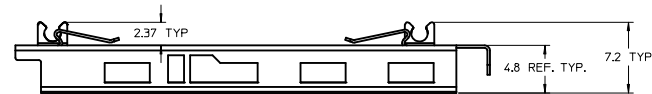
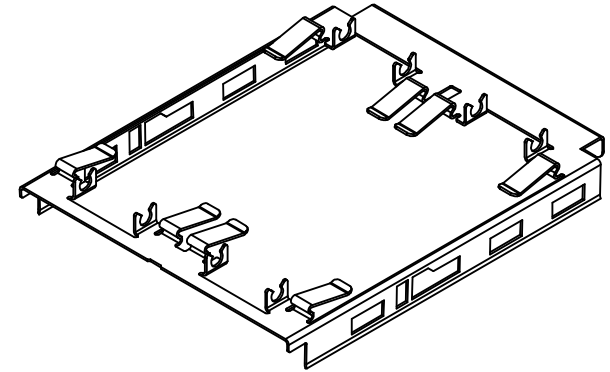
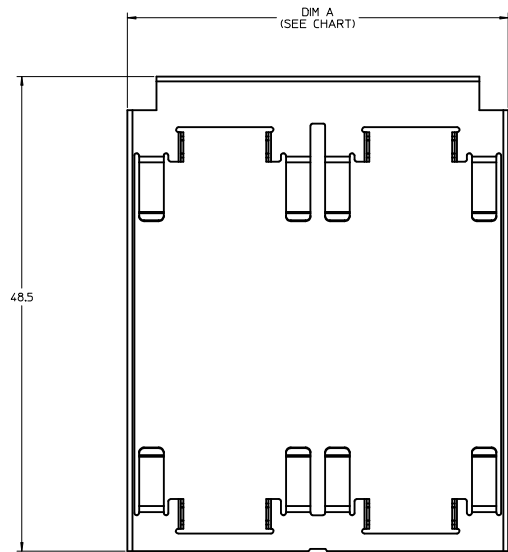


HEAT SINK CLIP W/OUT LIGHT PIPE(1X2 SHOWN)



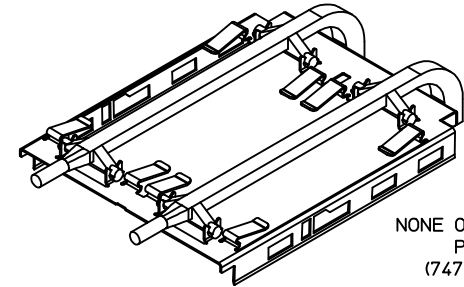
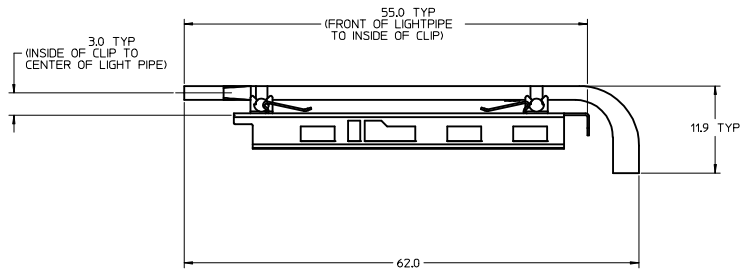
MOLEX P/N	PORT SIZE	DIM A
747830262	1x2	38.9
747830363	1x3	57.9
747830462	1x4	76.9
747830562	1x5	95.9
747830662	1x6	114.9

NOTES:

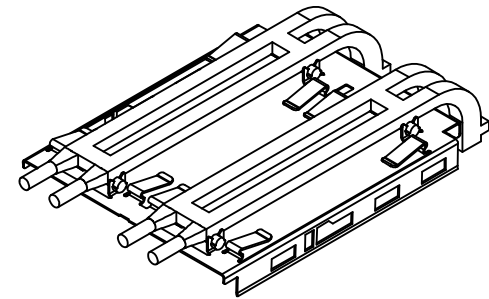
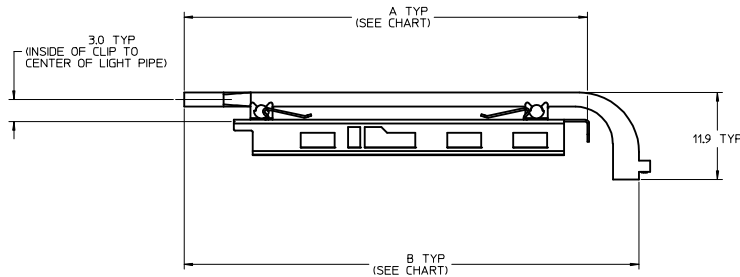
1. MATERIAL: STAINLESS STEEL
2. PACKAGING: TRAY
3. LEAD FREE, NO RoHS EXEMPTIONS.

ADDED 1X5 ASSY EC NO: CPG2013-0096 DRAWN BY: SKINNER CHKD BY: KARINE APP: KLLOYD	REV DESCRIPTION 2012/07/11 2012/07/11 2012/07/17	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.15 ± --- 1 PLACE ± 0.25 ± --- ANGULAR ± 1/2°	DIMENSION STYLE MM ONLY	SCALE 4:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	TITLE		
								1X2, 1X3, 1X4, 1X5, 1X6 QSFP+ HEAT SINKS AND CLIP ASSEMBLIES		
								MOLEX MOLEX INCORPORATED		
								MATERIAL NO. SEE TABLE		
								DOCUMENT NO. SD-74767-0400		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				SIZE D	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			SHEET NO. 1 OF 4		

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
----	----	----	----	----	----	----	----	----	----	----	---	---	---	---	---	---	---	---	---



NONE OR SINGLE LIGHT PIPE
PER PORT
(747670403 SHOWN)



DUAL LIGHT PIPES
PER PORT
(747670404 SHOWN)

NOTES:

1. MATERIALS:
 - LIGHT PIPE CLIP: STAINLESS STEEL
 - LIGHT PIPE: POLYCARBONATE (94-V0 RATED)
2. PACKAGE: TRAY
3. RECOMMENDED LED'S INCLUDE THE FOLLOWING MANUFACTURES:
 - DIALIGHT: 597-77X1-5XX SERIES
 - CHICAGO MINIATURE: 7016 SERIES
 - KINGBRIGHT: APBL3025 SERIES (BICOLOR)
 - APL3015 SERIES (SINGLE COLOR)
4. LEAD FREE, NO RoHS EXEMPTIONS.

