

AMPHENOL PART NUMBER CONFIGURATION
U90 - G 4X1 - 1XXX

HEAT SINK OPTION

- 1 = NO HEAT SINK OR CLIP SHIPPED
- 5 = PIN STYLE HEAT SINK AND CLIP (H1=15.1; H2=6.5; SAN HEIGHT)
- 6 = PIN STYLE HEAT SINK AND CLIP (H1=12.8; H2=4.2; PCI HEIGHT)
- 7 = PIN STYLE HEAT SINK AND CLIP (H1= 22.1; H2=13.5; TALL)
- D = PIN-FIN STYLE HEAT SINK AND CLIP (H1=15.1; H2=6.5; SAN HEIGHT)
- F = PIN-FIN STYLE HEAT SINK AND CLIP (H1=12.8; H2=4.2; PCI HEIGHT)
- E = PIN-FIN STYLE HEAT SINK AND CLIP (H1= 22.1; H2=13.5; TALL)

NOTE:

FOR LOCATION OF "H1" AND "H2" DIMENSIONS SEE SHEET 2 AND 3

PACKAGING OPTIONS

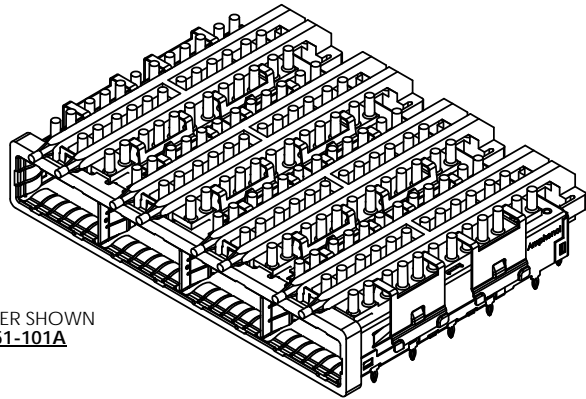
- 0 = TRAY PACKAGING, (HEAT SINK & CLIP SHIPPED IN SEPARATE TRAY, IF ORDERED)
- A = TRAY PACKAGING, HEAT SINK & CLIP SHIPPED ASSEMBLED

LIGHT PIPE AND BEHIND BEZEL COVER OPTIONS

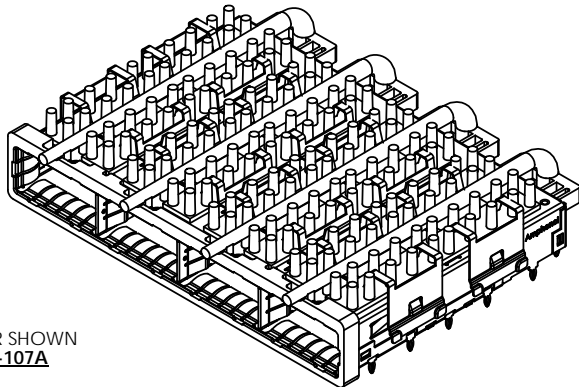
- 0 = STANDARD (NO LIGHT PIPES)
- 1 = WITH DUAL BARREL ROUND LIGHT PIPES INSTALLED
- 2 = WITH DUAL BARREL ROUND LIGHT PIPES AND WITH BEHIND BEZEL EMI GASKET SHIPPED LOOSE
- 3 = WITH DUAL BARREL SQUARE LIGHT PIPES INSTALLED. FOR DETAILS ON THIS OPTION SEE SHEET 3 AND 9
- 7 = WITH SINGLE BARREL ROUND LIGHT PIPE
- 9 = NO LIGHT PIPES AND WITH BEHIND BEZEL EMI GASKET SHIPPED LOOSE

OPTIONAL DUST COVER

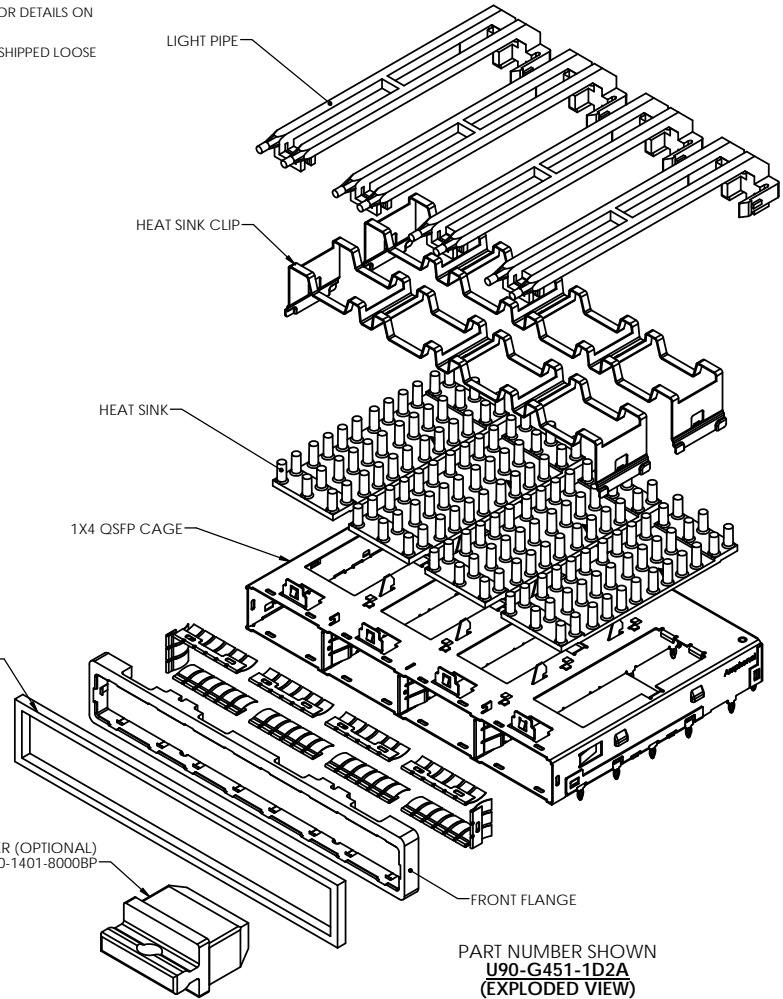
- 0 = WITHOUT DUST COVER
- D = WITH DUST COVER (SHIPPED AS LOOSE PIECE)



PART NUMBER SHOWN
U90-G451-101A



PART NUMBER SHOWN
U90-G451-107A



PART NUMBER SHOWN
U90-G451-1D2A
 (EXPLODED VIEW)

BEHIND BEZEL EMI GASKET (OPTIONAL)
 P/N: U90-1420-8010-BP

DUST COVER (OPTIONAL)
 P/N U90-1401-8000BP



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:

DECIMALS .XX ±.10
 .X ±.25

ANGLES ± 1°

MATERIAL AND FINISH

REF.

CODE IDENT. NO.

APPROVALS

DRAWN

DESIGNED

CHECKED

QA APP'D

IE APP'D

DWG APP'D

DATE

NOV 25/08

NOV 25/08

NOV 25/08

Amphenol Canada Corp.

