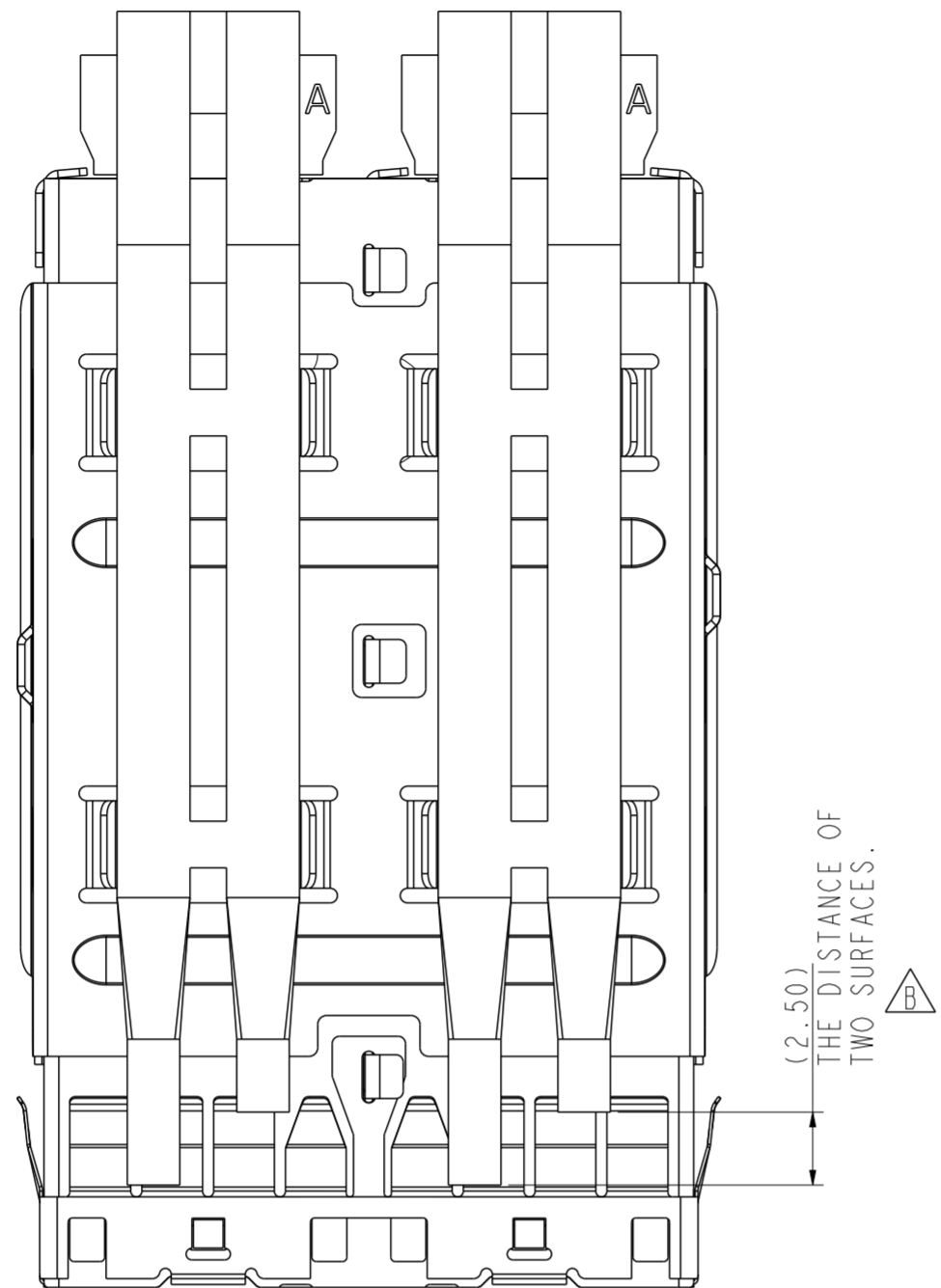
© 2016 APCI

spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	2.500
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15		MM	ecn no	ELX-DG-28824-1	rel level	Released
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Stone Li	2018/01/15						
surface	-	appr	Heaven Cen	2018/01/18	product family	MINI-SAS HD	dwg no	10120959	rev	B
ISO 1302	linear	0.X	±0.5	Amphenol FCI	cat. no.	-	Product - Customer Drw	sheet 2 of 7		
		0.XX	±0.3	www.fci.com						
		0.XXX	±							
	angular	0°	±3°							