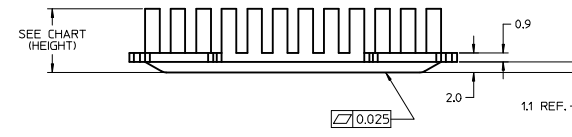
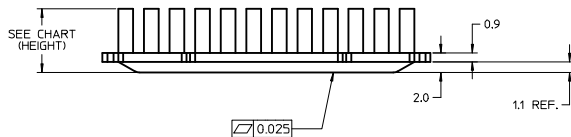
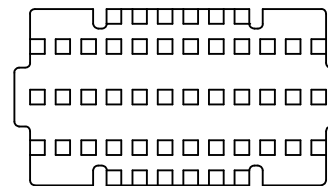
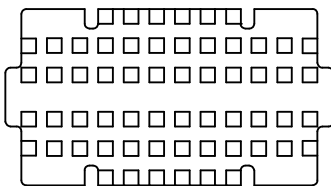
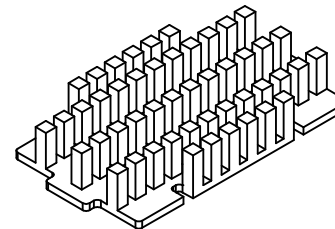
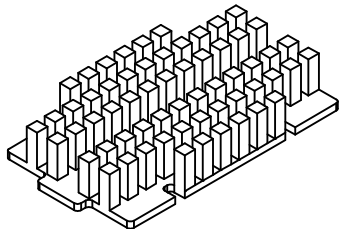
MOLEX PN (CLIP & LP ASSEMBLY)					DIM A	DIM B	LIGHT PIPES PER PORT
1x2	1x3	1x4	1x5	1x6			
747670403	747680403	747690403	747700403	747710403	55.0	62.0	NONE OR SINGLE
747670404	747680404	747690404	747700404	747710404	55.0	62.0	DUAL
747670405	N/A	N/A	N/A	N/A	53.2	63.0	

ADDED 1X5 ASSY EC NO: EP20203-0096 DRAWN BY: SAKHNER QC DATE: 2012/07/11 APPROVED: 2012/07/11 APPR: K.LLOYD	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 3:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																				
	= 0 = 0 = 0	<table><tr><td>.mm</td><td>.INCH</td></tr><tr><td>4 PLACES ±</td><td>±</td></tr><tr><td>3 PLACES ±</td><td>±</td></tr><tr><td>2 PLACES ± 0.15</td><td></td></tr><tr><td>1 PLACE ± 0.25</td><td></td></tr></table>	.mm	.INCH	4 PLACES ±	±	3 PLACES ±	±	2 PLACES ± 0.15		1 PLACE ± 0.25		<table><tr><td>DRAWN BY</td><td>DATE</td></tr><tr><td>BSWA JA</td><td>2012/02/09</td></tr><tr><td>CHECKED BY</td><td>DATE</td></tr><tr><td>KLLOYD</td><td>2012/07/11</td></tr><tr><td>APPROVED BY</td><td>DATE</td></tr><tr><td>KLLOYD</td><td>2012/02/16</td></tr></table>		DRAWN BY	DATE	BSWA JA	2012/02/09	CHECKED BY	DATE	KLLOYD	2012/07/11	APPROVED BY	DATE	KLLOYD	2012/02/16	TITLE 1X2, 1X3, 1X4, 1X5, 1X6 QSPF+ HEAT SINKS AND CLIP ASSEMBLIES	
	.mm	.INCH																										
	4 PLACES ±	±																										
3 PLACES ±	±																											
2 PLACES ± 0.15																												
1 PLACE ± 0.25																												
DRAWN BY	DATE																											
BSWA JA	2012/02/09																											
CHECKED BY	DATE																											
KLLOYD	2012/07/11																											
APPROVED BY	DATE																											
KLLOYD	2012/02/16																											
	ANGULAR ± 1/2°		MATERIAL NO.		DOCUMENT NO.		MOLEX INCORPORATED																					
	DRAFT WHERE APPLICABLE MUST BE WITHIN DIMENSIONS		SIZE D SEE TABLE		SD-74767-0400		SHEET NO. 2 OF 4																					
	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																											

NONE OR SINGLE LIGHT PIPE
PER PORT
(SAN HEIGHT - 747500307 SHOWN)

HEAT SINK

DUAL LIGHT PIPES
PER PORT
(SAN HEIGHT - 747500308 SHOWN)



NOTES:

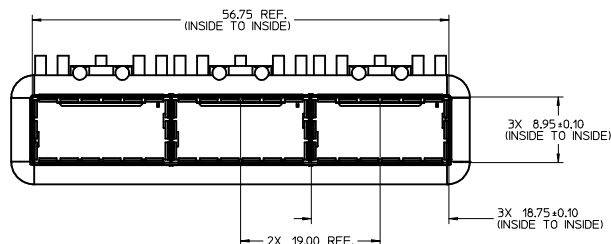
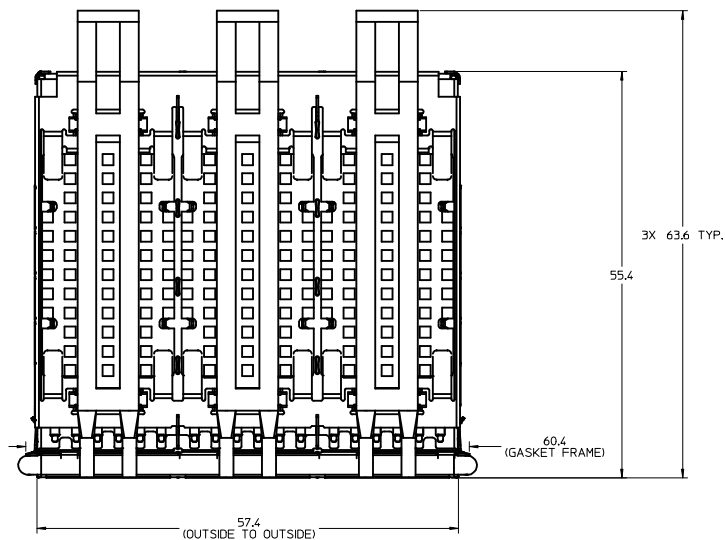
1. MATERIAL:
HEAT SINKS: BLACK ANNOXIDIZED ALUMINUM
2. PACKAGE: TRAY
3. CUSTOM HEATSINKS AVAILABLE UPON REQUEST.
4. LEAD FREE, NO RoHS EXEMPTIONS.