TITLE
 QSFP 1X4 CAGE
 BEHIND BEZEL
 WITH HEATSINK, CLIP AND LIGHT PIPE

SIZE
 C

DWG. NO.
 P-U90-G4X1-1XXX

REV.
 Q

SCALE
 1.6:1

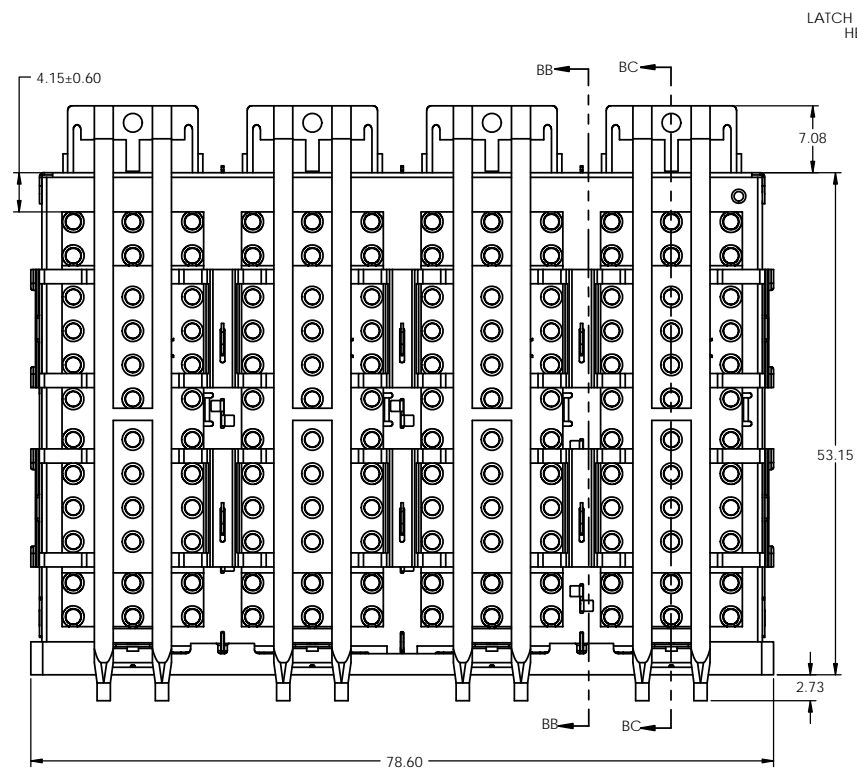
PROJECT

SHEET
 1 OF 10

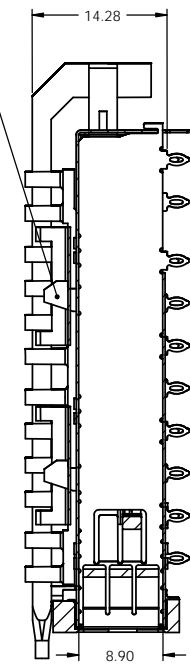
DO NOT SCALE DRAWING

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REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
O		SEE SHEET 1	JAN 29/13	ZLJ

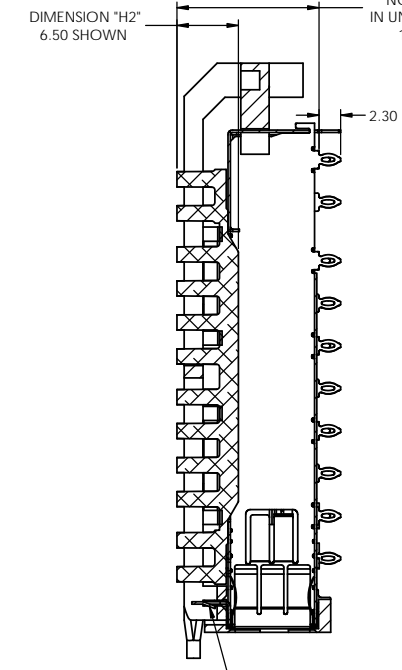


LATCH FEATURE FOR HEAT SINK CLIP
6 PLACES



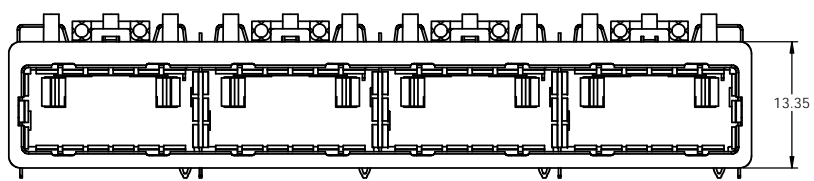
SECTION BB-BB
SCALE 2.5:1

DIMENSION "H1"
NOMINAL HEIGHT
IN UN-PLUGGED STATE
15.02 SHOWN



SECTION BC-BC
SCALE 2.5:1

LATCH FEATURE FOR LIGHT PIPE



PART NUMBER SHOWN
U90-G451-101A
(WITH ROUND LIGHT PIPE)

NOTES:

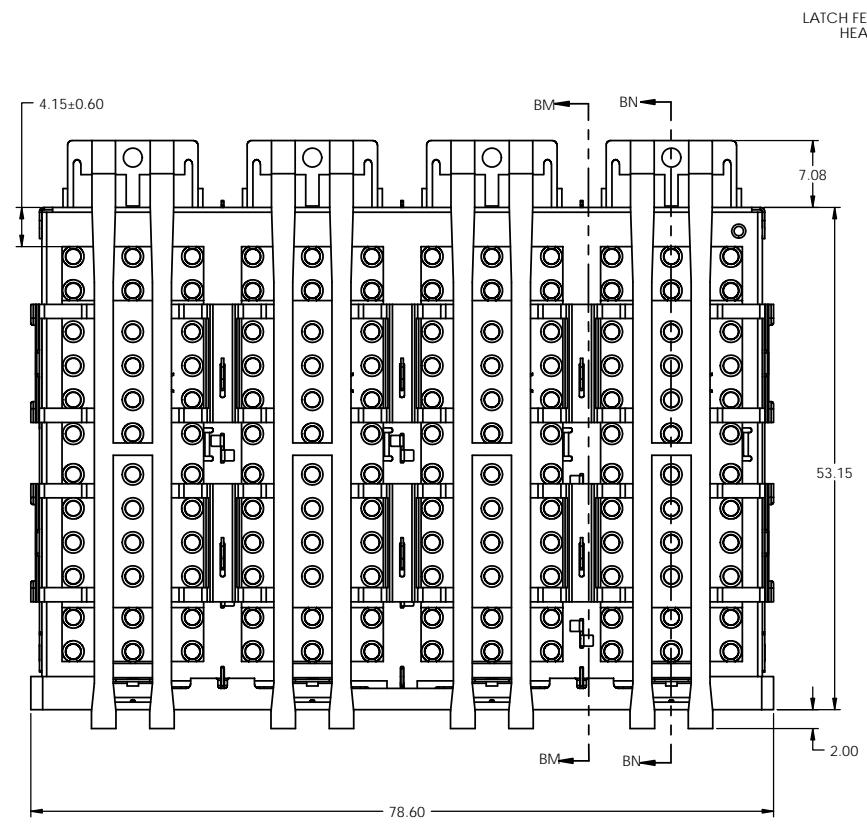
- MATERIAL:
CAGE AND EMI SPRINGS: COPPER ALLOY
FRONT FLANGE: ZINC DIE CAST
HEAT SINK CLIP: STEEL ALLOY
PIN-FIN STYLE HEAT SINK: ALUMINUM
PIN STYLE HEAT SINK: NICKEL PLATED ALUMINUM
CAGE PLATING: 3.81µm [100µ"] MIN. NICKEL.
LIGHT PIPE: GE LEXAN, OPTICAL GRADE
- CAGE IS INTENDED FOR USE WITH THE
QUAD SMALL FORM-FACTOR PLUGGABLE (QSFP)
TRANSCEIVER SPECIFICATION INF-8438I.

