



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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

HEATSINK OPTION

- 1 = NO HEATSINK OR CLIP SHIPPED
- 2 = PIN STYLE HEATSINK AND CLIP (H1=15.1; H2=6.5; SAN HEIGHT)
- 3 = PIN STYLE HEATSINK AND CLIP (H1=12.8; H2=4.2; PC1 HEIGHT)
- 4 = PIN STYLE HEATSINK AND CLIP (H1=22.1; H2=13.5; TALL)
- 5 = PIN-FIN STYLE HEATSINK AND CLIP (H1=15.1; H2=6.5; SAN HEIGHT)
- 6 = PIN-FIN STYLE HEATSINK AND CLIP (H1=12.8; H2=4.2; PC1 HEIGHT)
- 7 = PIN-FIN STYLE HEATSINK AND CLIP (H1=22.1; H2=13.5; TALL)

NOTE:

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

PACKAGING OPTIONS

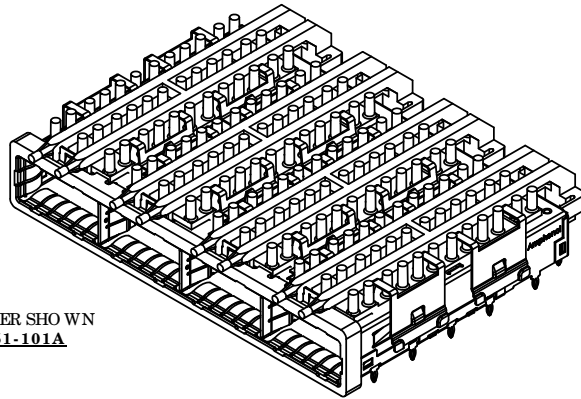
- 0 = TRAY PACKAGING, (HEATSINK & CLIP SHIPPED IN SEPARATE TRAY, IF ORDERED)
- 1 = TRAY PACKAGING, HEATSINK & CLIP SHIPPED ASSEMBLED

LIGHT PIPE AND BEHIND BEZEL COVER OPTIONS

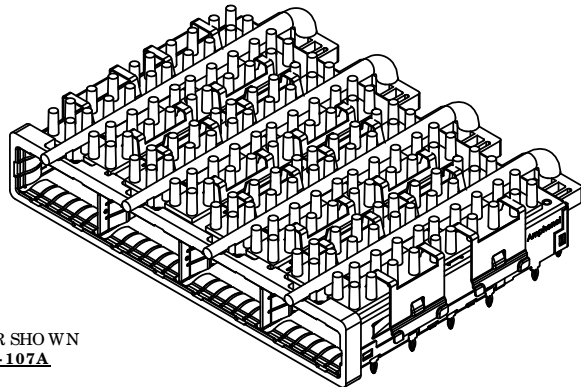
- 0 = STANDARD (NO LIGHT PIPES)
- 1 = WITH DUAL BARREL ROUND LIGHT PIPES INSTALLED
- 2 = WITH DUAL BARREL ROUND LIGHT PIPES AND WITH BEHIND BEZEL EMI GASKET SHIPPED LOOSE
- 3 = WITH DUAL BARREL SQUARE LIGHT PIPES INSTALLED. FOR DETAILS ON THIS OPTION SEE SHEETS 3 AND 9
- 4 = WITH SINGLE BARREL ROUND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

OPTIONAL DUST COVER

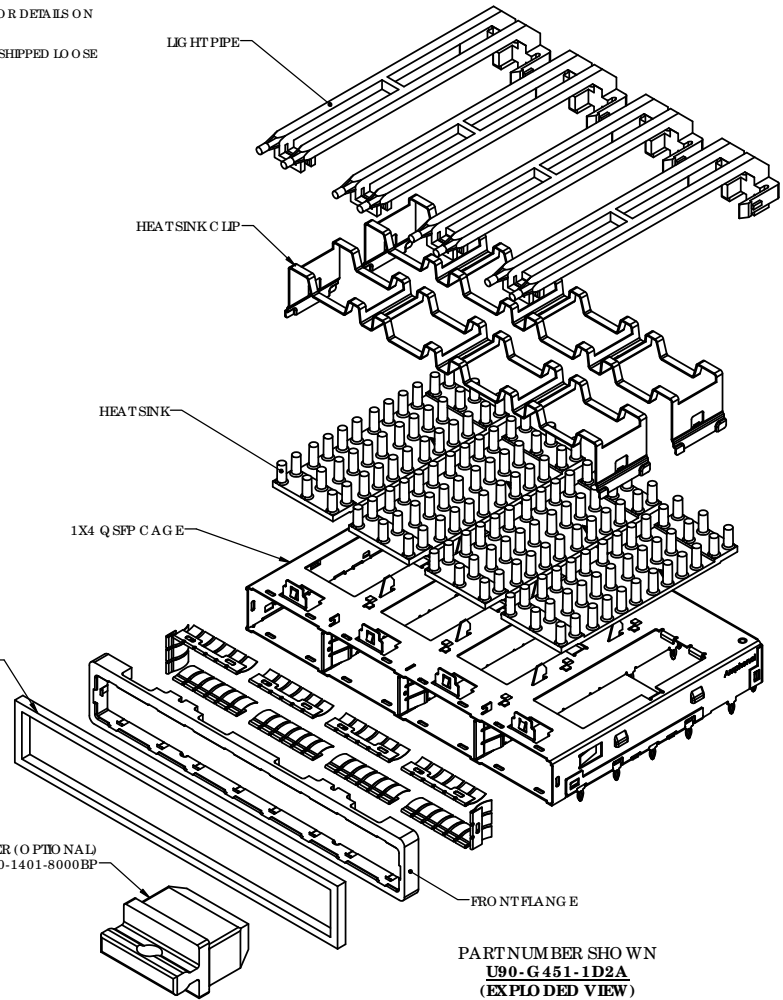
- 0 = WITH DUST COVER
- 1 = WITH DUST COVER (SHIPPED AS LOOSE PIECE)



PART NUMBER SHOWN
U90-G 451-101A



PART NUMBER SHOWN
U90-G 451-107A



PART NUMBER SHOWN
U90-G 451-1D2A
 (EXPLODED VIEW)

REVISIONS				
REV.	ECN/ER	DESCRIPTION	DATE	APPROVED
L		NEW FRONT FLANGE ADDED	JAN 14/11	ZLJ
M		NEW SINGLE LIGHT PIPE ADDED	NOV 22/11	ZLJ
N		BEZEL CUTOUT POSITION REVERSED	JAN 03/12	ZLJ
P		NO LIGHT PIPE / GASKET OPTION ADDED	APR 05/12	ZLJ
Q		BEZEL CUTOUT POSITION REVERSED	JAN 29/13	ZLJ

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	DATE
DRAWN Jane.Z	NOV 25/08
DESIGNED ZLJ	NOV 25/08
CHECKED	
QA APP'D	
IE APP'D	
DWG APP'D A.GREEN	NOV 25/08

Amphenol Canada Corp.