MOLEX P/N			
NONE OR SINGLE LIGHT PIPE PER PORT	DUAL LIGHT PIPES PER PORT	SYSTEM TYPE	HEIGHT (mm)
747500314	747500315	PCI	4.2
747500307	747500308	SAN	6.5
747500317	747500318	NET	13.5

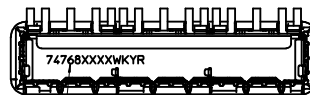
ADDED 1X5 ASSY EC NO: CPG2013-0096 DRAWN BY: CHYDARINE SKINNER CHECKED BY: KLLOYD DATE: 2012/07/11 DATE: 2012/07/17	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	DESCRIPTION APPES-KLLOYD	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 4:1	DESIGN UNITS METRIC		THIRD ANGLE PROJECTION	
				mm	INCH	DRAWN BY BSWAJA	DATE 2012/02/09	TITLE 1X2, 1X3, 1X4, 1X5, 1X6 QSFP+ HEAT SINKS AND CLIP ASSEMBLIES			
			4 PLACES ±	±	±	CHECKED BY KLLOYD	DATE 2012/07/11				
			3 PLACES ±	±	±	APPROVED BY KLLOYD	DATE 2012/02/16	 MOLEX INCORPORATED			
			1 PLACE ±	±	±						
			ANGULAR AR ±1/2°		MATERIAL NO.		DOCUMENT NO.	SHEET NO.			
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-74767-0400		3 OF 4		
					SIZE D		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

[illegible]

ADDED 1X5 ASSY EC NO. PF2013-0096 DRAWSKINNER CHKDAR WE APPROVAL MO 2012/07/11 2012/07/11 2012/07/17	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) <table><tr><th></th><th>mm</th><th>INCH</th></tr><tr><td>4 PLACES</td><td>± .005</td><td>± .0004</td></tr><tr><td>3 PLACES</td><td>± .003</td><td>± .0002</td></tr><tr><td>2 PLACES</td><td>± .015</td><td>± .0006</td></tr><tr><td>1 PLACE</td><td>± .025</td><td>± .0010</td></tr><tr><td>0 PLACE</td><td>± .000</td><td>± .0000</td></tr></table>		mm	INCH	4 PLACES	± .005	± .0004	3 PLACES	± .003	± .0002	2 PLACES	± .015	± .0006	1 PLACE	± .025	± .0010	0 PLACE	± .000	± .0000	DIMENSION STYLE MM ONLY		SCALE 1:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION
				mm	INCH																				
			4 PLACES	± .005	± .0004																				
			3 PLACES	± .003	± .0002																				
			2 PLACES	± .015	± .0006																				
1 PLACE	± .025	± .0010																							
0 PLACE	± .000	± .0000																							
DRAWN BY DATE BSWAJA 2012/02/09		TITLE 1X2, 1X3, 1X4, 1X5, 1X6 Q5FP+ HEAT SINKS AND CLIP ASSEMBLIES																							
CHECKED BY DATE KLOYD 2012/07/11		APPROVED BY DATE KLOYD 2012/02/16																							
MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-74767-0400																							
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE D	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																						
		SHEET NO. 4 OF 4																							

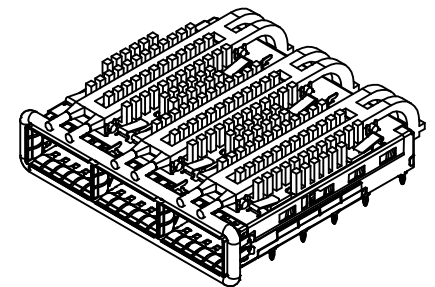


LIGHT PIPE IS REMOVED FOR CLARITY

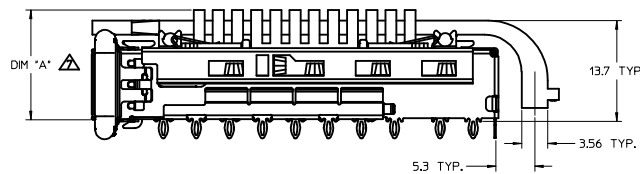


PART NO. AND WEEK/YEAR DATE CODE TO BE PRINTED ON BACK OF COMPLETED CAGE ASSEMBLY APPROXIMATELY AS SHOWN. SEE TABLE BELOW FOR DATE CODE INFORMATION.

WEEK/YEAR DATE CODE TABLE	
WEEK	01 THRU 52 EXAPLES: 01 = FIRST WEEK OF YEAR 52 = LAST WEEK OF YEAR
YEAR	10, 11, 12 ETC. EXAMPLE: YEAR 2010 = 10