DIMENSION "H1" SHOWN IN UN-PLUGGED STATE		
PART NUMBER	DIM. "H1"	DIM. "H2"
U90-G451-1XXX	15.03	6.50
U90-G461-1XXX	12.37	4.20
U90-G471-1XXX	22.03	13.50
U90-G4D1-1XXX	15.03	6.50
U90-G4E1-1XXX	12.37	4.20
U90-G4F1-1XXX	22.03	13.50

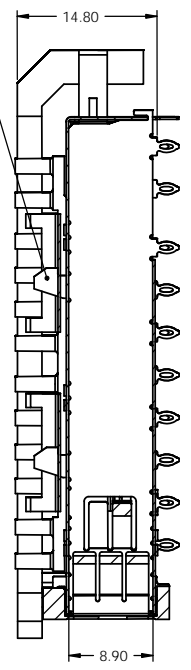


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:		APPROVALS	DATE	Amphenol Canada Corp.	
DECIMALS .XX ±.10 .X ±.25	ANGLES ± 1°	DRAWN Jane.Z	NOV 25/08		
MATERIAL AND FINISH		DESIGNED ZLJ	NOV 25/08	TITLE QSFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
		CHECKED			
REF.		QA APP'D		SIZE C	DWG. NO. P-U90-G4X1-1XXX
		IE APP'D		SCALE 5:2	PROJECT
CODE IDENT. NO.		DWG APP'D A.GREEN	NOV 25/08	SHEET 2 OF 10	

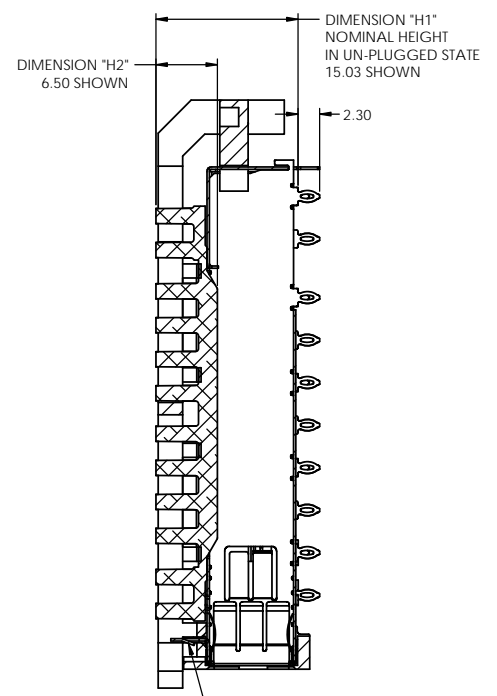
REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



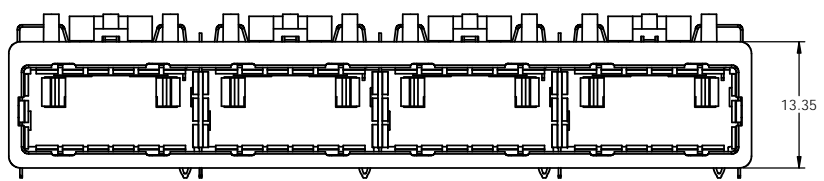
LATCH FEATURE FOR HEAT SINK CLIP
6 PLACES



SECTION BM-BM
SCALE 2.5 : 1



SECTION BN-BN
SCALE 2.5 : 1



NOTES:

- MATERIAL:
CAGE AND EMI SPRINGS: COPPER ALLOY
FRONT FLANGE: ZINC DIE CAST
HEAT SINK CLIP: STEEL ALLOY
PIN-FIN STYLE HEAT SINK: ALUMINUM
PIN STYLE HEAT SINK: NICKEL PLATED ALUMINUM
CAGE PLATING: 3.81µm [100µ"] MIN. NICKEL.
LIGHT PIPE: GE LEXAN, OPTICAL GRADE
- CAGE IS INTENDED FOR USE WITH THE QUAD SMALL FORM-FACTOR PLUGGABLE (OSFP) TRANSCEIVER SPECIFICATION INF-8438I.

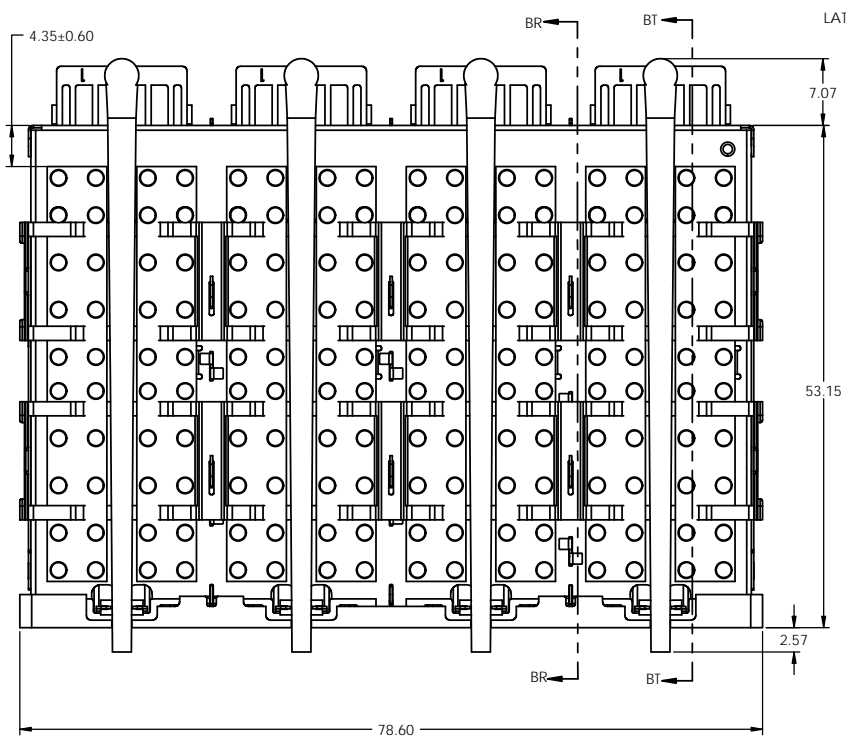
DIMENSION "H1" SHOWN IN UN-PLUGGED STATE		
PART NUMBER	DIM. "H1"	DIM. "H2"
U90-G451-1XXX	15.03	6.50
U90-G461-1XXX	12.37	4.20
U90-G471-1XXX	22.03	13.50
U90-G4D1-1XXX	15.03	6.50
U90-G4E1-1XXX	12.37	4.20
U90-G4F1-1XXX	22.03	13.50

PART NUMBER SHOWN
U90-G451-103A
(WITH SQUARE LIGHT PIPES)

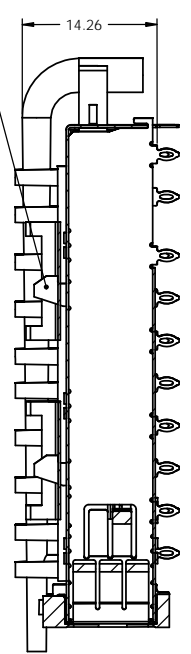


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:		APPROVALS	DATE	Amphenol Canada Corp.	
DECIMALS	ANGLES	DRAWN	NOV 25/08		
.XX ±.10	± 1°	DESIGNED	NOV 25/08	TITLE OSFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
.X ±.25		CHECKED			
MATERIAL AND FINISH		QA APP'D		SIZE	DWG. NO.
REF.		IE APP'D		C	P-U90-G4X1-1XXX
CODE IDENT. NO.		DWG APP'D	NOV 25/08	SCALE	PROJECT
		A.GREEN		5:2	
					SHEET
					3 OF 10

REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



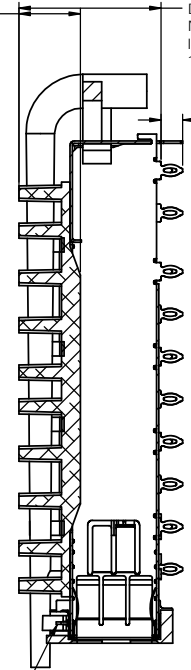
LATCH FEATURE FOR HEAT SINK CLIP 6 PLACES



SECTION BR-BR

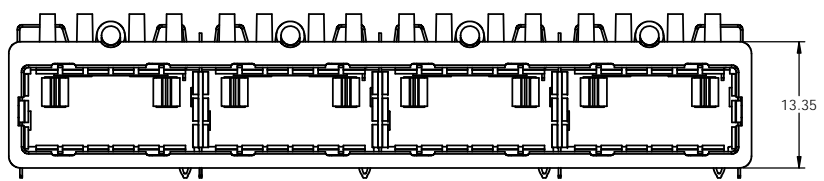
DIMENSION "H2" 6.50 SHOWN

DIMENSION "H1" NOMINAL HEIGHT IN UN-PLUGGED STATE 15.03 SHOWN



LATCH FEATURE FOR LIGHT PIPE

SECTION BT-BT



NOTES:

- MATERIAL:
 CAGE AND EMI SPRINGS: COPPER ALLOY
 FRONT FLANGE: ZINC DIE CAST
 HEAT SINK CLIP: STEEL ALLOY
 PIN-FIN STYLE HEAT SINK: ALUMINUM
 PIN STYLE HEAT SINK: NICKEL PLATED ALUMINUM
 CAGE PLATING: 3.81µm [100µ"] MIN. NICKEL.
 LIGHT PIPE: GE LEXAN, OPTICAL GRADE
- CAGE IS INTENDED FOR USE WITH THE QUAD SMALL FORM-FACTOR PLUGGABLE (QSFP) TRANSCEIVER SPECIFICATION INF-8438I.

DIMENSION "H1" SHOWN IN UN-PLUGGED STATE		
PART NUMBER	DIM. "H1"	DIM. "H2"
U90-G451-1XXX	15.03	6.50
U90-G461-1XXX	12.37	4.20
U90-G471-1XXX	22.03	13.50
U90-G4D1-1XXX	15.03	6.50
U90-G4E1-1XXX	12.37	4.20
U90-G4F1-1XXX	22.03	13.50

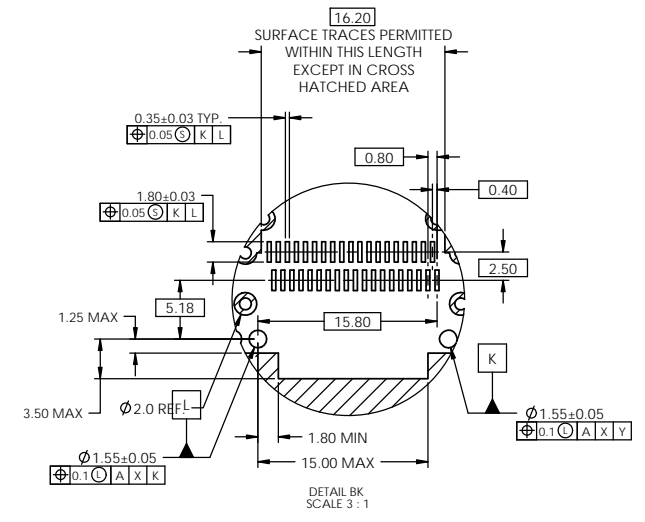
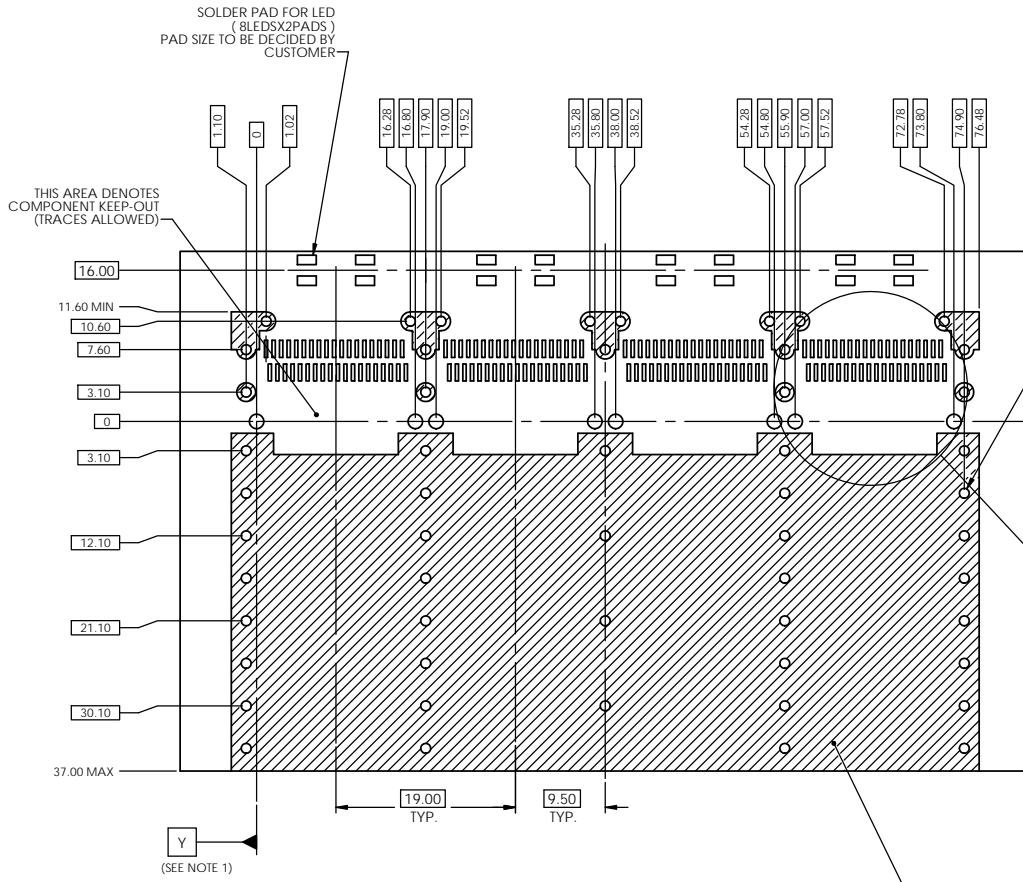
PART NUMBER SHOWN
 U90-G451-107A
 (WITH SINGLE BARREL
 ROUND LIGHT PIPES)



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DECIMALS	ANGLES	DRAWN	NOV 25/08		
.XX ±.10	± 1°	DESIGNED	NOV 25/08	TITLE QSFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
.X ±.25		CHECKED			
MATERIAL AND FINISH		QA APP'D		SIZE	DWG. NO.
		IE APP'D		C	P-U90-G4X1-1XXX
REF.		DWG APP'D		SCALE	PROJECT
CODE IDENT. NO.		A.GREEN	NOV 25/08	5:2	SHEET
					4 OF 10



REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



**RECOMMENDED HOST PCB BOARD
BEHIND BEZEL BELLY TO BELLY LAYOUT
FOR DOUBLE BARREL LIGHT PIPE
(COMPONENT SIDE OF BOARD)**

CROSS-HATCHED AREA DENOTES
COMPONENT AND TRACE KEEP-OUT
(EXCEPT CHASSIS GROUND)