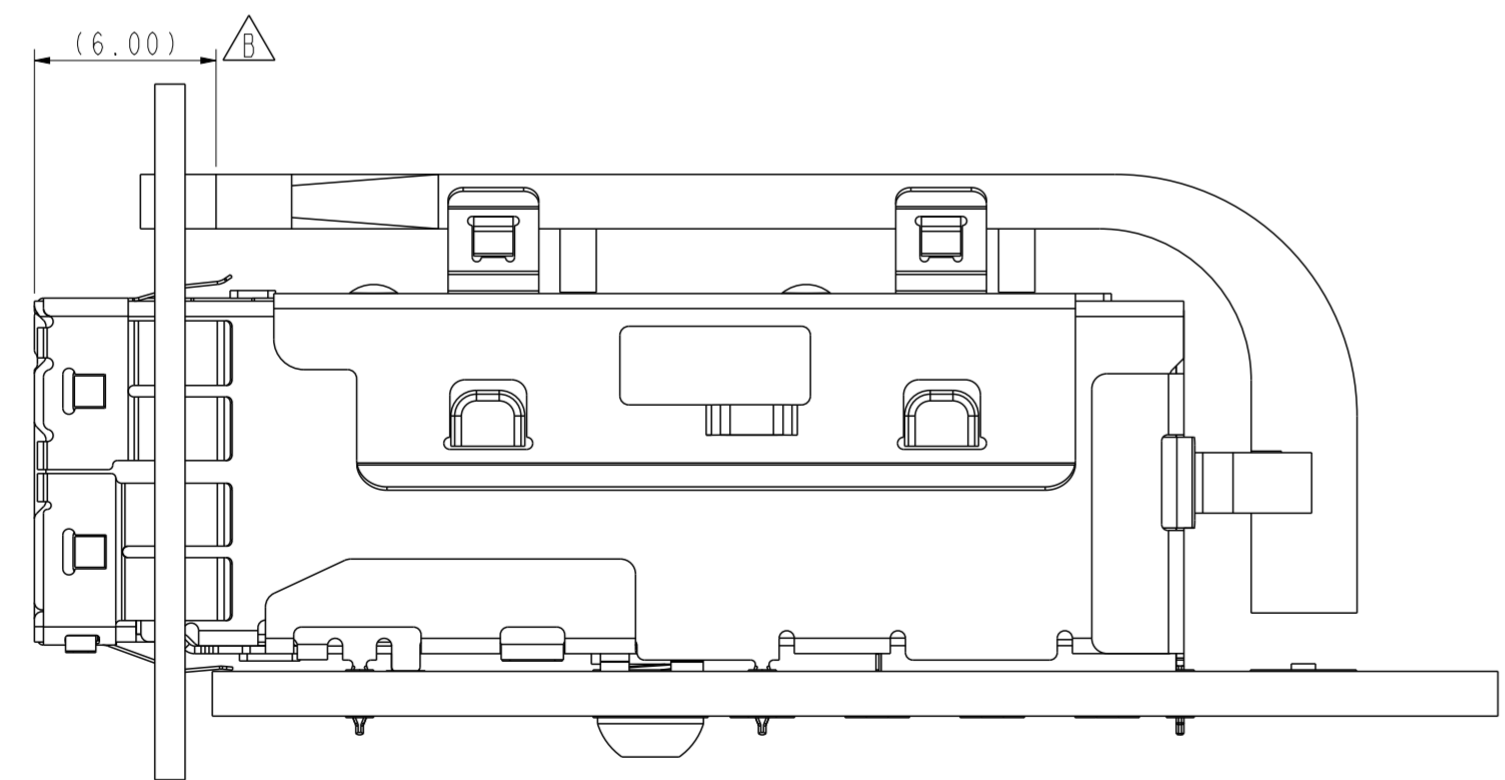
PDS: Rev :B

STATUS:Released

Printed: Jan 18, 2018



10120959-102LF SHOWN  
WITH DIFFERENT LENGTH LIGHT PIPES  
SCALE 4.000