CAGE ASSEMBLY WITH SAN HEATSINK AND DUAL LIGHT PIPE



OVERALL HEATSINK HEIGHT	DIM 'A'
PCI	13.7
SAN	16.0
NET	23.0

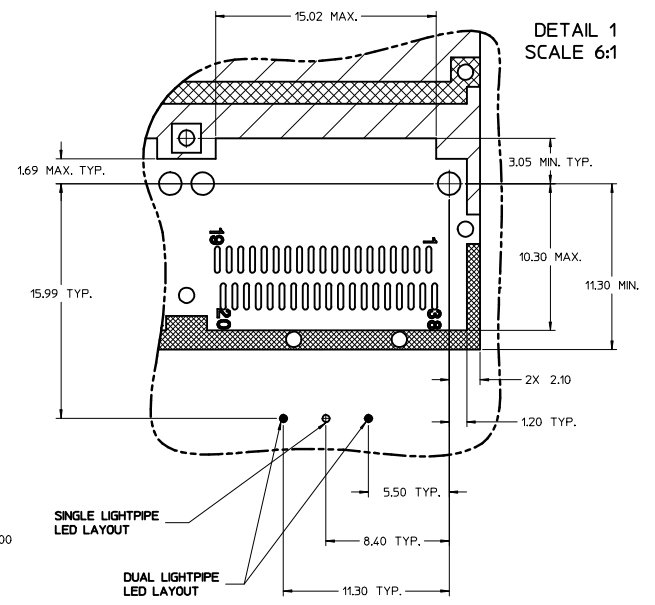
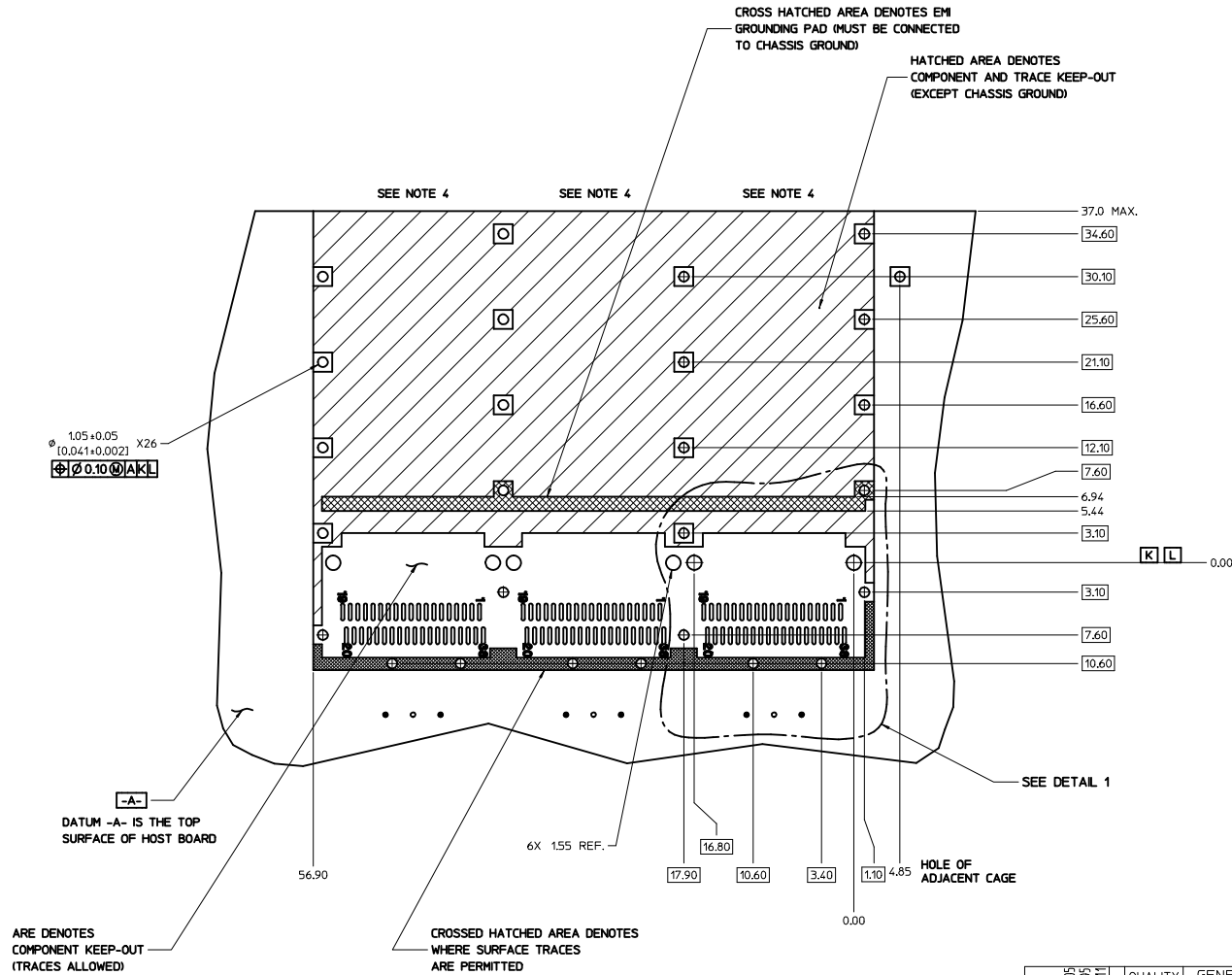
MOLEX P/N	DESCRIPTION	LP	HS	#OF REAR LEGS PER PORT
747680501	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	SINGLE	SAN	2
747680502	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	SINGLE	NET	2
747680503	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	DUAL	SAN	2
747680504	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	DUAL	NET	2
747680505	1X3 QSFP+ CAGE W/ HEATSINK ASSEMBLY	N/A	PCI	2
747680506	1X3 QSFP+ CAGE W/ HEATSINK ASSEMBLY	N/A	SAN	2
747680507	1X3 QSFP+ CAGE W/ HEATSINK ASSEMBLY	N/A	NET	2
747680508	1X3 QSFP+ CAGE W/ HEATSINK, LIGHTPIPE & GASKET	QUAD	CUSTOM	2
747680511	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	DUAL	PCI	2
747680512	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	SINGLE	PCI	2
747680601	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	SINGLE	SAN	0
747680602	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	SINGLE	NET	0
747680603	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	DUAL	SAN	0
747680604	1X3 QSFP+ CAGE W/ HEATSINK & LIGHTPIPE ASSEMBLY	DUAL	NET	0
747680605	1X3 QSFP+ CAGE W/ HEATSINK ASSEMBLY	N/A	PCI	0
747680606	1X3 QSFP+ CAGE W/ HEATSINK ASSEMBLY	N/A	SAN	0
747680607	1X3 QSFP+ CAGE W/ HEATSINK ASSEMBLY	N/A	NET	0

NOTES:

- QSFP+ ASSEMBLES ALSO AVAILABLE AND 1X2 (74767 SERIES) AND 1X4 (74769 SERIES) CONFIGURATIONS.
 - MATERIAL:
COVER/CLIP: STAINLESS STEEL
LIGHT PIPES: POLYCARBONATE (94-V0 RATED)
HEAT SINKS: ALUMINUM
CAGE: COPPER ALLOY
 - FOR CAGE DETAIL, SEE MOLEX DRAWINGS SD-74768-0212
 - PCI OPTION - NOT AVAILABLE WITH LIGHTPIPES AND HEATSINKS INSTALLED.
LIGHTPIPE CLIP AND HEATSINKS MUST BE INSTALLED AFTER CAGE INSTALLATION.
 - NO ROHS EXEMPTIONS
 - CUSTOM HEATSINKS AVAILABLE UPON REQUEST
- ⚠ HEIGHT OF HEATSINK WITH MODULE INSERTED. DIMENSION MAY BE LESS DUE TO MODULE AND HEATSINK VARIATIONS.

SEE REV HISTORY EC NO: CPG2014-1327 TDRWNS:WALLACE01 2013/11/05 CHKD:JERWIN 2013/11/05 APPR:KLOVD 2013/11/11	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	TITLE QSFP+ 1X3 GANGED CAGE FULLY ASSEMBLED molex MATERIAL NO. SEE CHART DOCUMENT NO. SD-74768-0501	SHEET NO. 1 OF 5
		▽=0	mm	INCH	DRAWN BY JERWIN	DATE 2011/05/11	TITLE				
		▽=0	3 PLACES ±	±	±	CHECKED BY CHIRSCHY	DATE 2011/05/11				
		▽=0	2 PLACES ±	0.15	±	APPROVED BY	DATE				
			1 PLACE ±	0.25	±						
		0 PLACE ±	±	±							
		ANGULAR ± 1 °		MATERIAL NO.		DOCUMENT NO.					
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE CHART		SD-74768-0501					
	REV			SIZE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