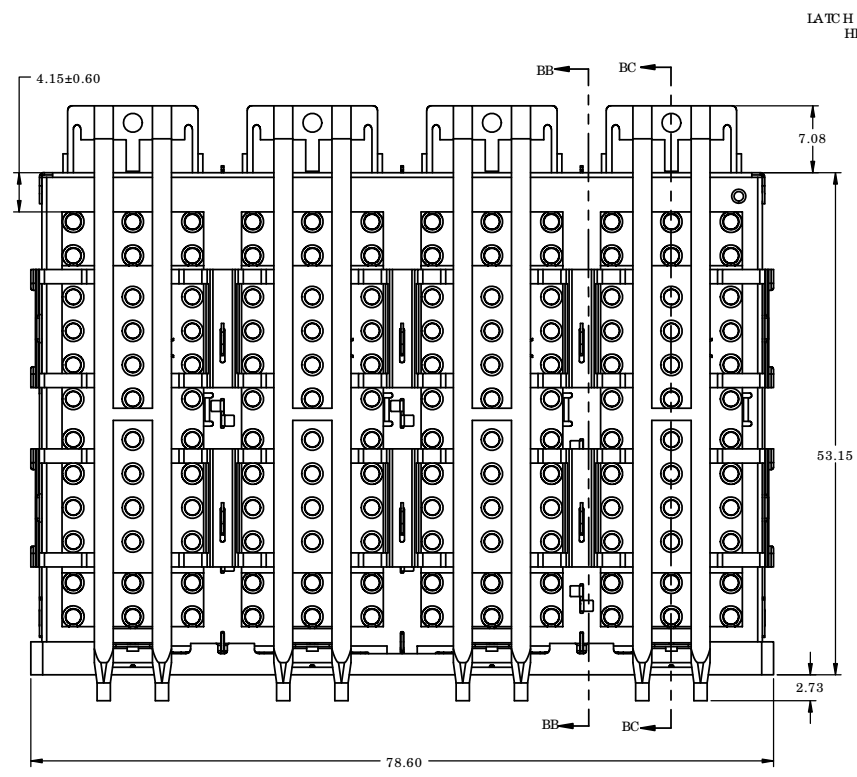
TITLE
**Q SFP 1X4 CAGE
 BEHIND BEZEL
 WITH HEATSINK, CLIP AND LIGHT PIPE**

SIZE C	DWG. NO. P-U90-G4X1-1XXX	REV. Q
SCALE 1.6:1	PROJECT	SHEET 1 OF 10

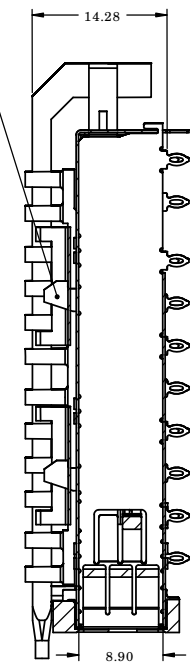
DO NOT SCALE DRAWING

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

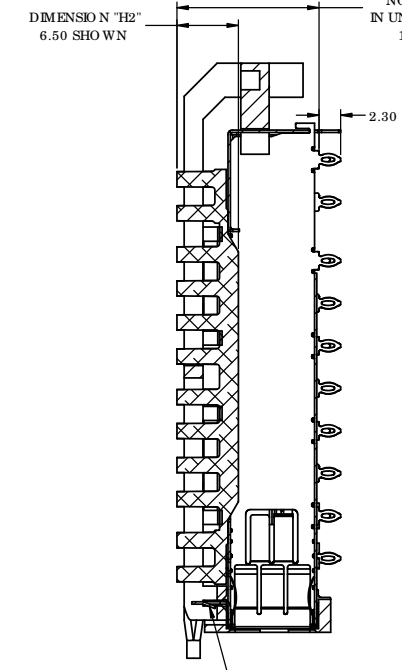


LATCH FEATURE FOR HEAT SINK CLIP 6 PLACES

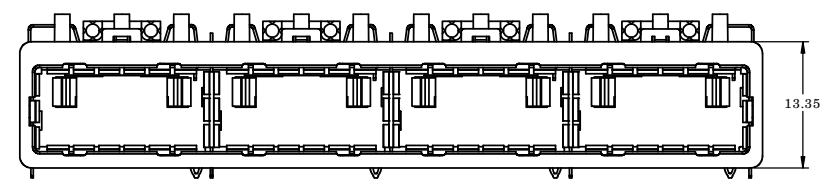


SECTION BB-BB
SCALE 2.5:1

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



SECTION BC-BC
SCALE 2.5:1



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

NOTES:

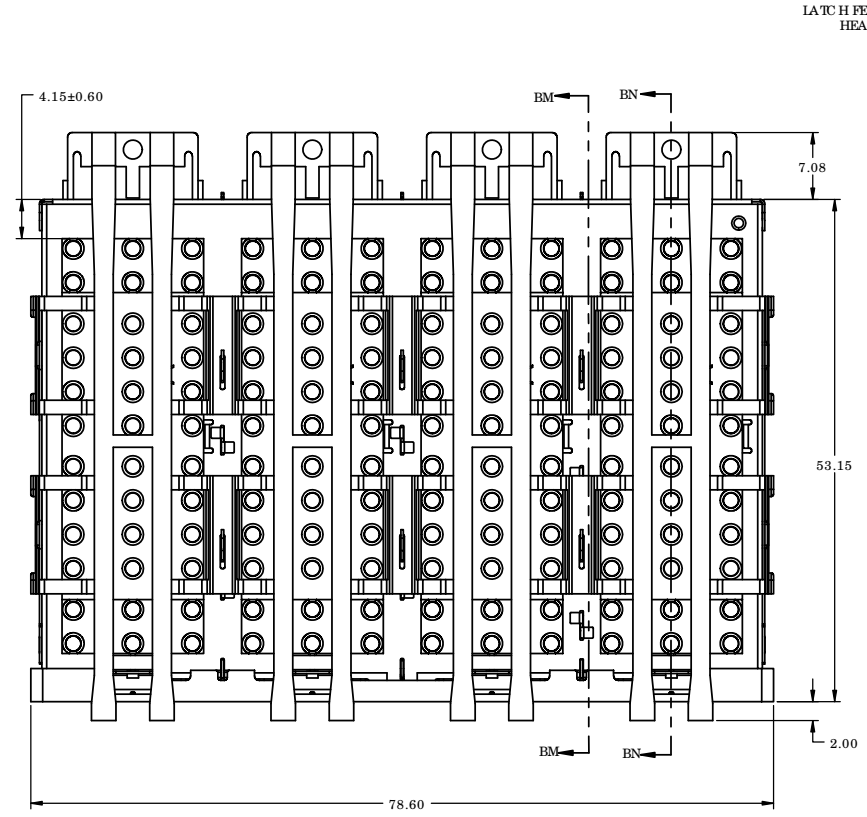
- MATERIAL:
CAGE AND EMISPRINGS: COPPER ALLOY
FRONT FLANGE: ZINC DIE CAST
HEAT SINK CLIP: STEEL ALLOY
PIN-FIN STYLE HEAT SINK: ALUMINUM
PIN STYLE HEAT SINK: NICKEL PLATED ALUMINUM
CAGE PLATING: 3.81µm [100µ"] MIN. NICKEL
LIGHT PIPE: GELDEXAN, OPTICAL GRADE
- CAGE IS INTENDED FOR USE WITH THE QUAD SMALL FORM-FACTOR PLUGGABLE (QSFP) TRANSCEIVER SPECIFICATION INF-84381.