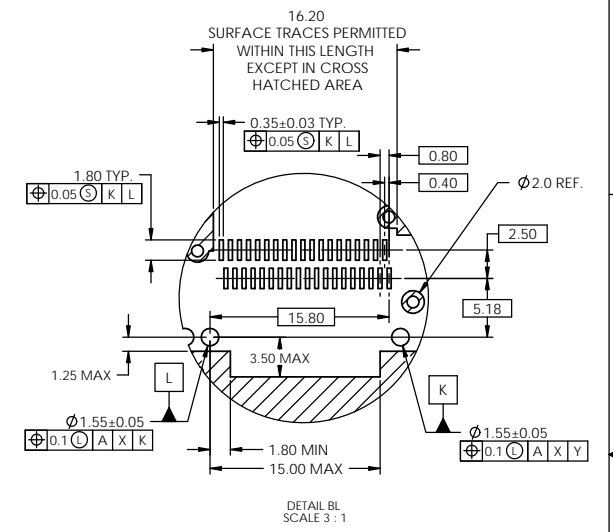
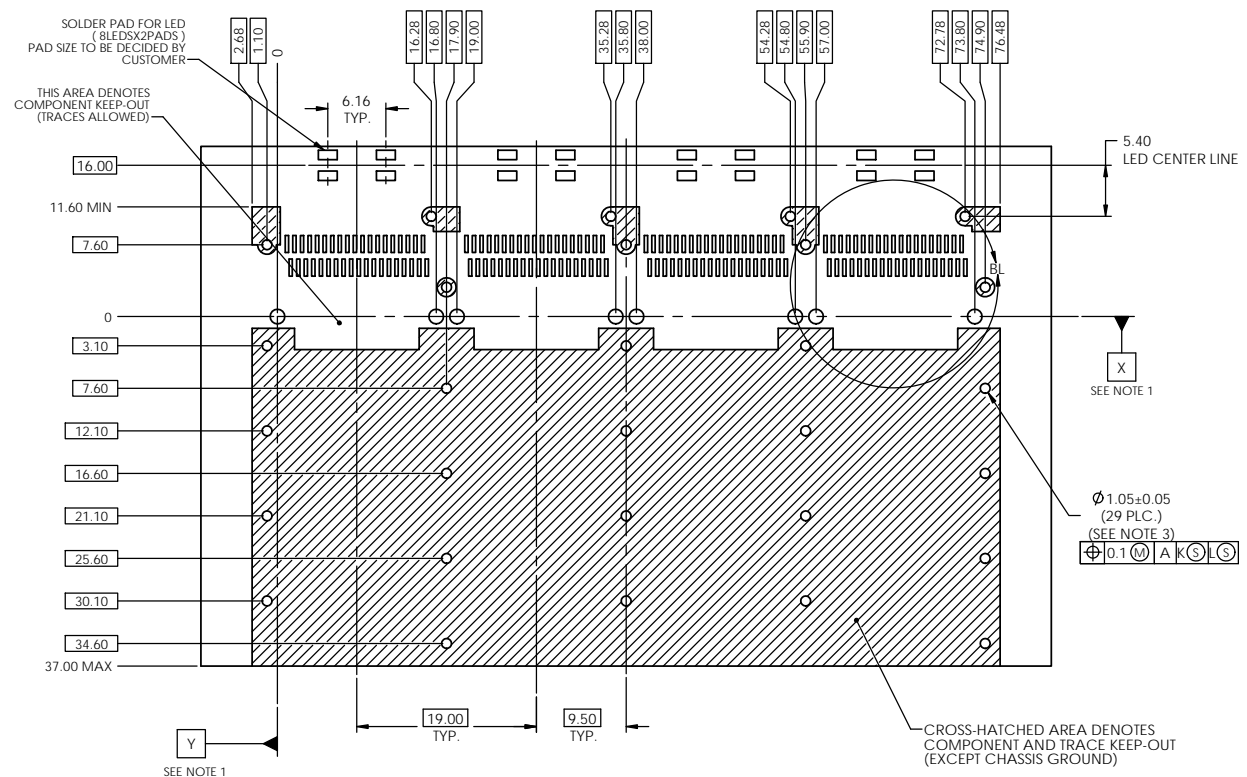
3.20±0.32
FOR BELLY TO BELLY APPLICATION

- NOTES:
- DATUM X AND Y ESTABLISHED BY CUSTOMER'S FUDICIAL.
 - LOCATION OF EDGE OF PCB IS APPLICATION SPECIFIC.
 - FINISHED HOLE SIZE.

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE: DECIMALS ANGLES .XX ±.10 ± 1° .X ±.25	APPROVALS	DATE	Amphenol Canada Corp.		
	DRAWN Jane.Z	NOV 25/08			
MATERIAL AND FINISH	DESIGNED ZLJ	NOV 25/08	SIZE C	DWG. NO. P-U90-G4X1-1XXX	REV. Q
	QA APP'D		SCALE 5:2	PROJECT	SHEET 5 OF 10
REF.	IE APP'D				
CODE IDENT. NO.	DWG APP'D A.GREEN	NOV 25/08			

REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



**RECOMMENDED HOST PCB BOARD
SINGLE LEVEL MOUNTING LAYOUT
FOR DOUBLE BARREL LIGHT PIPE
(COMPONENT SIDE OF BOARD)**

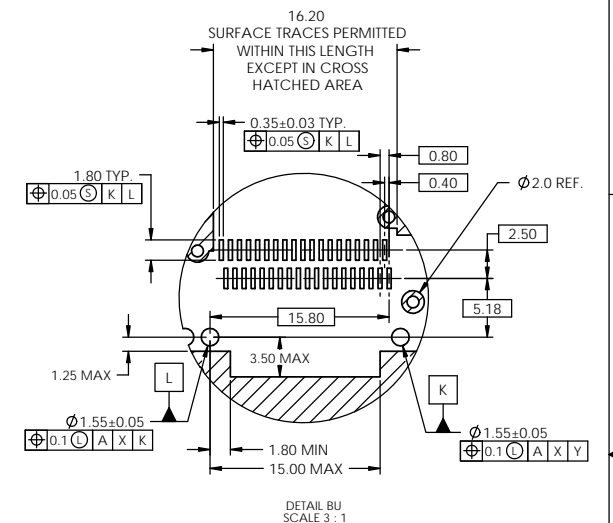
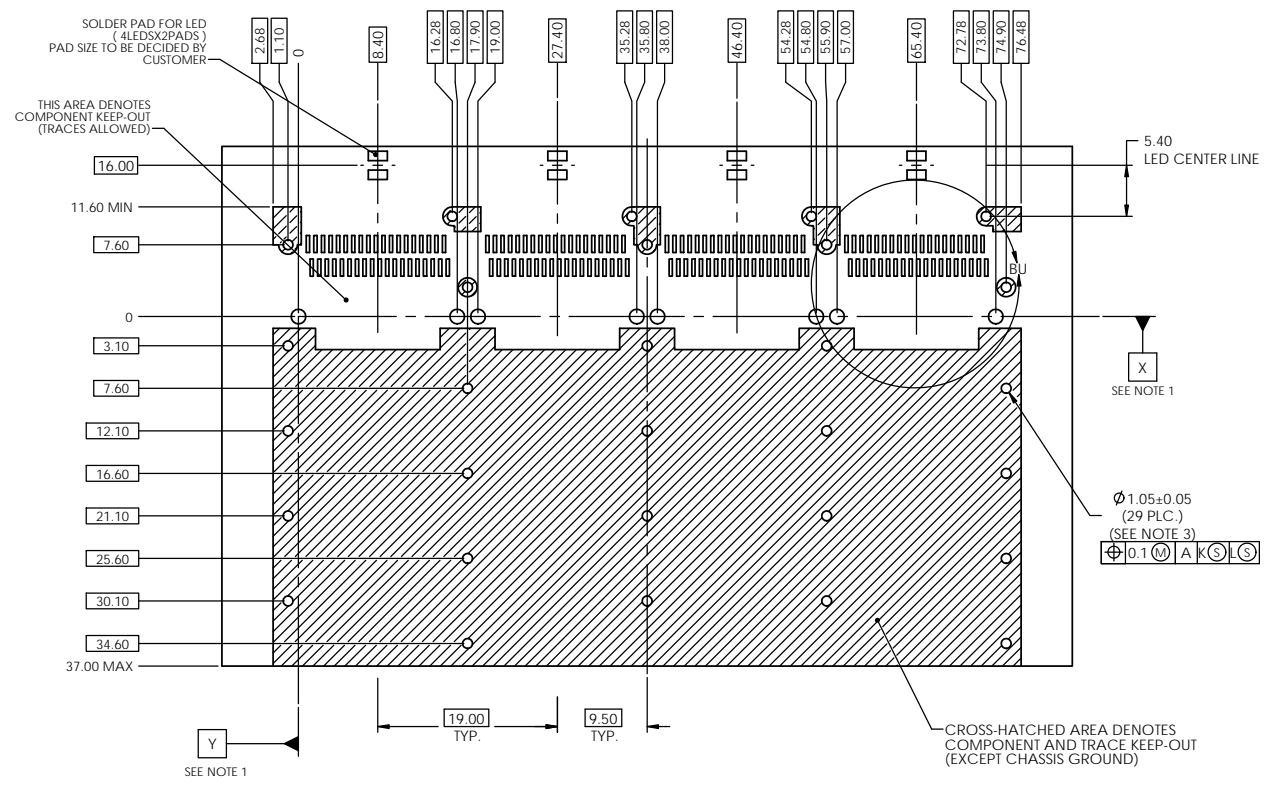