PCB LAYOUT FOR SINGLE SIDED MOUNTING

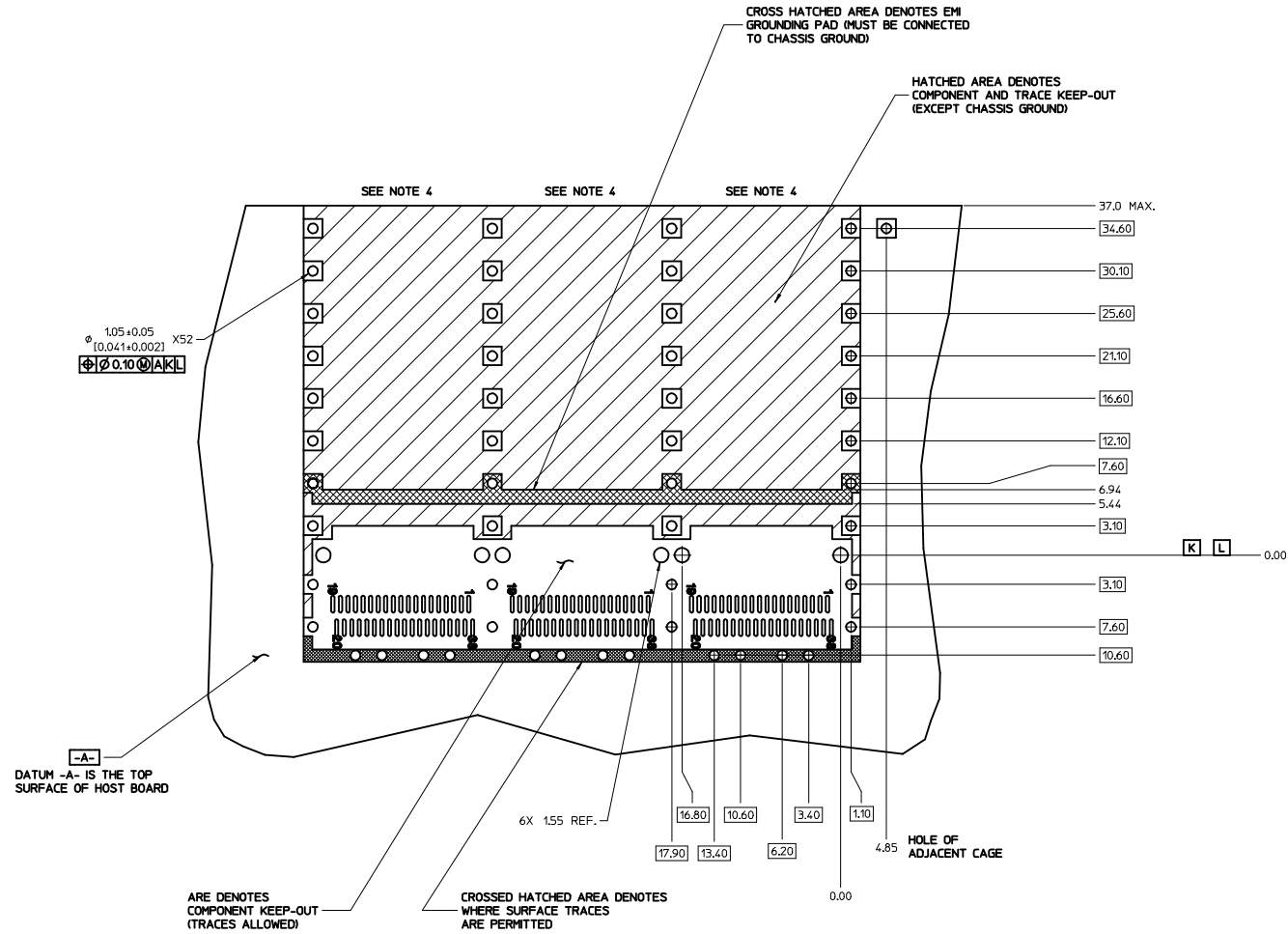


NOTES:

1. PADS AND VIAS CONNECT TO CHASSIS GROUND (RECOMMEND PADS TO BE 2.00mm SQUARE)
2. RECOMMENDED THRU HOLE PLATING INCLUDES HASL, OSP, OR IMMERSION (GOLD, SILVER, OR TIN).
3. CONNECTOR PAD LAYOUT PER QSFP MSA WILL ACCOMMODATE MOLEX CONNECTOR 75586-0010 OR 75586-0011.
4. HOLE PATTERN REPEATS FOR EACH PORT. SPACING BETWEEN PORTS IS 19.00 [0.748].
5. LED SHOULD BE PLACED RELATIVE TO THE QSFP CONNECTOR POST HOLES

SEE REV HISTORY EC NO: CPG2014-1327 TDRWNS:JALLAC01 2013/11/05 CHKD:JERWIN 2013/11/05 APPR:KLLOYD 2013/11/11	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▽=0	mm		MM ONLY		4:1	METRIC	DATE	
	▽=0	INCH		DRAWN BY		TITLE		DATE	
	▽=0	4 PLACES ±		JERWIN		2011/05/11		QSFP+ 1X3 GANGED CAGE	
		3 PLACES ±		CHECKED BY		DATE		FULLY ASSEMBLED	
	2 PLACES ±		CHIRSCHY		2011/05/11				
	1 PLACE ±		APPROVED BY		DATE				
	0 PLACE ±								
	ANGULAR ± 1 °		MATERIAL NO.		DOCUMENT NO.		SHEET NO.		
	DRAFT WHERE APPLICABLE		SEE CHART		SD-74768-0501		2 OF 5		
	MUST REMAIN WITHIN DIMENSIONS		SIZE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

PCB LAYOUT FOR BELLY TO BELLY MOUNTING

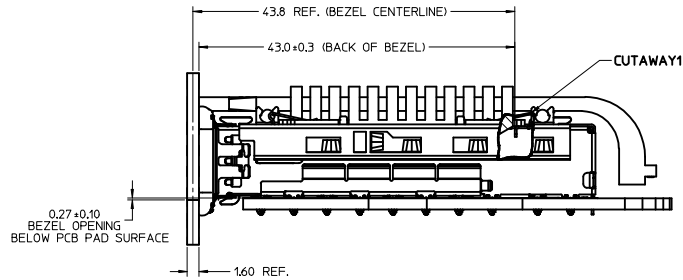


NOTE:
SEE SHEET 2 FOR
HOST CONNECTOR AND
LED LOCATION DETAILS

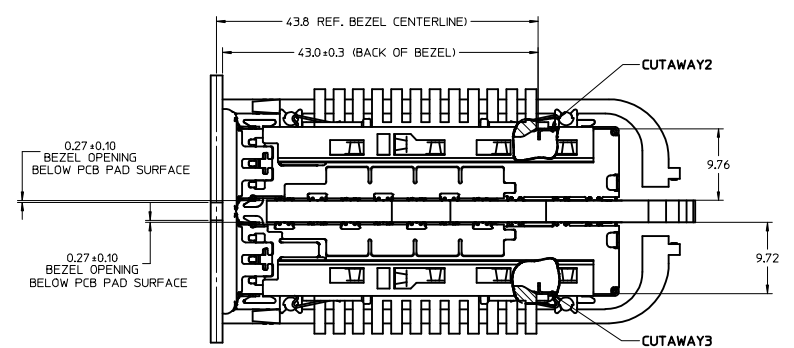
- NOTES:
1. PADS AND VIAS CONNECT TO CHASSIS GROUND (RECOMMEND PADS TO BE 2.00mm SQUARE)
 2. RECOMMENDED THRU HOLE PLATING INCLUDES HASL, OSP, OR IMMERSION (GOLD, SILVER, OR TIN).
 3. CONNECTOR PAD LAYOUT PER QSFP MSA WILL ACCOMMODATE MOLEX CONNECTOR 75586-0010 OR 75586-0011.
 4. HOLE PATTERN REPEATS FOR EACH PORT. SPACING BETWEEN PORTS IS 19.00 [0.748].