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

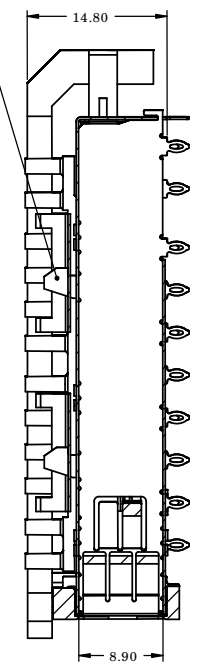


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:		APPROVALS	DATE	Amphenol Canada Corp.	
DECIMALS .XX ±.10 .X ±.25	ANGLES ± 1°	DRAWN Jane.Z	NOV 25/08		
MATERIAL AND FINISH		DESIGNED ZLJ	NOV 25/08	TITLE Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
		CHECKED			
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	

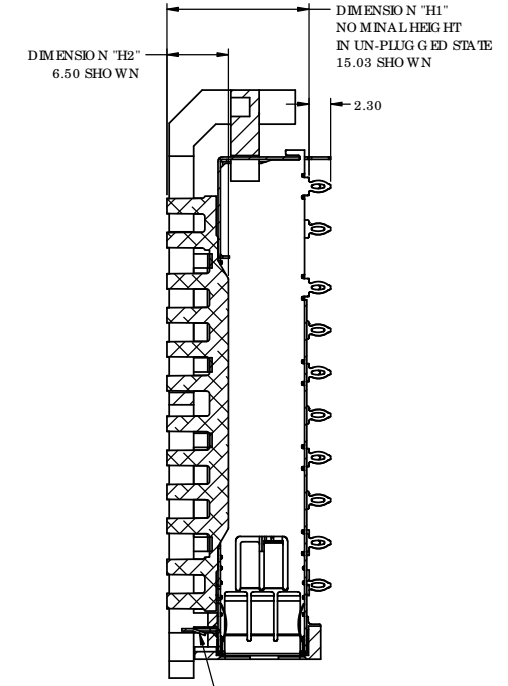
REVISIONS				
REV.	ECN/E/R	DESCRIPTION	DATE	APPROVED
Q		SEE SHEET 1	JAN 29/13	ZLJ



LATCH FEATURE FOR HEAT SINK CLIP 6 PLACES

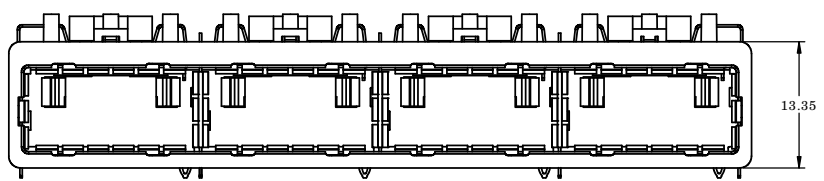


SECTION BM-BM
SCALE 2.5:1



LATCH FEATURE FOR LIGHT PIPE

SECTION BN-BN
SCALE 2.5:1



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

NOTES:

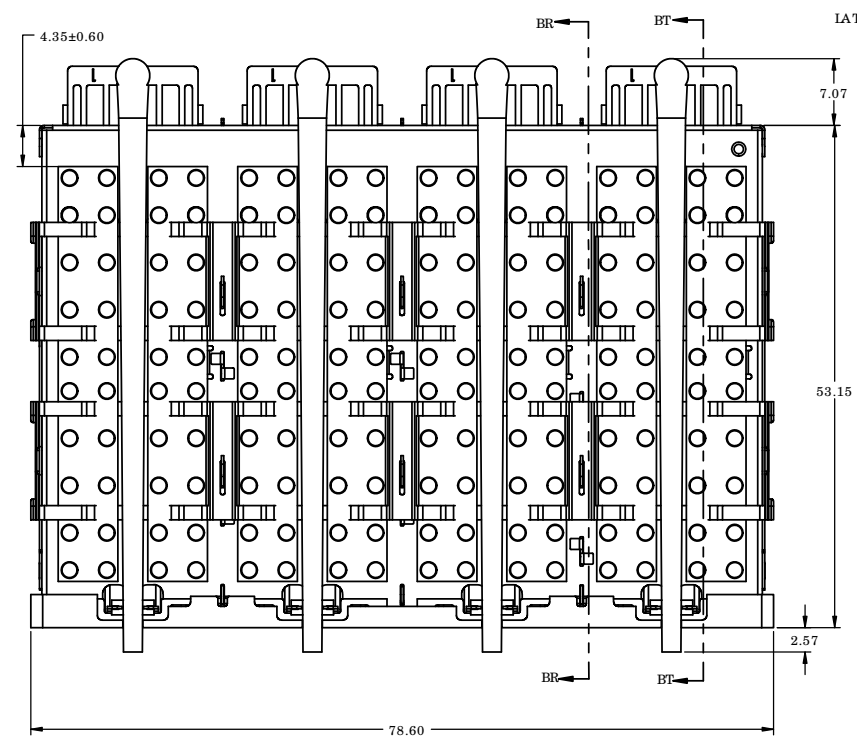
- MATERIAL:
CAGE AND EMISPRINGS: COPPER ALLOY
FRONT FLANGE: ZINC DIE CAST
HEAT SINK CLIP: STEEL ALLOY
PIN-FIN STYLE HEAT SINK: ALUMINUM
PIN STYLE HEAT SINK: NICKEL PLATED ALUMINUM
CAGE PLATING: 3.81µm [100µ"] MIN. NICKEL
LIGHT PIPE: GELDEXAN, OPTICAL GRADE
- CAGE IS INTENDED FOR USE WITH THE QUAD SMALL FORM-FACTOR PLUGGABLE (QSFP) TRANSCEIVER SPECIFICATION INF-84381.