- NOTES:
- DATUM X AND Y ESTABLISHED BY CUSTOMER'S FUDICIAL.
 - LOCATION OF EDGE OF PCB IS APPLICATION SPECIFIC.
 - FINISHED HOLE SIZE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE: DECIMALS .XX ±.10 .X ±.25 MATERIAL AND FINISH REF. CODE IDENT. NO.	APPROVALS	DATE	Amphenol Canada Corp.		
	DRAWN Jane.Z	NOV 25/08			
	DESIGNED ZLJ	NOV 25/08	SIZE C	DWG. NO. P-U90-G4X1-1XXX	REV. Q
	CHECKED		SCALE 2.5:1	PROJECT	SHEET 6 OF 10
	QA APP'D				
	IE APP'D				
	DWG APP'D A.GREEN	NOV 25/08			

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REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



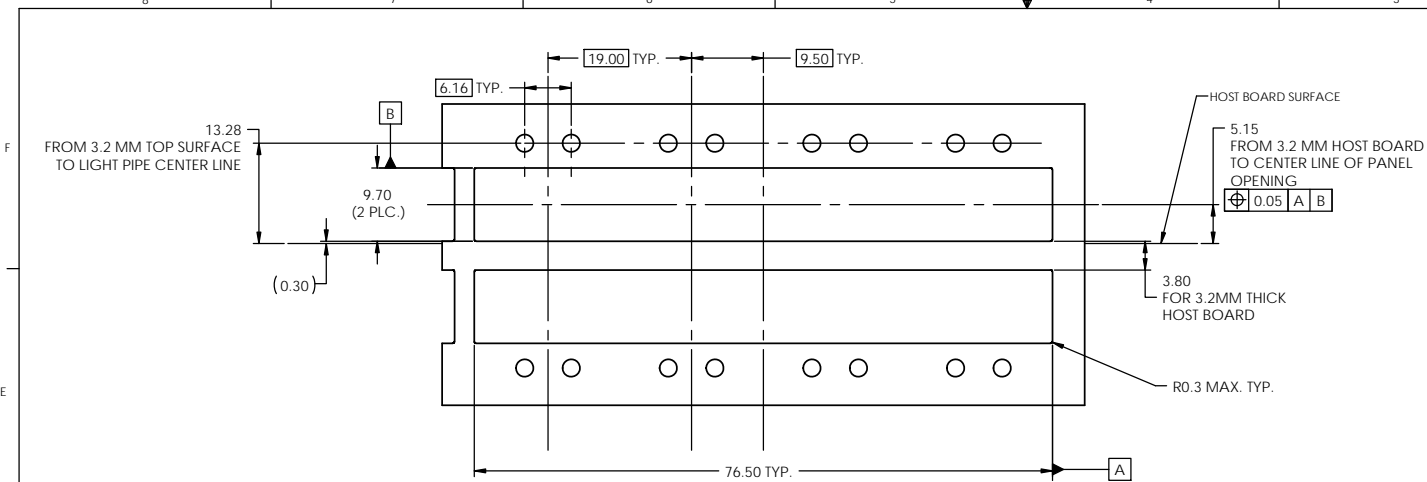
**RECOMMENDED HOST PCB BOARD
SINGLE LEVEL MOUNTING
SINGLE BARREL LP LAYOUT
(COMPONENT SIDE OF BOARD)**



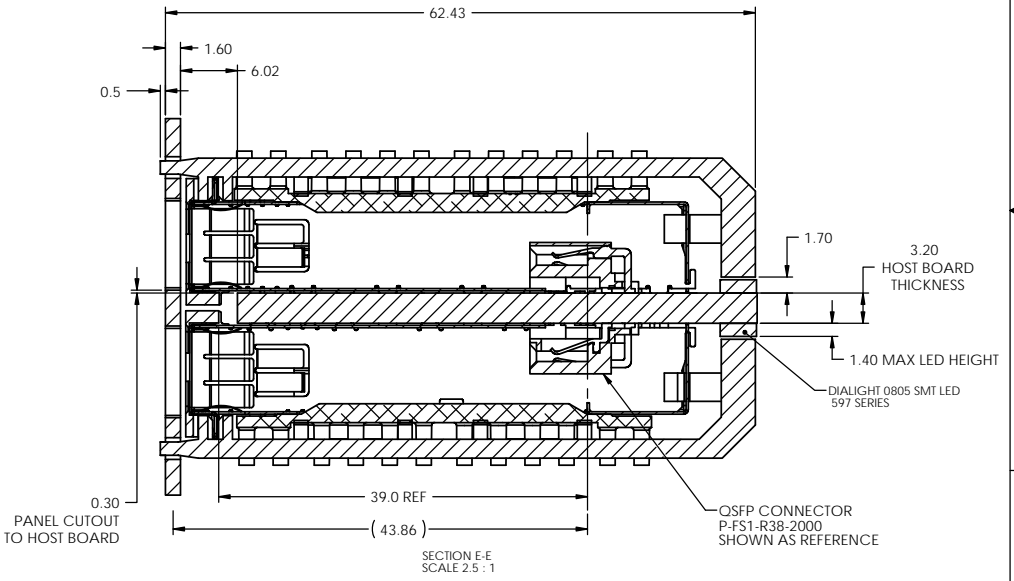
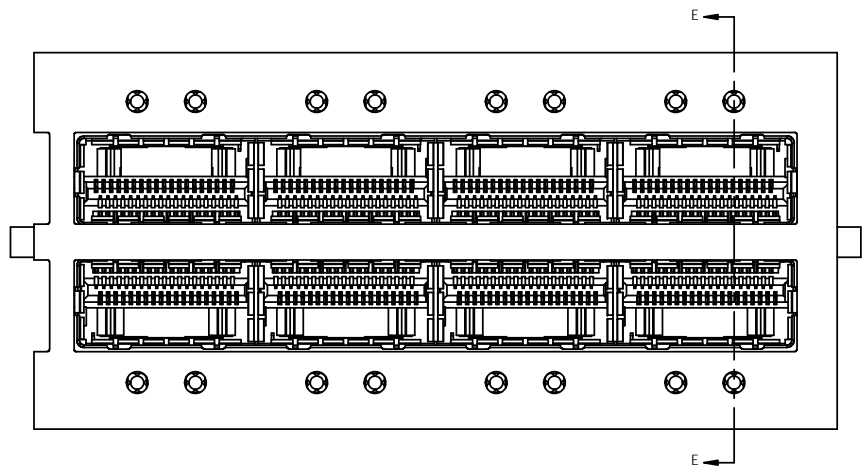
- NOTES:
- DATUM X AND Y ESTABLISHED BY CUSTOMER'S FUDICIAL.
 - LOCATION OF EDGE OF PCB IS APPLICATION SPECIFIC.
 - FINISHED HOLE SIZE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE: DECIMALS .XX ±.10 .X ±.25 ANGLES ± 1°	APPROVALS	DATE	Amphenol Canada Corp.		
	DRAWN Jane.Z	NOV 25/08			
MATERIAL AND FINISH	DESIGNED ZLJ	NOV 25/08	TITLE QSFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE		
	CHECKED				
REF.	QA APP'D		SIZE C	DWG. NO. P-U90-G4X1-1XXX	REV. Q
	IE APP'D		SCALE 2.5:1	PROJECT	SHEET 7 OF 10
CODE IDENT. NO.	DWG APP'D A.GREEN	NOV 25/08			