SEE REV HISTORY EC NO: CP-020101-032 DRAWING WALLACE01 2013/11/05 CHKD: JERWIN 2013/11/05 APPROVALD 2013/11/11		DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 4:1		DESIGN UNITS METRIC		THIRD ANGLE PROJECTION	
			▽=0	mm	INCH	DRAWN BY	DATE	TITLE		QSPF+ 1X3 GANGED CAGE FULLY ASSEMBLED			
			▽=0	4 PLACES ±---	±---	JERWIN	2011/05/11	CHECKED BY					
			▽=0	3 PLACES ±---	±---	CHIRSCHY	2011/05/11	DATE					
			▽=0	2 PLACES ±0.15	±---	APPROVED BY	DATE	DOCUMENT NO.					
			1 PLACE ±0.25	±---					molex		SHEET NO.		
			0 PLACE ±---	±---					SD-74768-0501		3 OF 5		
		REV	ANGULAR ± 1 °			MATERIAL NO.							
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE CHART							
						SIZE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

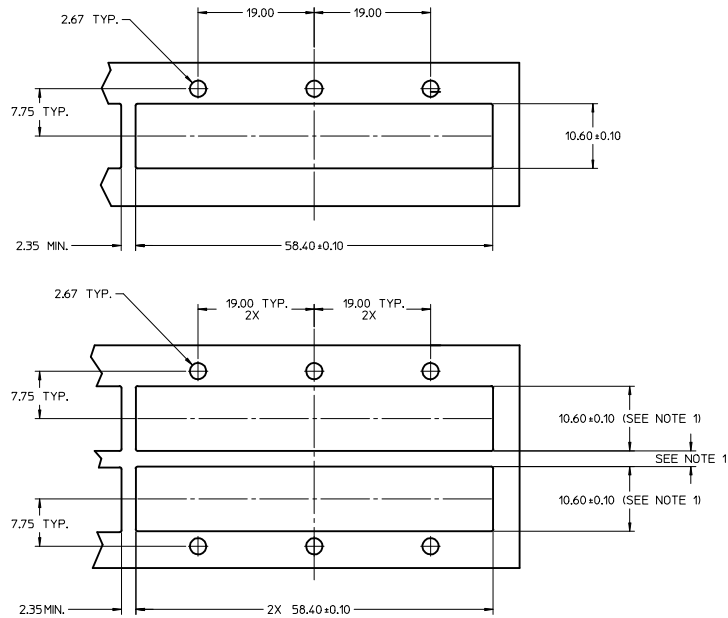
BEZEL AND BOARD POSITION DIMENSIONS FOR SINGLE SIDE MOUNTING



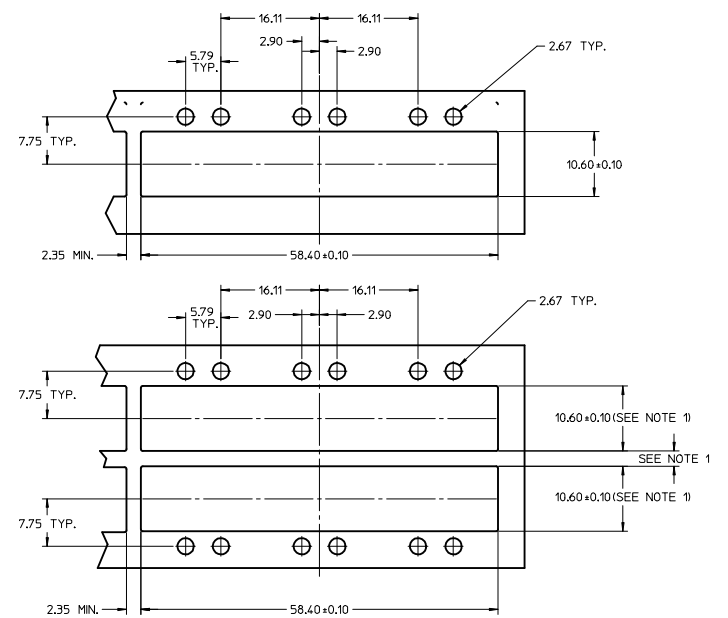
BEZEL AND BOARD POSITION DIMENSIONS FOR BELLY TO BELLY MOUNTING



SINGLE LIGHT PIPE



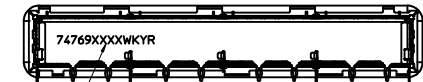
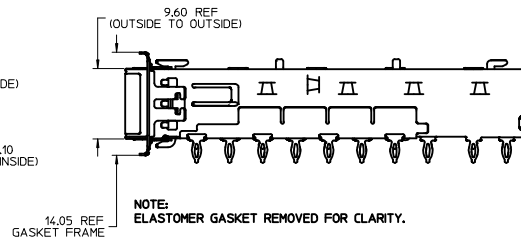
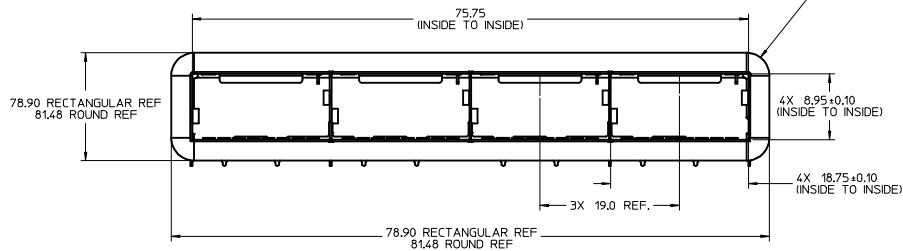
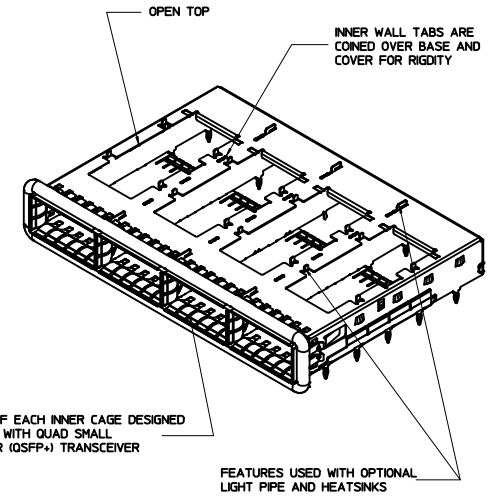
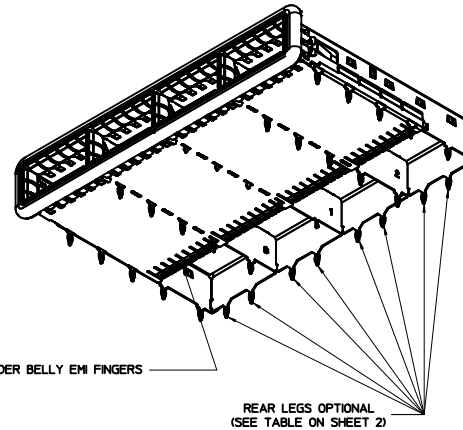
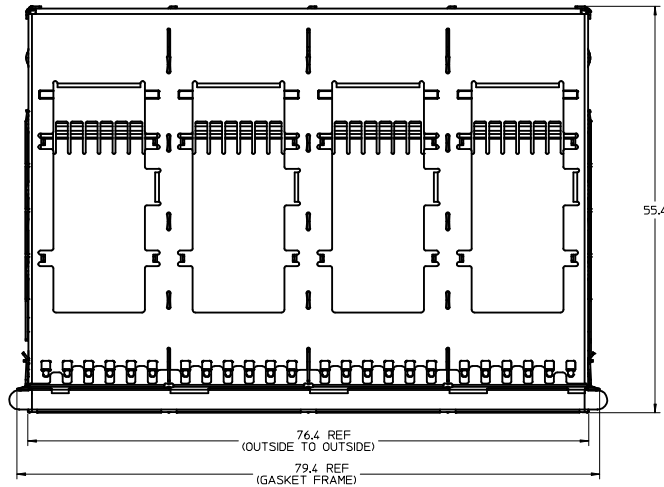
DUAL LIGHT PIPE