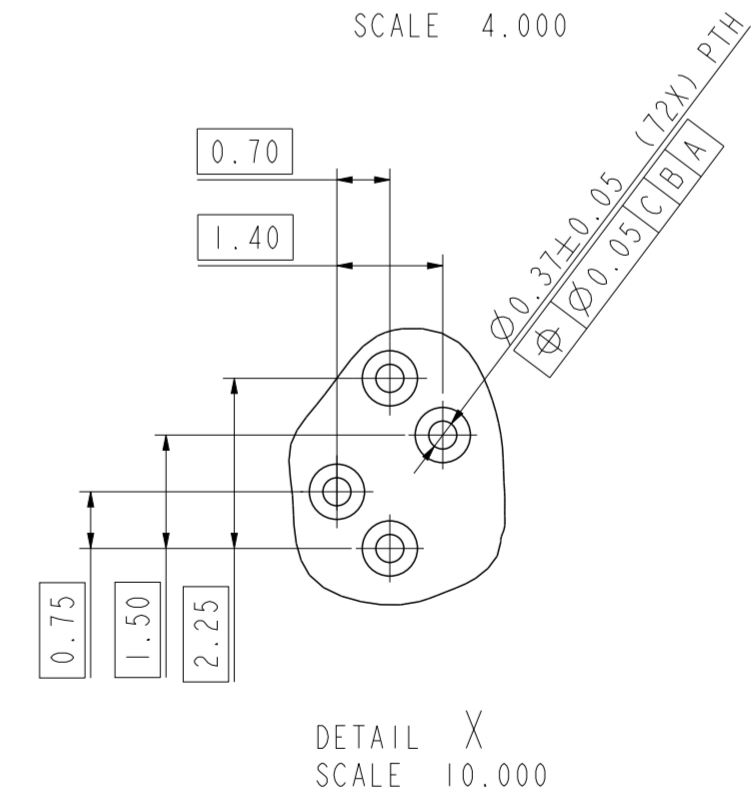
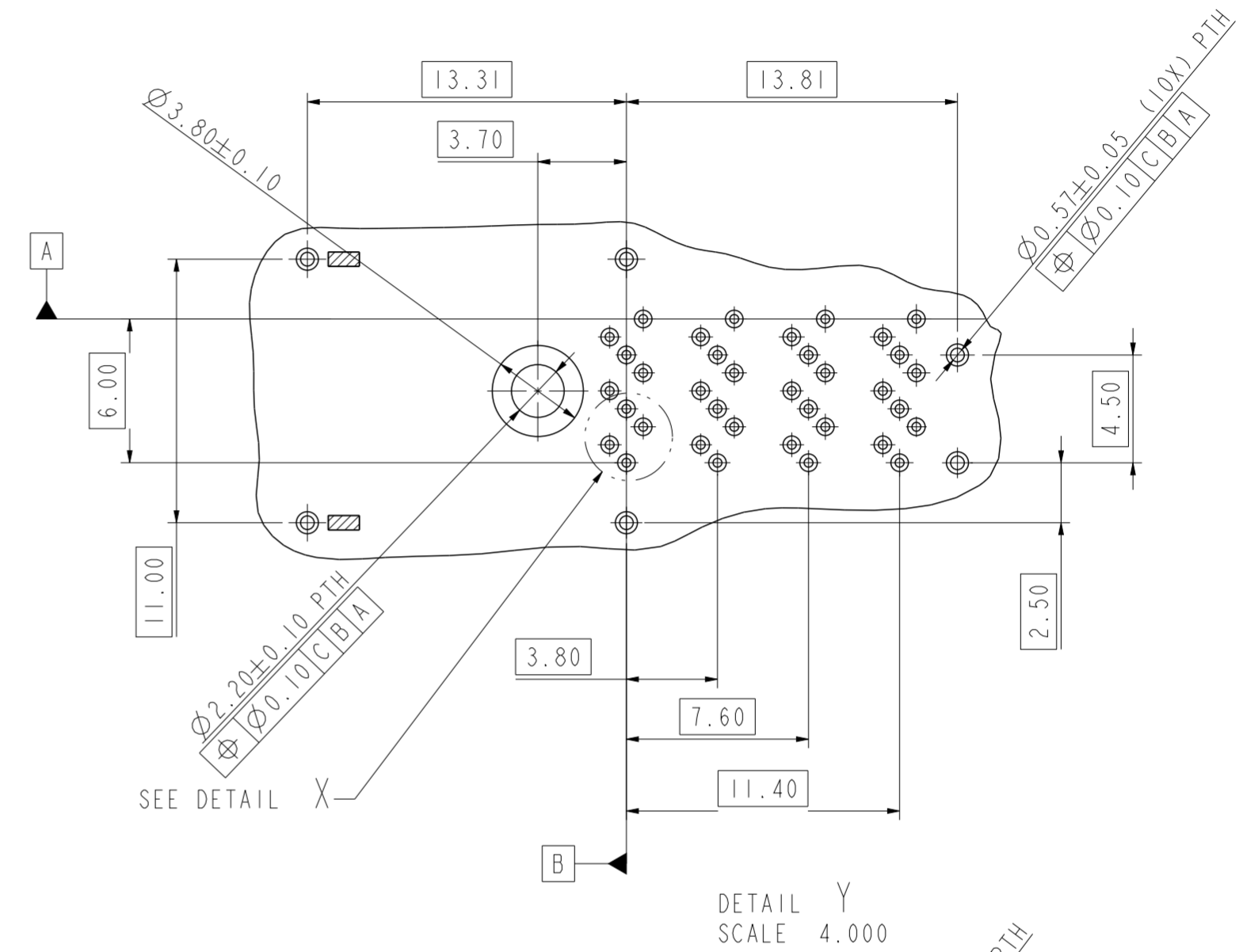
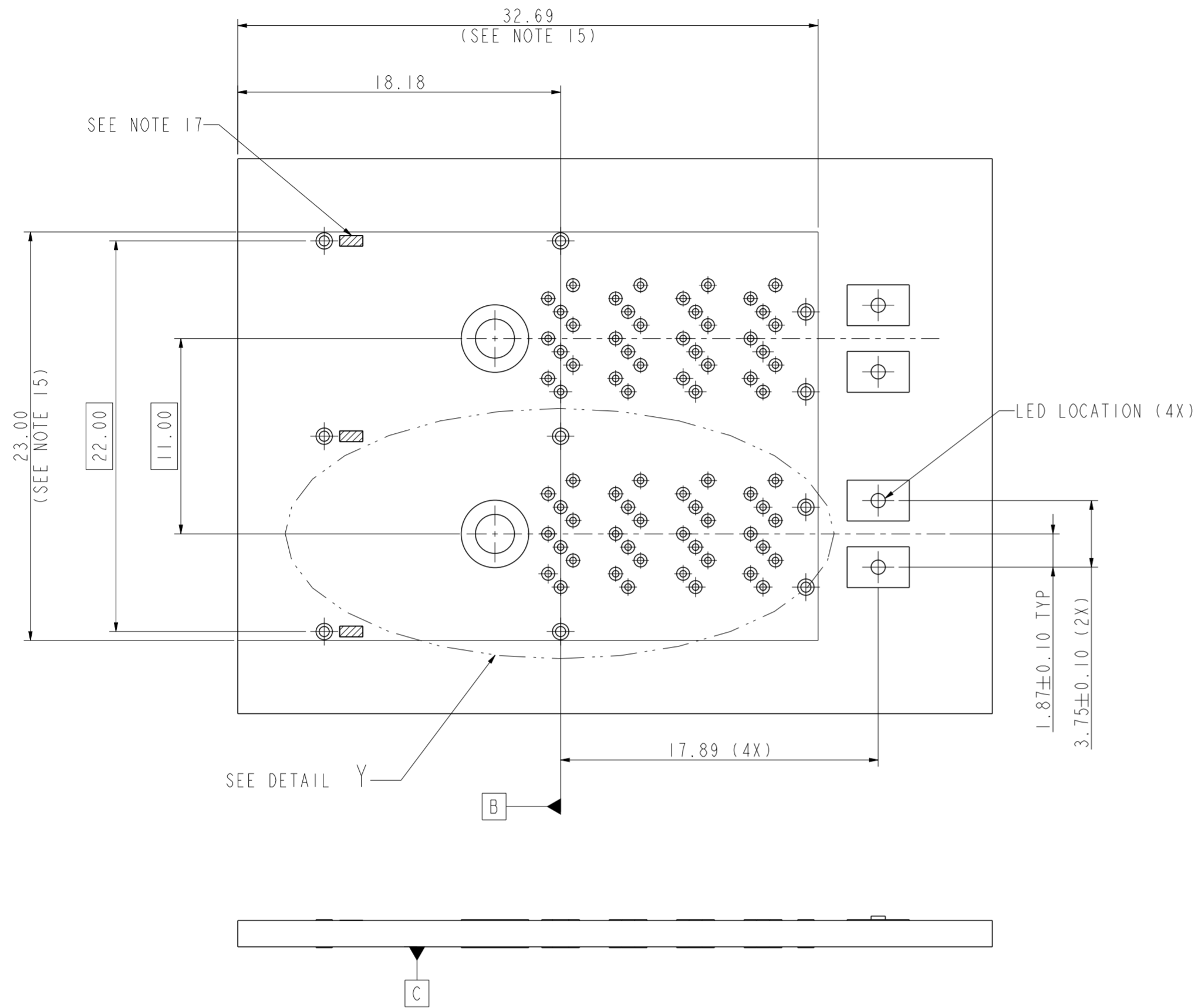
10120959-102LF ASSEMBLED VIEW  
WITH DIFFERENT LENGTH LIGHT PIPES  
SCALE 4.000