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

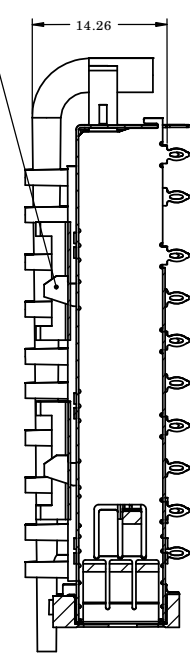


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:		APPROVALS	DATE	Amphenol Canada Corp.	
DECIMALS .XX ±.10 .X ±.25	ANGLES ± 1°	DRAWN Jane.Z	NOV 25/08		
MATERIAL AND FINISH		DESIGNED ZLJ	NOV 25/08	TITLE Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
		CHECKED			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

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



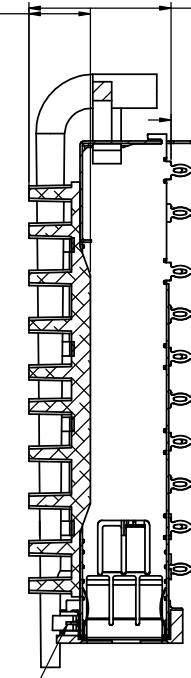
LATCH FEATURE FOR HEATSINK CLIP 6 PLACES



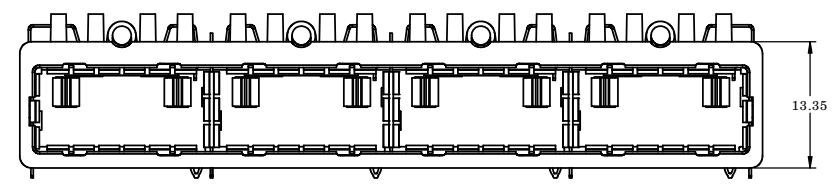
SECTION BR-BR

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 EMISPRINGS: COPPER ALLOY
 FRONT FLANGE: ZINC DIE CAST
 HEATSINK CLIP: STEEL ALLOY
 PIN-FIN STYLE HEATSINK: ALUMINUM
 PIN STYLE HEATSINK: NICKEL PLATED ALUMINUM
 CAGE PLATING: 3.81µm [100µ"] MIN. NICKEL
 LIGHT PIPE: GELDEXAN, OPTICAL GRADE
- CAGE IS INTENDED FOR USE WITH THE QUAD SMALL FORM-FACTOR PLUGGABLE (QSFP) TRANSCEIVER SPECIFICATION INF-84381.

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

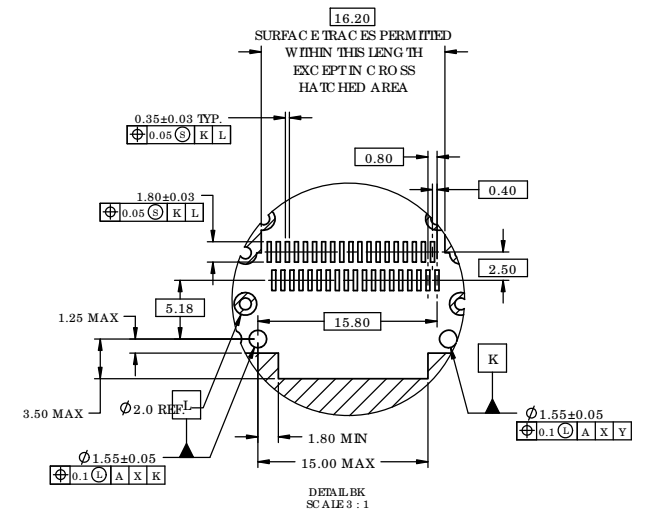
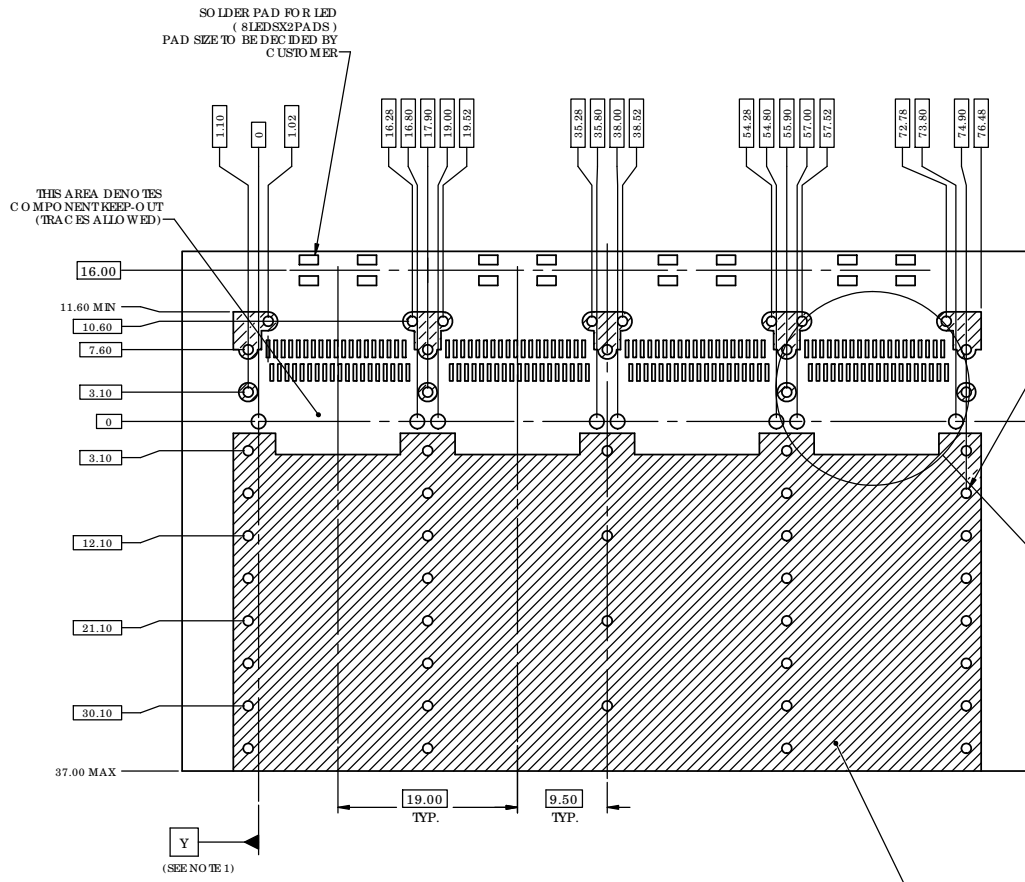
PART NUMBER SHOWN
U90-G451-107A
 (WITH SINGLE BARREL
 ROUND LIGHT PIPES)



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 Q SFP 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
					4 OF 10