NOTES:
1. PCB THICKNESS VARIATION MUST BE CONSIDERED WHEN DETERMINING BEZEL OPENING, SIZE, AND LOCATION

QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE		DESIGN UNITS		THIRD ANGLE PROJECTION	
SYMBOLS		TOLERANCES		MM ONLY		2.5:1		METRIC		THIRD ANGLE PROJECTION	
DESCRIPTION		TOLERANCES		DATE		DATE		DATE		DATE	
DRAWN BY		JERWIN		2011/05/11		2011/05/11		2011/05/11		2011/05/11	
CHECKED BY		CHIRSCHY		2011/05/11		2011/05/11		2011/05/11		2011/05/11	
APPROVED BY		DATE		DATE		DATE		DATE		DATE	
MATERIAL NO.		SEE CHART		DOCUMENT NO.		SD-74768-0501		SHEET NO.		4 OF 5	
SIZE		D		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							

BASE CAGE DETAILS



INNER SPRING FINGERS HAVE BEEN REMOVED FOR CLARITY

NOTE: ELASTOMER GASKET REMOVED FOR CLARITY.

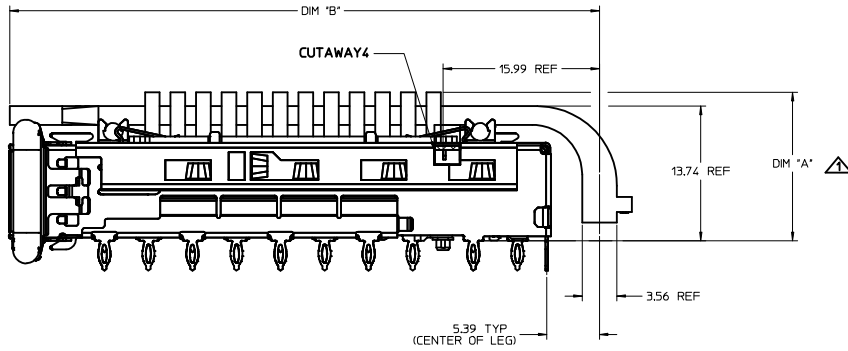
WEEK/YEAR DATE CODE TABLE		
WK	01 THRU 52 OR 53	EXAMPLE: 01 = FIRST WEEK OF YEAR 52 = LAST WEEK OF YEAR
YR	11, 12, 13 ETC.	EXAMPLE: YEAR 2013 = 13

NOTES:

1. QSFP+ ASSEMBLYS ALSO AVAILABLE AND 1X1 (74750 SERIES), 1X2 (74767 SERIES), 1X3 (74768 SERIES), AND 1X6 (74771 SERIES) CONFIGURATIONS.
2. MATERIAL:
LIGHT PIPE/HEATSINK CLIP: STAINLESS STEEL
LIGHT PIPES: POLYCARBONATE (94-V0 RATED)
HEAT SINKS: ANNOXIDIZED ALUMINUM
CAGE: NICKEL COPPER ALLOY
3. NO RoHS EXEMPTIONS
4. CUSTOM HEATSINKS AVAILABLE UPON REQUEST

SEE REVISION SHEET		QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE		DESIGN UNITS		THIRD ANGLE PROJECTION	
EC NO: CPG2014-0365	2013/08/28	DRWN: JERWIN	2013/10/21	CHKD: JERWIN	2013/11/20	APPR: KLOYD	2013/11/20	MM ONLY	DATE	2:1	METRIC	DATE	TITLE
4 PLACES ± ---		3 PLACES ± ---		2 PLACES ± 0.15		1 PLACE ± 0.25		0 PLACE ± ---		ANGULAR ± 1 °		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	
DRAWN BY		CHECKED BY		APPROVED BY		MATERIAL NO.		DATE		DATE		DATE	
JERWIN		CHIRSCHY		RMAHMOOD		74769XXXXWKYR		2011/05/03		2011/05/03		2011/06/10	
SEE TABLE		SEE TABLE		SEE TABLE		SEE TABLE		SEE TABLE		SEE TABLE		SEE TABLE	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	

CAGE ASSEMBLY OPTIONS

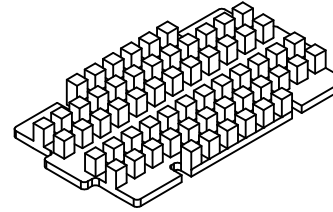


HEATSINK HEIGHT OPTIONS

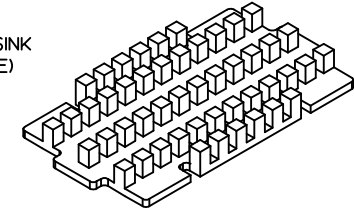
OVERALL HEATSINK HEIGHT	DIM "A"	TOL
PCI	13.7	+0.25
SAN	16.0	-0.73
NET	23.0	

△ HEIGHT OF HEATSINK WITH MODULE INSERTED.
DIMENSION MAY BE LESS DUE TO MODULE AND HEATSINK VARIATIONS.

SINGLE LIGHT PIPE



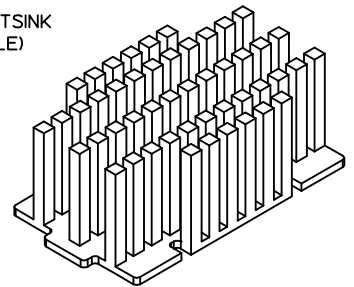
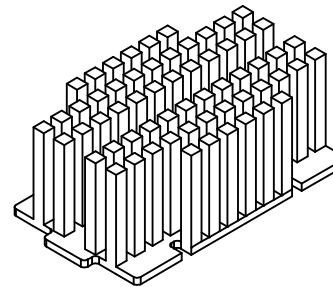
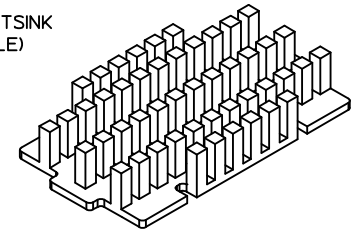
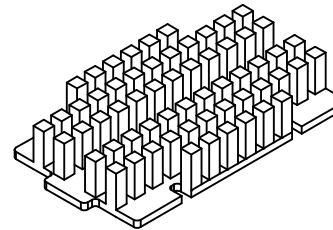
DUAL LIGHT PIPE