ALL DIMENSIONS ARE SAME AS 10120959-101LF EXCEPT AS SHOWN.

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spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	2.500	
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15			ecn no	ELX-DG-28824-1			
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Stone Li	2018/01/15			product family	MINI-SAS HD	rel level	Released	
surface	-	appr	Heaven Cen	2018/01/18			title	1X2 EXTERNAL ASSEMBLY WITH LIGHT PIPE MINI-SAS HD	dwg no	10120959	
ISO 1302	linear	0.X	±0.5	www.fci.com		cat. no.	-	Product - Customer Drw	sheet 3 of 7	rev	B
	0.XX	±0.3									
	0.XXX	±									
	angular	0°	±3°								



RECOMMENDED BOARD LAYOUT  
SEE SFF-8644 FOR DETAIL

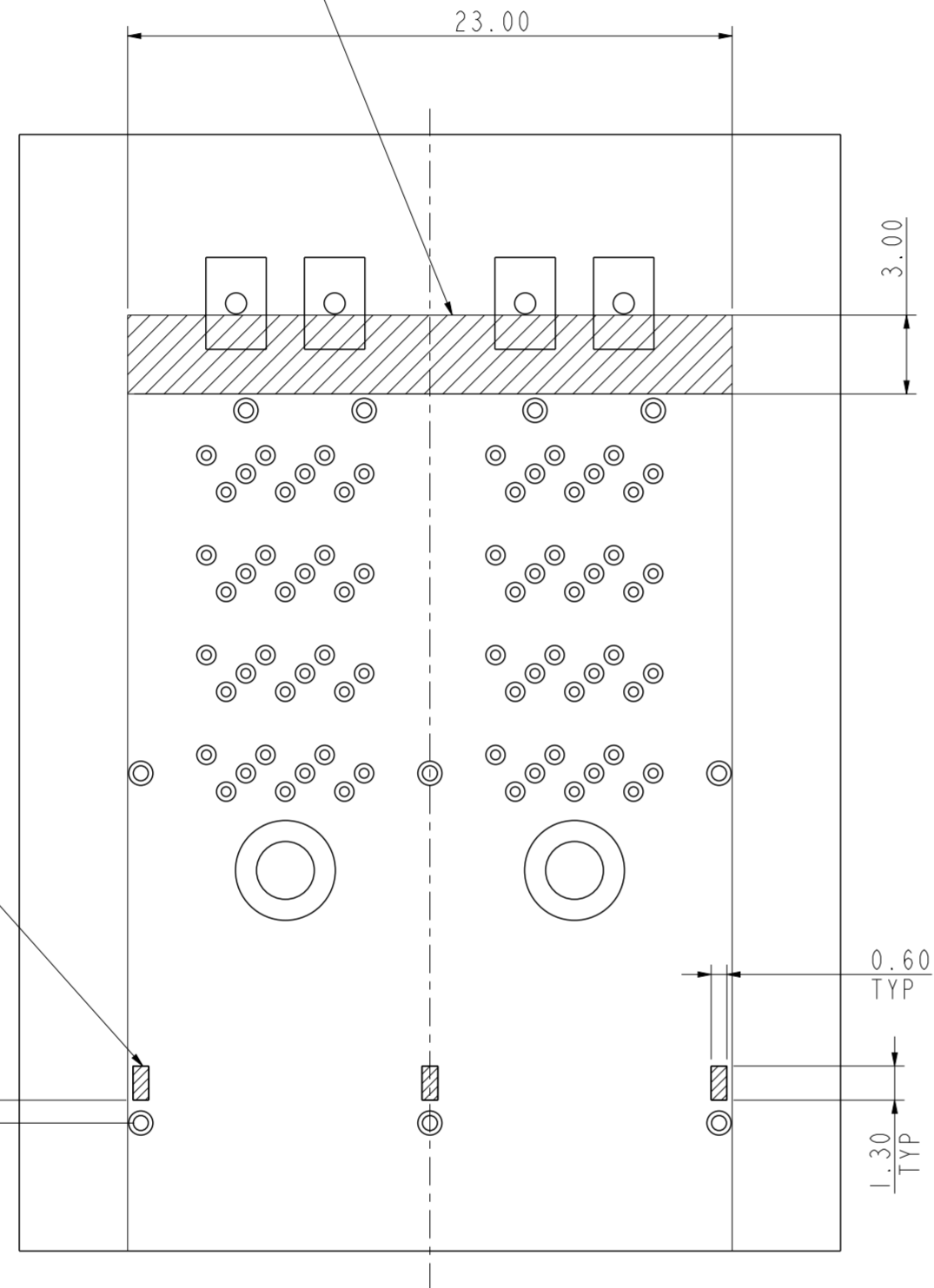
NOTES:

10. RECOMMENDED DRILL SIZE FOR  $\varnothing 0.37$  FINISHED PTH IS  $\varnothing 0.457$ .
11. RECOMMENDED ANNULAR RING AROUND  $\varnothing 0.37$  FINISHED PTH IS  $\varnothing 0.73$ .
12. RECOMMENDED DRILL SIZE FOR  $\varnothing 0.57$  FINISHED PTH IS  $\varnothing 0.68$ .
13. RECOMMENDED ANNULAR RING AROUND  $\varnothing 0.57$  FINISHED PTH IS  $\varnothing 0.93$ .
14. MINIMUM RECOMMENDED CENTER TO CENTER SPACING BETWEEN ADJACENT CONNECTORS: 47.00mm.
15. CONNECTOR KEEP OUT AREA.
16. MINIMUM PCB THICKNESS: 1.57mm.
17. CAGE STAND OFF AREA, NO TRACES ON SURFACE OF PCB IN THE AREAS.

spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	4.000									
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15			ecn no	ELX-DG-28824-1	rel level	Released									
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Stone Li	2018/01/15															
surface	-	appr	Heaven Cen	2018/01/18	product family	MINI-SAS HD	dwg no	10120959	rev	B									
ISO 1302	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±0.5</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±0.3</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±-</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±3°</td> </tr> </table>	linear	0.X	±0.5		0.XX	±0.3		0.XXX	±-	angular	0°	±3°	<b>Amphenol FCI</b> www.fci.com		title 1X2 EXTERNAL ASSEMBLY WITH LIGHT PIPE MINI-SAS HD	cat. no.	Product - Customer Drw	sheet 4 of 7
linear	0.X	±0.5																	
	0.XX	±0.3																	
	0.XXX	±-																	
angular	0°	±3°																	