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



**RECOMMENDED HO ST 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 CROSS HATCHED AREA)

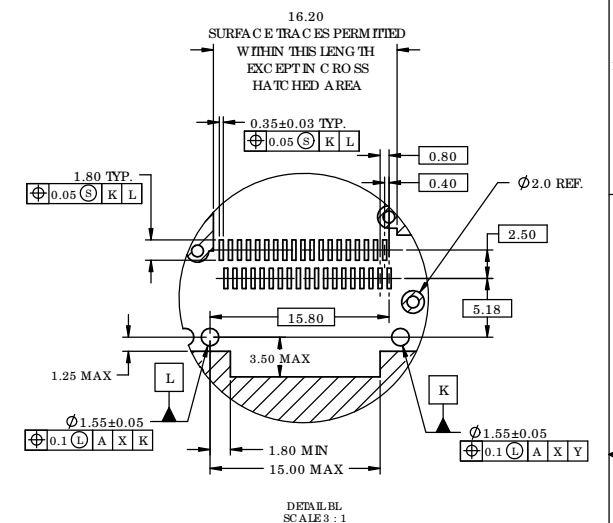
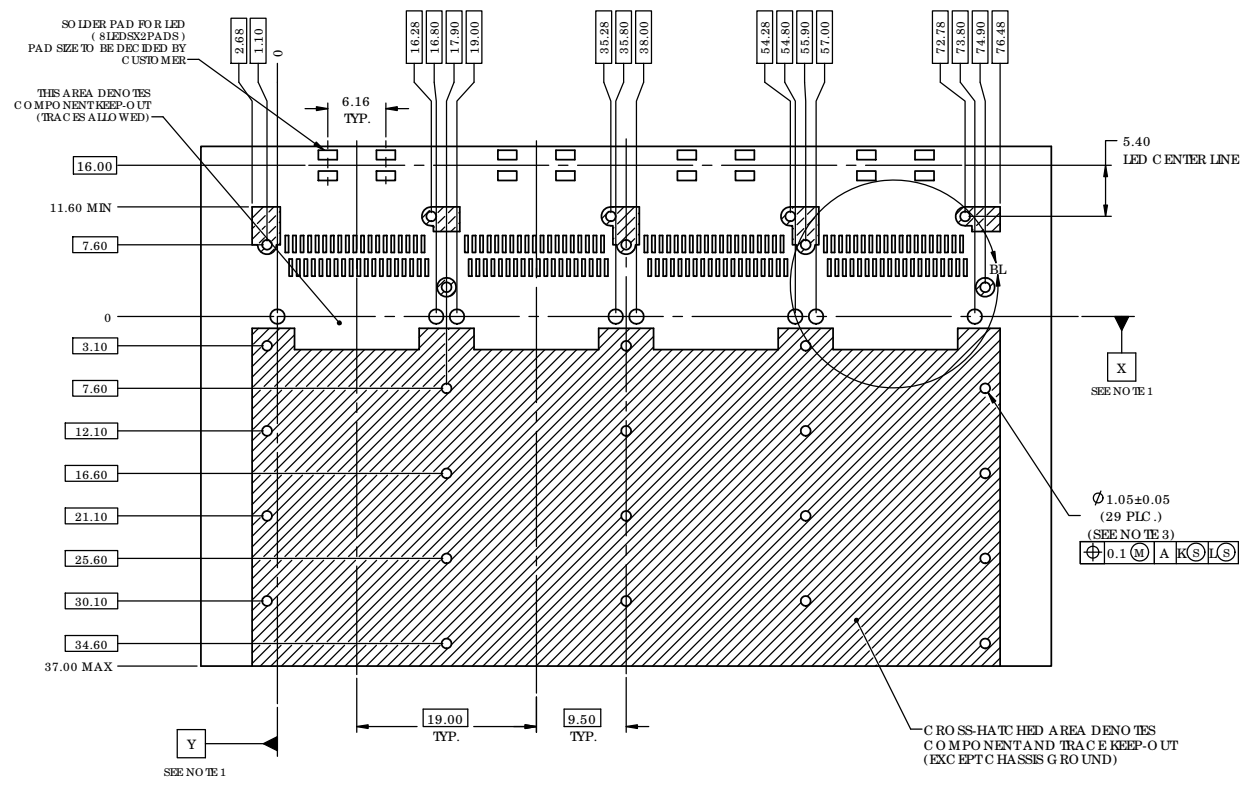
3.20±0.32
FOR BELLY TO BELLY APPLICATION

- NOTES:
1. DATUM X AND Y ESTABLISHED BY CUSTOMER'S FUDUCIAL
 2. LOCATION OF EDGE OF PCB IS APPLICATION SPECIFIC.
 3. 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				TITLE
	DESIGNED ZLJ	NOV 25/08				Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE
	CHECKED					SIZE C
MATERIAL AND FINISH	QA APP'D		DWG. NO. P-U90-G4X1-1XXX	REV. Q		
REF.	IE APP'D		SCALE 5:2	PROJECT	SHEET 5 OF 10	
CODE IDENT. NO.	DWG APP'D A.GREEN	NOV 25/08				

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



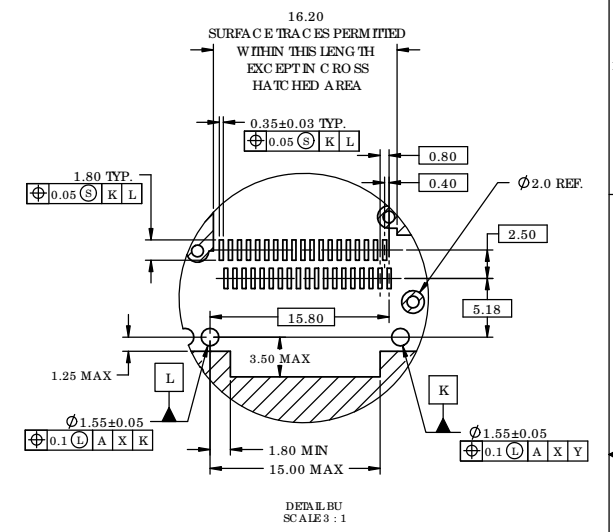
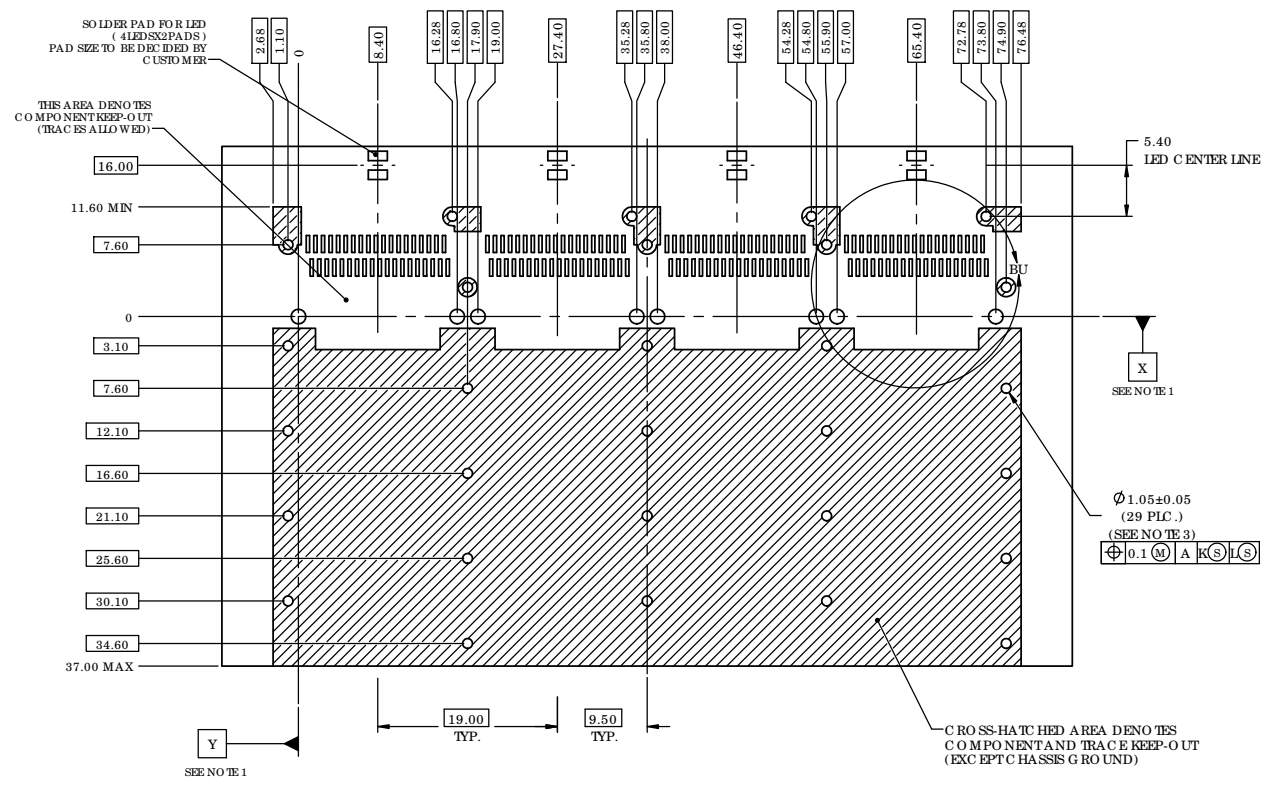
**RECOMMENDED HO ST PCB BOARD
SINGLE LEVEL MOUNTING LAYOUT
FOR DOUBLE BARREL LIGHT PIPE
(COMPONENT SIDE OF BOARD)**