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**PANEL CUTOUT FOR BEHIND BEZEL
BELLY TO BELLY OPTION WITH ROUND LIGHT PIPES**



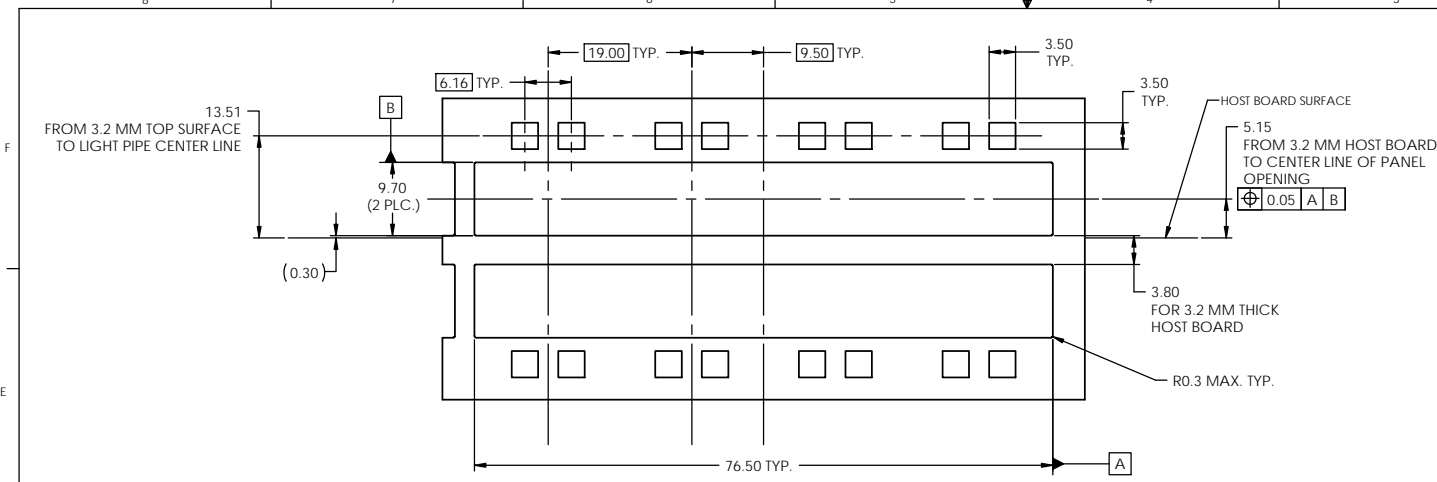
**PART NUMBER SHOWN
U90-G451-101A
(WITH ROUND LIGHT PIPES)**

REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



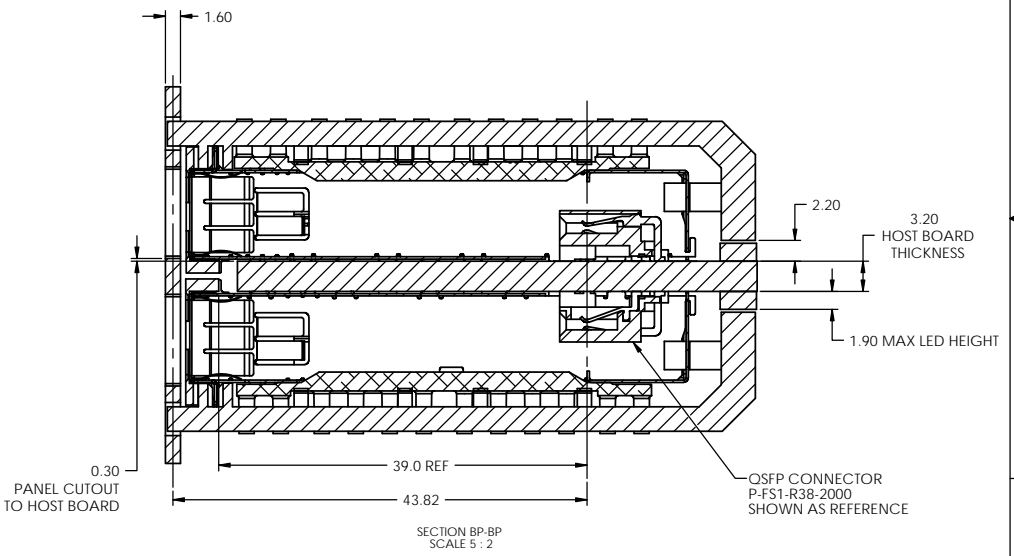
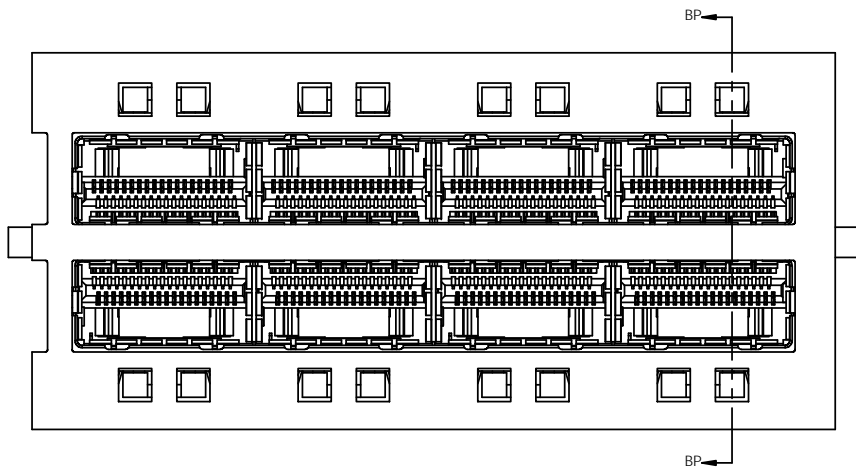
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:		APPROVALS	DATE	Amphenol Canada Corp.	
DECIMALS	ANGLES	DRAWN	NOV 25/08		
.XX ±.10	± 1°	Jane.Z	NOV 25/08	TITLE	
.X ±.25		ZLJ		OSFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
MATERIAL AND FINISH		CHECKED		SIZE	DWG. NO.
		QA APP'D		C	P-U90-G4X1-1XXX
REF.		IE APP'D		SCALE	PROJECT
		DWG APP'D		2.5:1	
CODE IDENT. NO.		A.GREEN	NOV 25/08	SHEET	8 OF 10