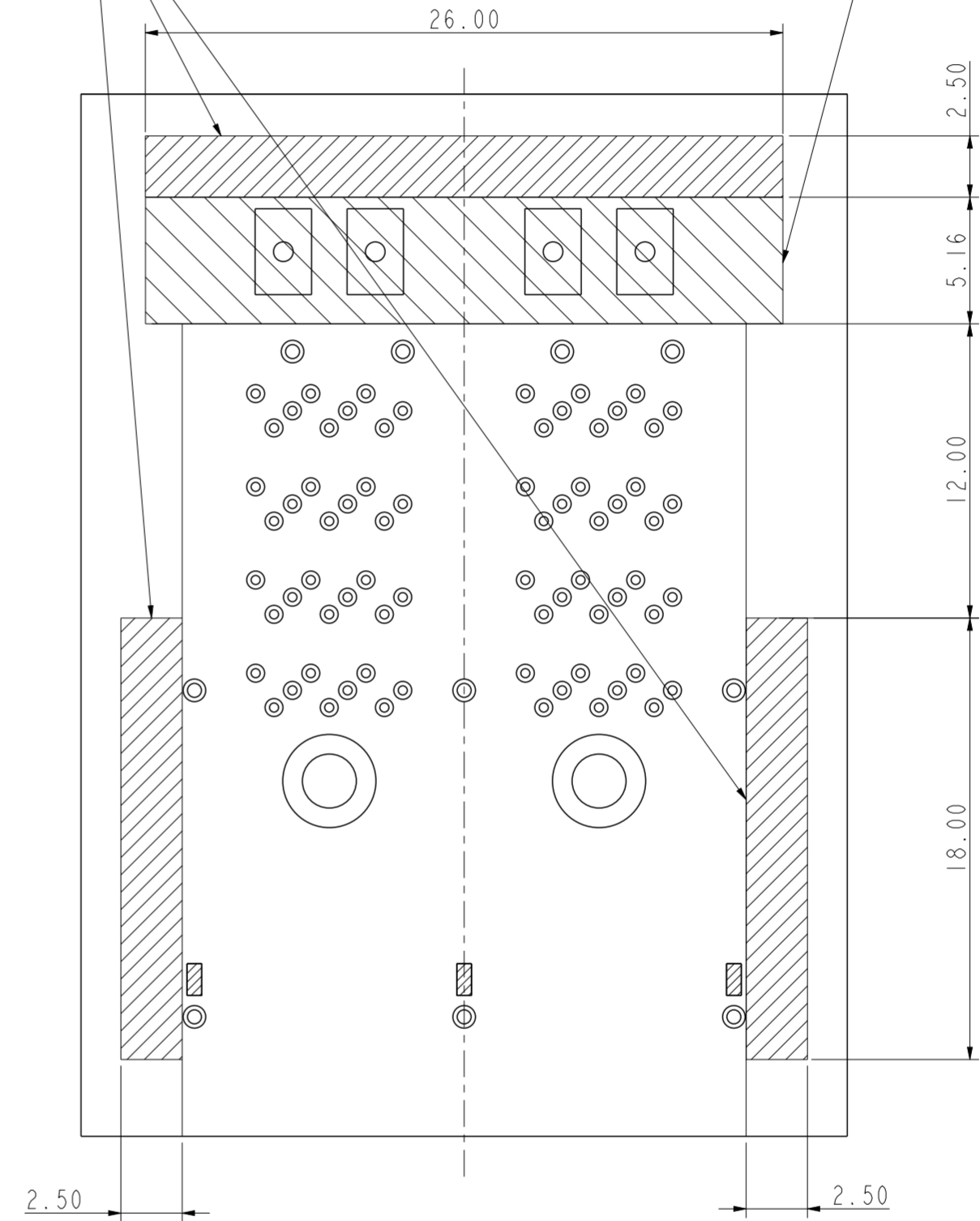
# RECOMMENDED KEEP OUT AREAS

RECOMMENDED INSERTION TOOL  
KEEP OUT AREA  
NO COMPONENTS IN THIS AREA  
MORE THAN 7.50mm TALL



RECOMMENDED EXTRACTION TOOL  
KEEP OUT AREA  
NO COMPONENTS IN THESE AREAS

RECOMMENDED EXTRACTION TOOL  
KEEP OUT AREA  
NO COMPONENTS IN THESE AREAS



CAGE STAND OFF KEEP OUT AREA

0.87  
TYP

0.60  
TYP

1.30  
TYP

2.50

2.50

2.50

5.16

12.00

18.00

23.00

26.00

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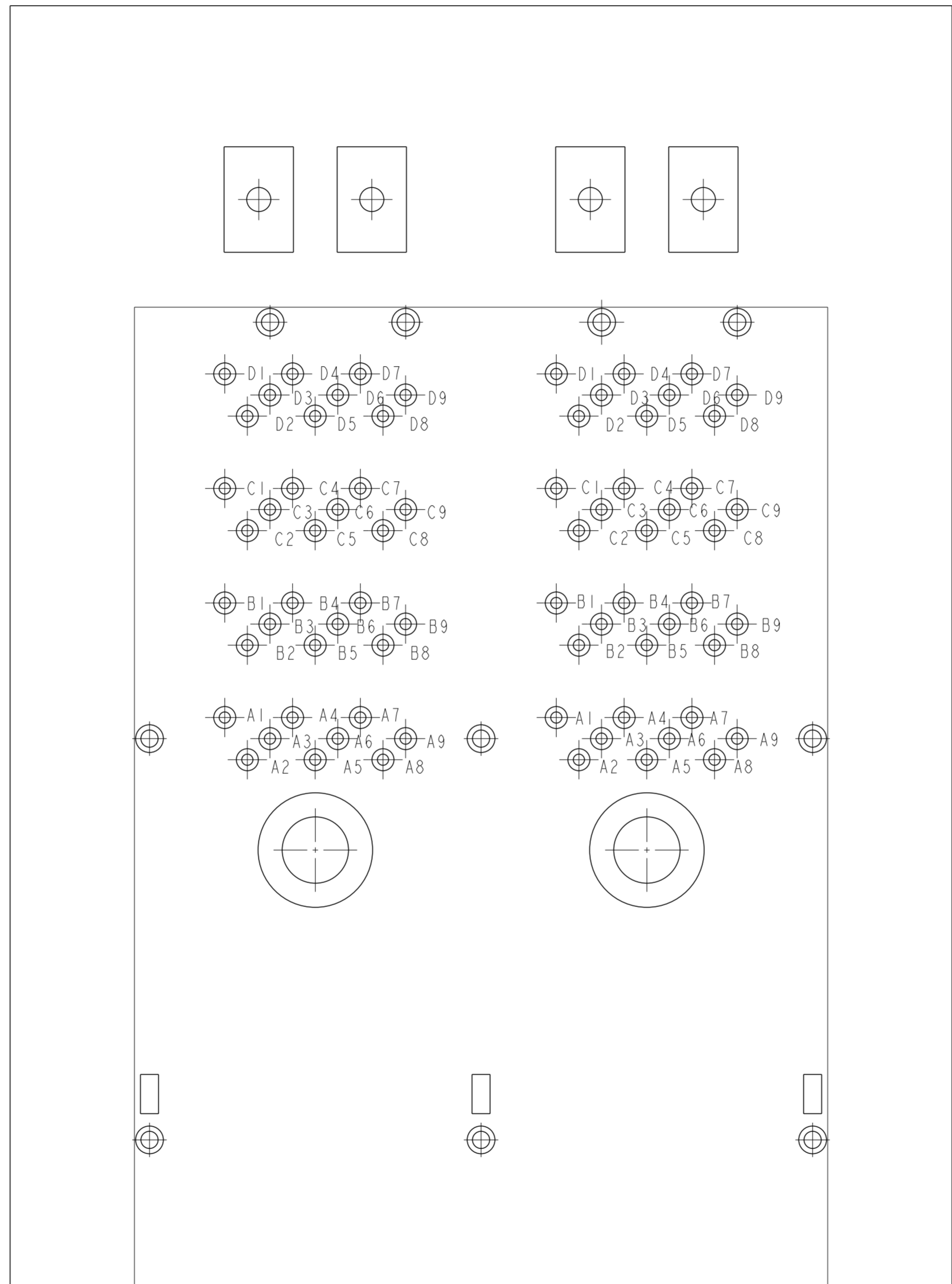
spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	4.000
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15			ecn no	ELX-DG-28824-1	rel level	Released
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Stone Li	2018/01/15						
surface	ISO 1302	appr	Heaven Cen	2018/01/18	<b>Amphenol FCI</b> www.fci.com		title 1X2 EXTERNAL ASSEMBLY WITH LIGHT PIPE MINI-SAS HD	dwg no 10120959	rev B	Product - Customer Drw sheet 5 of 7