- NOTES:
1. DATUM X AND Y ESTABLISHED BY CUSTOMER'S FUDUCIAL
 2. LOCATION OF EDGE OF PCB IS APPLICATION SPECIFIC.
 3. FINISHED HO LE 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 Q SFP 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 6 OF 10
CODE IDENT. NO.	DWG APP'D A.GREEN	NOV 25/08			

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

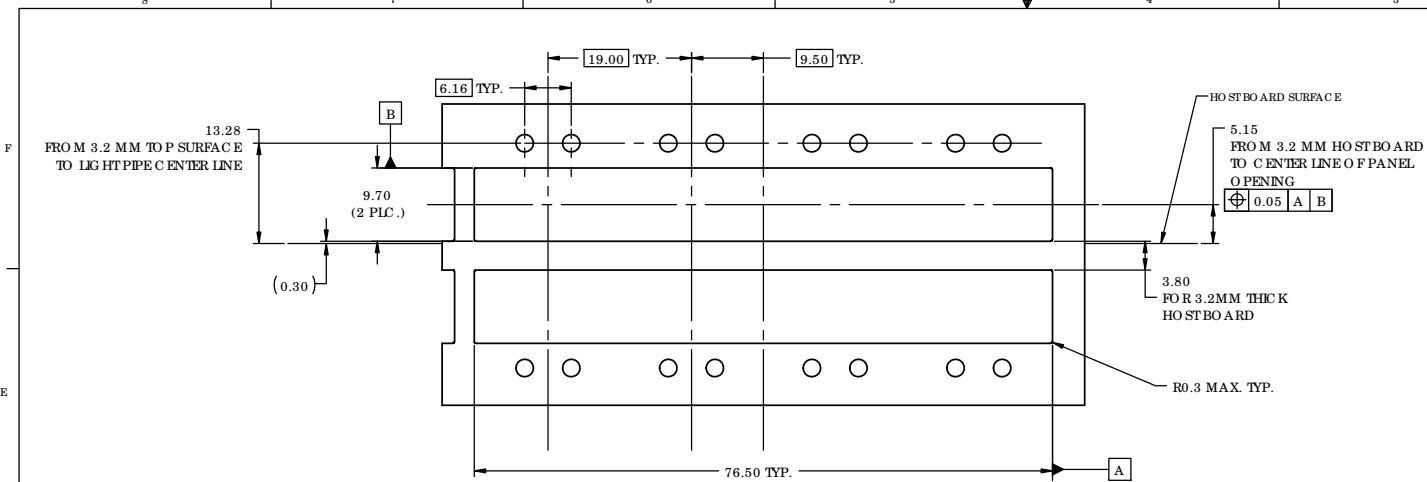


**RECOMMENDED HO ST PCB BOARD
SINGLE LEVEL MOUNTING
SINGLE BARREL IP LAYOUT
(COMPONENT SIDE OF BOARD)**

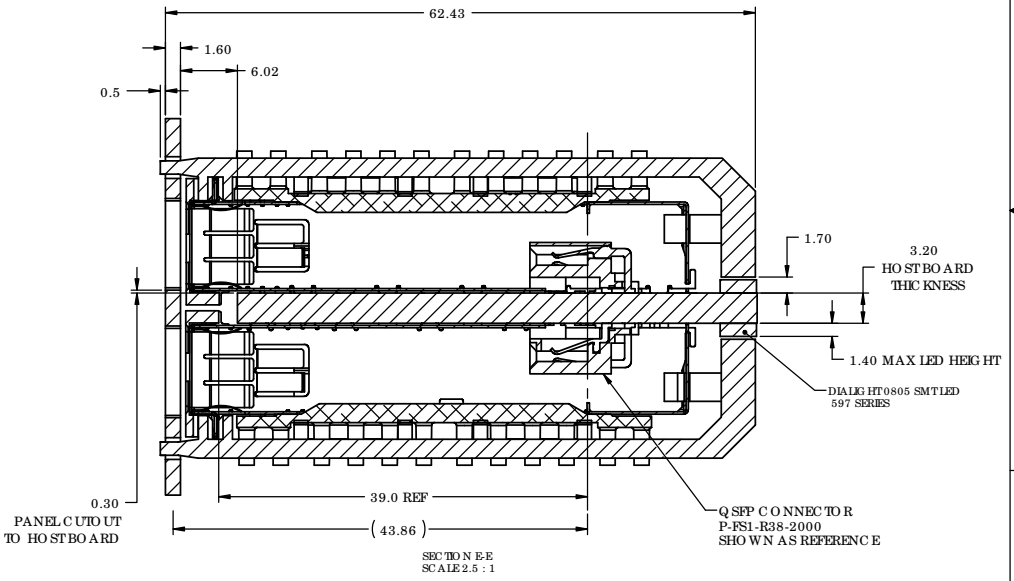
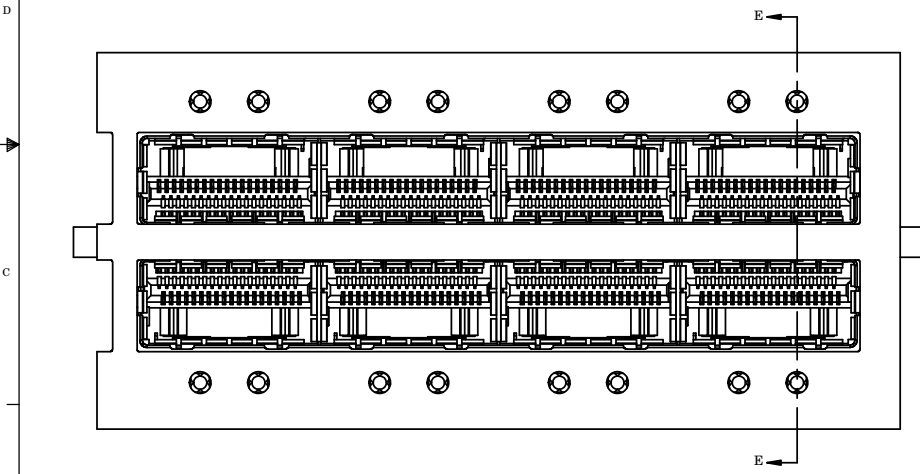