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**PANEL CUTOUT FOR BEHIND BEZEL
BELLY TO BELLY OPTION WITH LIGHT PIPES**

REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ

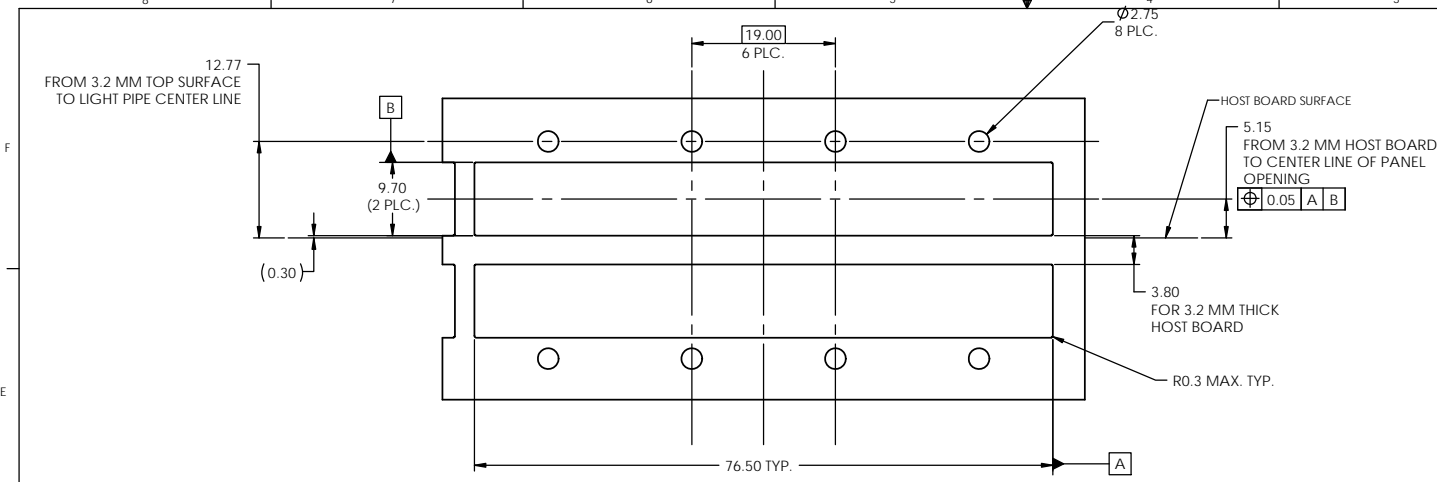


**PART NUMBER SHOWN
U90-G451-103A
(WITH SQUARE LIGHT PIPES)**



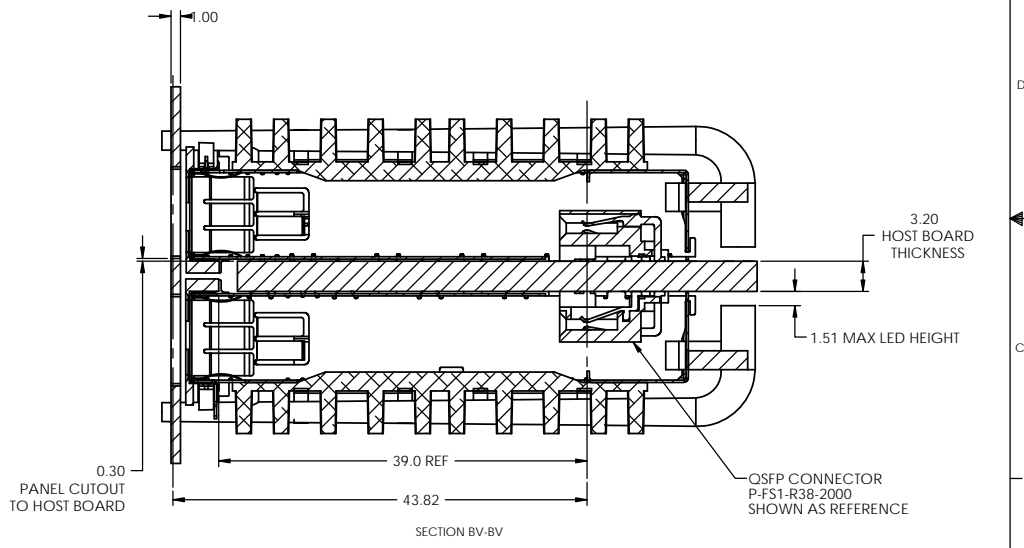
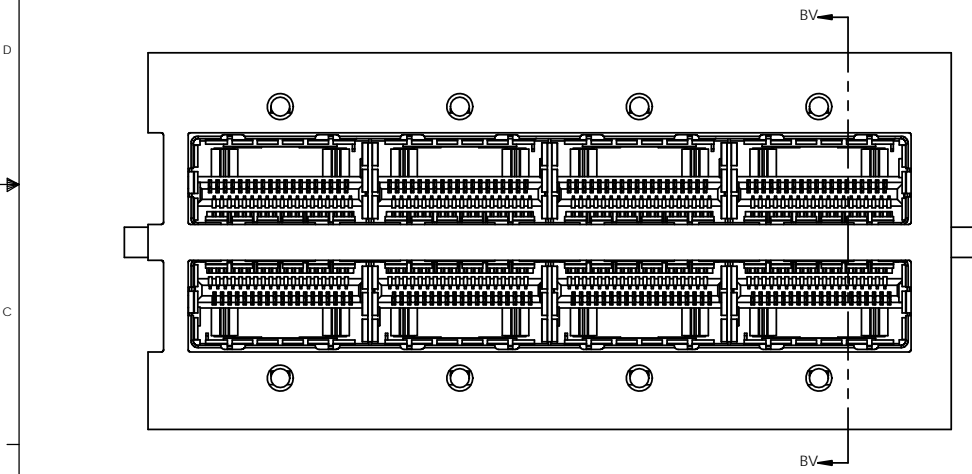
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE: DECIMALS .XX ±.10 .X ±.25 MATERIAL AND FINISH REF. CODE IDENT. NO.	APPROVALS	DATE	Amphenol Canada Corp.	
	DRAWN Jane.Z	NOV 25/08		
	DESIGNED ZLJ	NOV 25/08	OSFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
	CHECKED		SIZE C	DWG. NO. P-U90-G4X1-1XXX
	QA APP'D		SCALE 2.5:1	REV. Q
	IE APP'D		PROJECT	SHEET 9 OF 10
	DWG APP'D A.GREEN	NOV 25/08		

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REVISIONS				
REV.	ECN/E-R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ

PANEL CUTOUT FOR BEHIND BEZEL BELLY TO BELLY OPTION WITH LIGHT PIPES



**PART NUMBER SHOWN
U90-G451-107A
(WITH SINGLE SINGLE BARREL ROUND LIGHT PIPES)**



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE: DECIMALS .XX ±.10 .X ±.25 MATERIAL AND FINISH REF. CODE IDENT. NO.	APPROVALS	DATE	Amphenol Canada Corp.		
	DRAWN Jane.Z	NOV 25/08			
	DESIGNED ZLJ	NOV 25/08	SIZE C	DWG. NO. P-U90-G4X1-1XXX	REV. Q
	CHECKED		SCALE 2.5:1	PROJECT	SHEET 10 OF 10
	QA APP'D				
	IE APP'D				
	DWG APP'D A.GREEN	NOV 25/08			

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