PDS: Rev :B

STATUS:Released

Printed: Jan 18, 2018

# PIN OUT DESIGNATIONS



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spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	7.000
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15			ecn no	ELX-DG-28824-1		
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Stone Li	2018/01/15			rel level	Released		
surface	ISO 1302	appr	Heaven Cen	2018/01/18	product family	MINI-SAS HD	rel level	Released		
linear	0.X ±0.5 0.XX ±0.3 0.XXX ±-			title 1X2 EXTERNAL ASSEMBLY WITH LIGHT PIPE MINI-SAS HD		dwg no 10120959	rev B			
angular	0° ±3°			cat. no.	Product - Customer Drw		sheet 6 of 7			

A

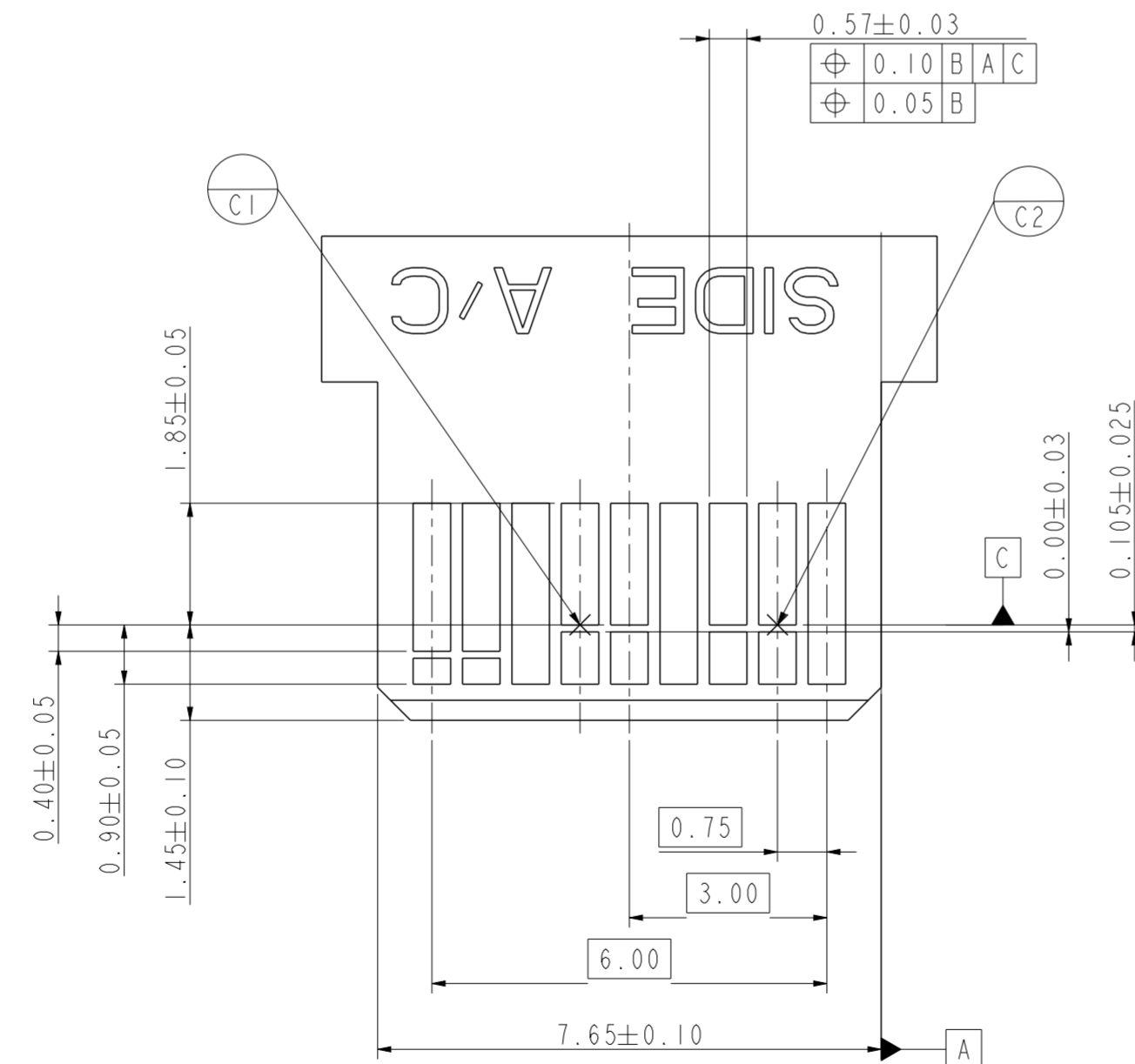
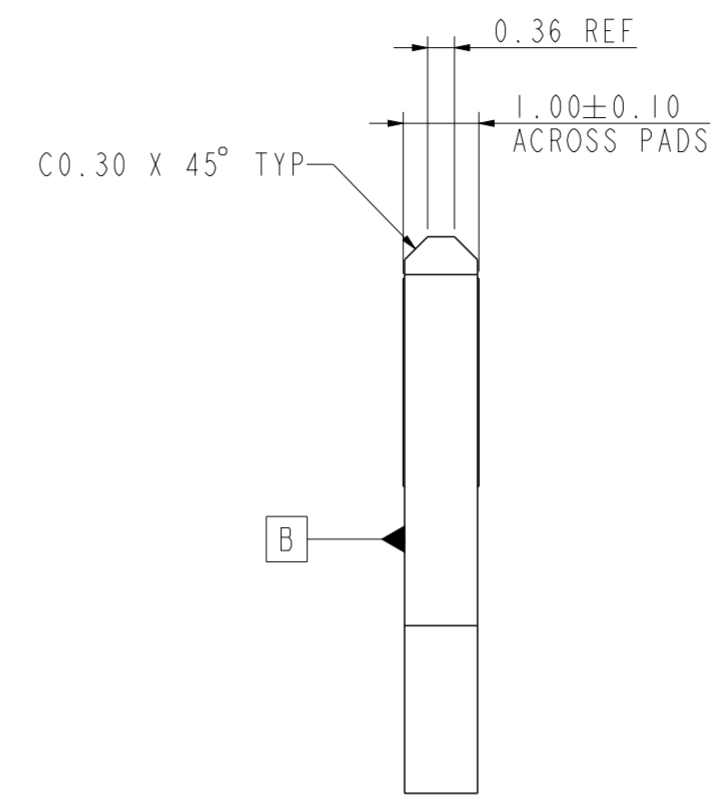
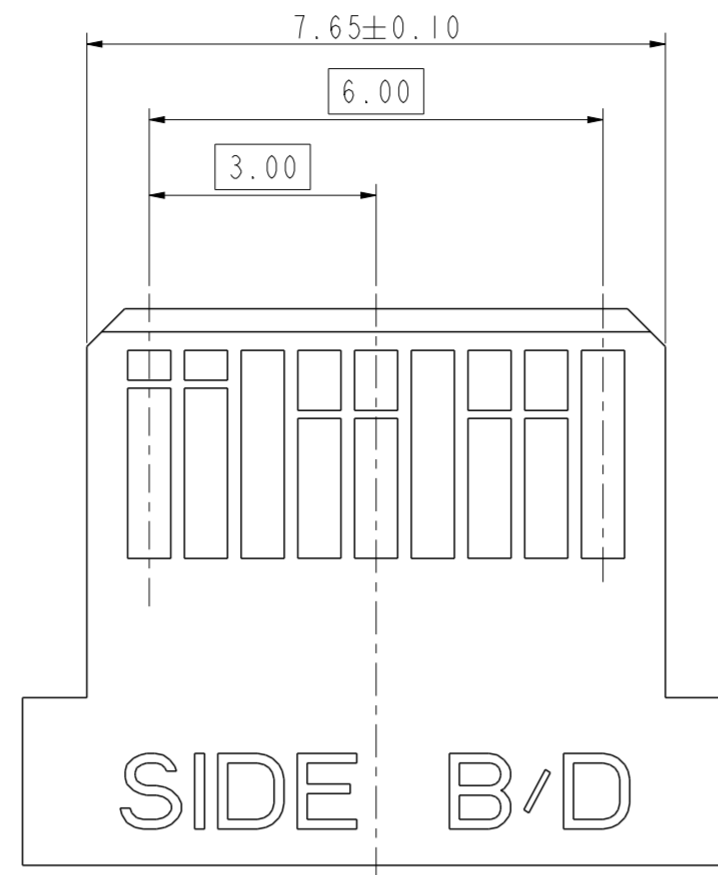
B

C

D

E

F



RECOMMENDED PLUG PADDLE CARD  
SEE SFF-8644 FOR DETAIL

- NOTES:
- 18. 0.05 MINIMUM KEEP OUT FOR SOLDER MASK AROUND ALL PADS.
  - 19. DATUM C TARGETS ARE DEFINED BY THE RESPECTIVE PAD CENTER LINES AND THE LEADING EDGE OF THE TARGET PADS.

spec ref	-	dr	Qin De-Feng	2012/1/21	projection	MM	size	A2	scale	10.000
tolerance std	ISO 406 ISO 1101	eng	Jerry Zhang	2018/01/15			ecn no	ELX-DG-28824-1		
surface	-	chr	Stone Li	2018/01/15			rel level	Released		
		appr	Heaven Cen	2018/01/18	product family	MINI-SAS HD	rel level	Released		
linear	0.X ±0.5 0.XX ±0.3 0.XXX ±-	<b>Amphenol FCI</b> www.fci.com		title 1X2 EXTERNAL ASSEMBLY WITH LIGHT PIPE MINI-SAS HD	dwg no 10120959	rev B				
angular	0° ±3°			cat. no.	Product - Customer Drw		sheet 7 of 7			

Amphenol FCI

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