- NOTES:
1. DATUM X AND Y ESTABLISHED BY CUSTOMER'S FUDUCIAL
 2. LOCATION OF EDGE OF PCB IS APPLICATION SPECIFIC.
 3. FINISHED HOLE SIZE.

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	Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE		
	CHECKED		SIZE C	DWG. NO. P-U90-G4X1-1XXX	REV. Q
	QA APP'D		SCALE 2.5:1	PROJECT	SHEET 7 OF 10
	IE APP'D				
	DWG APP'D A.GREEN	NOV 25/08			



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



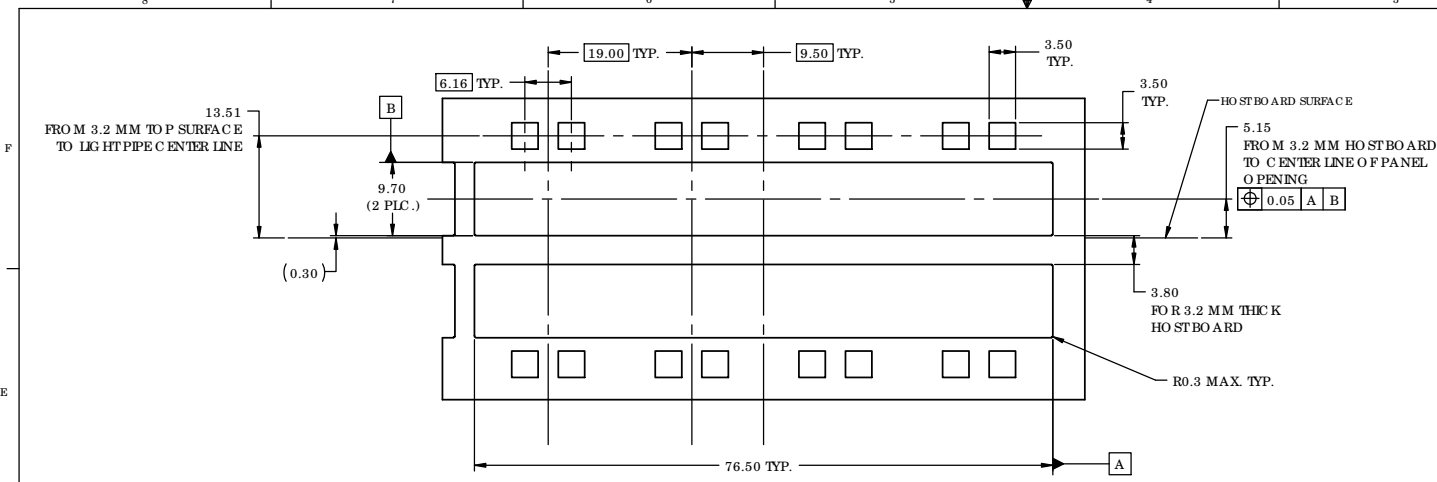
**PART NUMBER SHOWN
U90-G451-101A
(WITH ROUND LIGHT PIPES)**

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



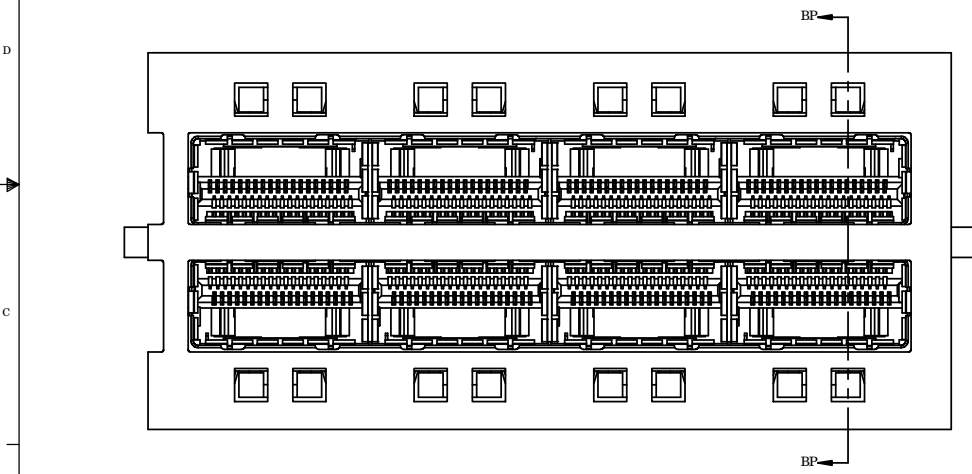
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE:		APPROVALS	DATE	Amphenol Canada Corp.	
DECIMALS	ANGLES	DRAWN	NOV 25/08		
.XX ±.10	± 1°	Jane.Z	NOV 25/08	TITLE Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
.X ±.25		ZLJ	NOV 25/08		
MATERIAL AND FINISH		CHECKED	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

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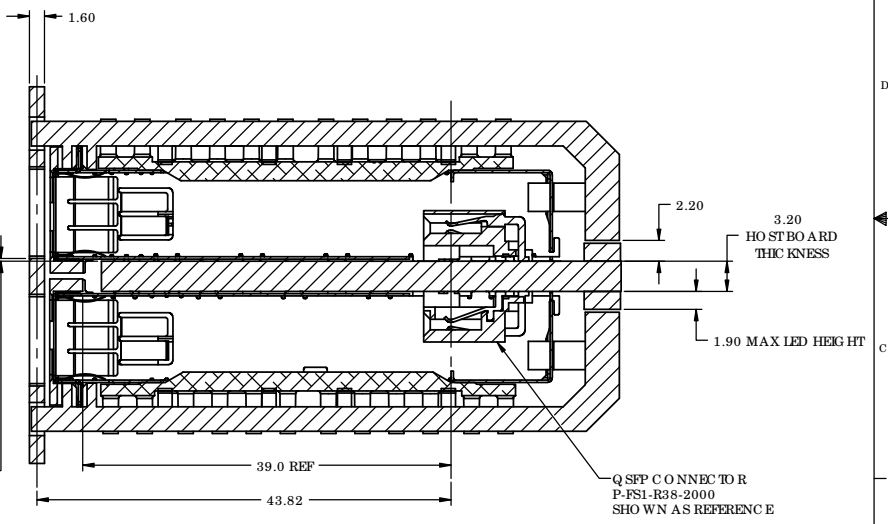


**PANEL CUTOUT FOR BEHIND BEZEL
BELLY TO BELLY OPTION WITH LIGHT PIPES**

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



0.30
PANEL CUTOUT
TO HOST BOARD



SECTION BP-BP
SCALE 5:2

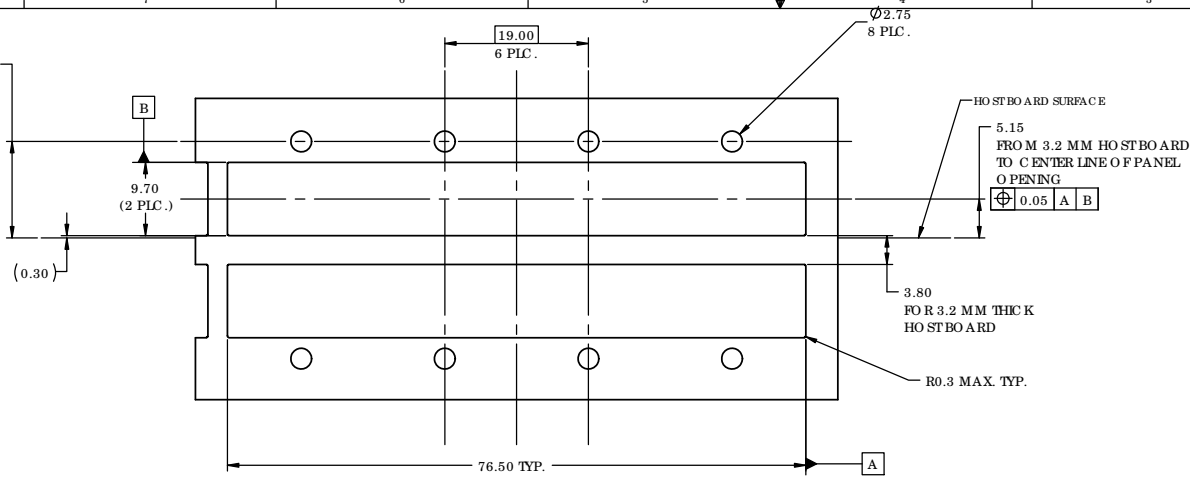
**PART NUMBER SHOWN
U90-G451-103A
(WITH SQUARE LIGHT PIPES)**

DO NOT SCALE DRAWING
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OR USED FOR MANUFACTURING PURPOSES WITHOUT PERMISSION FROM AMPHENOL CANADA CORP.



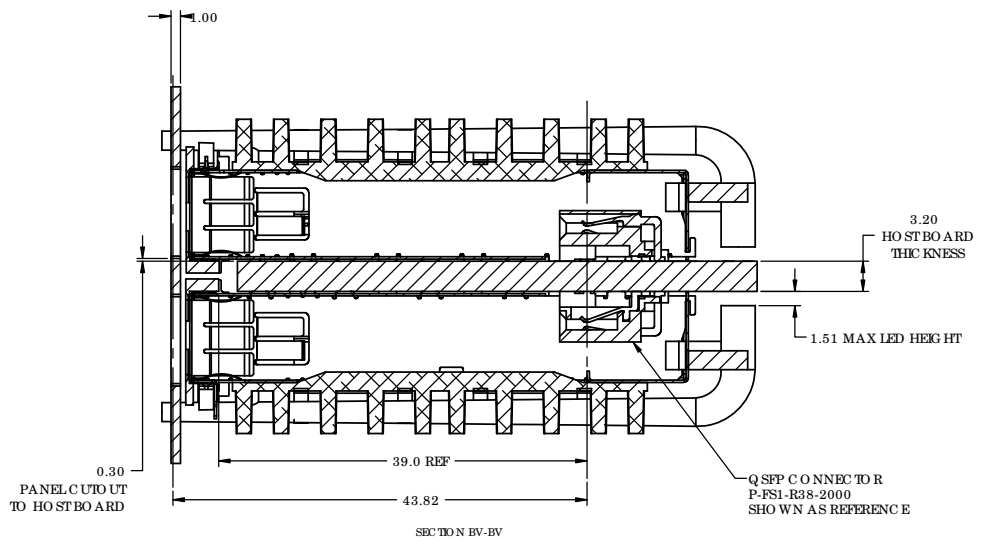
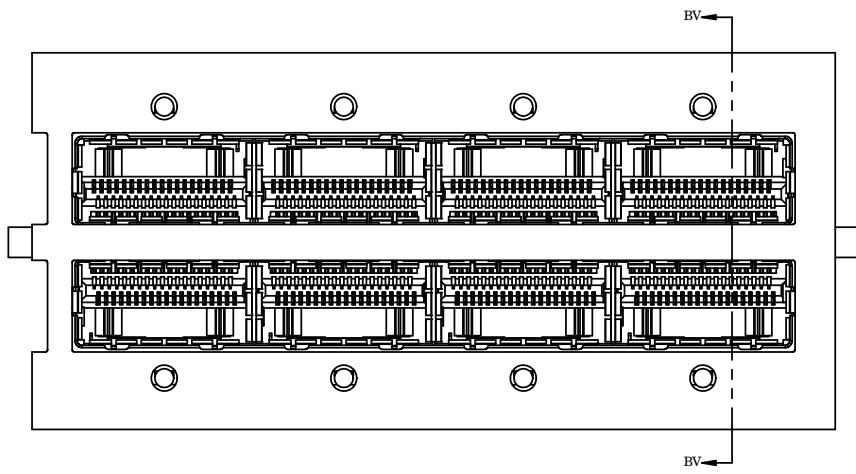
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETER TOLERANCES ARE: DECIMALS .XX ± .10 .X ± .25 MATERIAL AND FINISH REF. CODE IDENT. NO.	APPROVALS	DATE	Amphenol Canada Corp.	
	DRAWN Jane.Z	NOV 25/08		
ANGLES ± 1°	DESIGNED ZLJ	NOV 25/08	TITLE Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT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

12.77
FROM 3.2 MM TOP SURFACE
TO LIGHT PIPE CENTER LINE



**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-G451-107A
(WITH SINGLE SINGLE BARREL ROUND 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°	Jane.Z	NOV 25/08	TITLE	
.X ± .25		ZLJ		Q SFP 1X4 CAGE BEHIND BEZEL WITH HEATSINK, CLIP AND LIGHT PIPE	
MATERIAL AND FINISH		CHECKED		SIZE	DWG. NO.
REF.		QA APP'D		C	P-U90-G4X1-1XXX
CODE IDENT. NO.		IE APP'D		SCALE	PROJECT
		DWG APP'D	NOV 25/08	2.5:1	SHEET
		A.GREEN			10 OF 10

DO NOT SCALE DRAWING
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