PCI HEATSINK
(PIN STYLE)

SAN HEATSINK
(PIN STYLE)

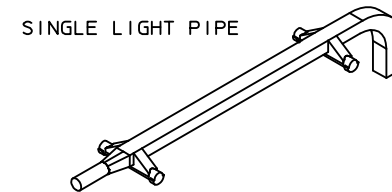
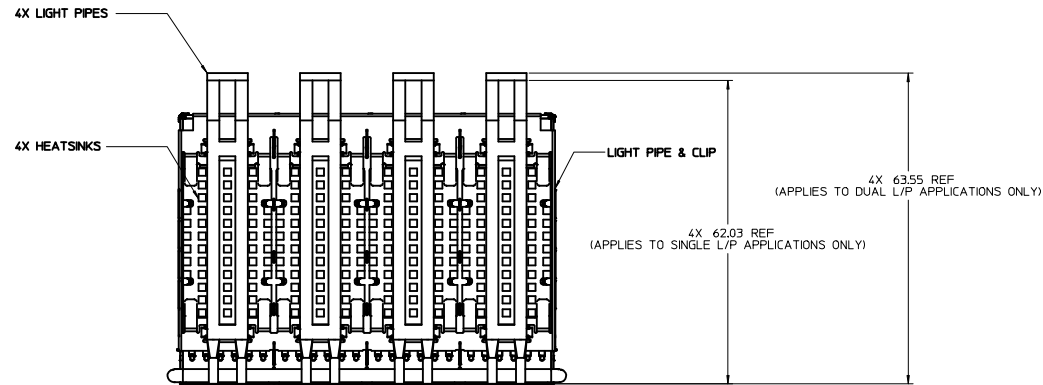
NET HEATSINK
(PIN STYLE)



NOTE:
1) FOR LIGHT PIPE OPTIONS SEE SHEET 3.

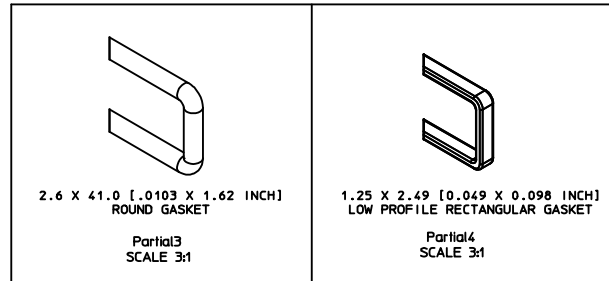
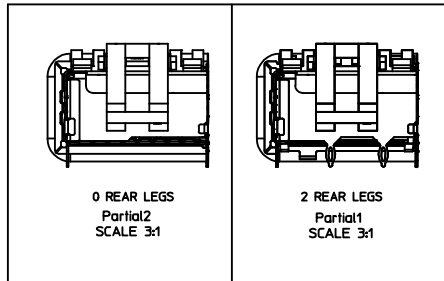
SEE REV HISTORY IEC NO: CPG2014-0365 DRAWN BY: JERWIN CHECKED BY: CHIRSCY APPROVED BY: RMAHMOOD DATE: 2013/08/28 DATE: 2013/10/21 DATE: 2013/11/20	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 4:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	
					DRAWN BY JERWIN	DATE 2011/05/03	TITLE QSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET			
					CHECKED BY CHIRSCY	DATE 2011/05/03	molex			
					APPROVED BY RMAHMOOD	DATE 2011/06/10				
					MATERIAL NO.		DOCUMENT NO.	SHEET NO.		
REV		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	ANGULAR ± 1 °		SEE TABLE		SD-74769-0501		2 OF 9	
					SIZE D	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

CAGE ASSEMBLY OPTIONS (CONT.)

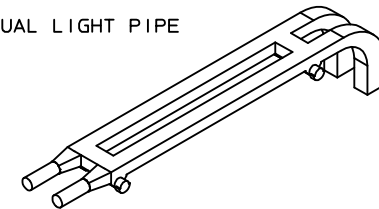


REAR LEG OPTIONS

ELASTOMERIC GASKET OPTIONS



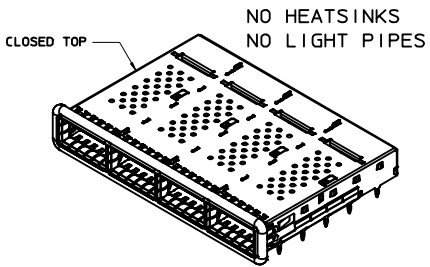
DUAL LIGHT PIPE



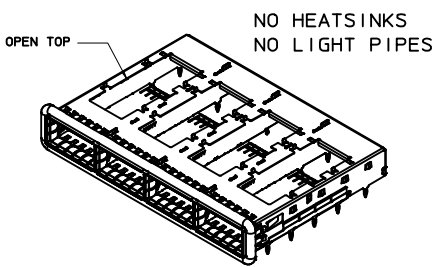
NOTE:
1) FOR HEATSINK OPTIONS SEE SHEET 2.

SEE REV HISTORY IEC NO: CPG2014-0365 DRAWN BY: TDRW/MDINA CHECKED BY: CHYO:ERWIN APPR:KLLOYD DATE: 2013/08/28 DATE: 2013/10/21 DATE: 2013/11/20	QUALITY SYMBOLS ∇=0 ∇=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.15 ± --- 1 PLACE ± 0.25 ± --- 0 PLACE ± --- ± ---		DRAWN BY: JERWIN DATE: 2011/05/03 CHECKED BY: CHIRSCY DATE: 2011/05/03 APPROVED BY: RMAHMOOD DATE: 2011/06/10	TITLE QSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET		
		ANGULAR ± 1 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-74769-0501	SHEET NO. 3 OF 9	
		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

PART NUMBER SELECTION

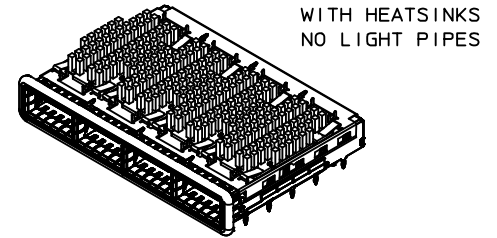


MOLEX P/N	# OF REAR LEGS PER PORT
747690223	2
747690226	0



MOLEX P/N	# OF REAR LEGS PER PORT
747690210	0
747690212	2
747690217**	2

**USES LOW PROFILE
RECTANGULAR GASKET

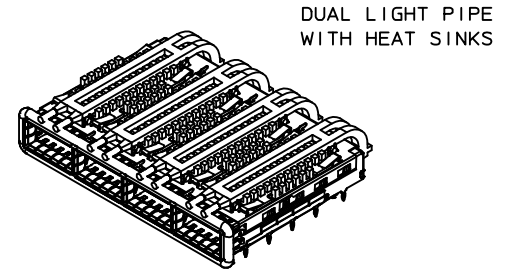
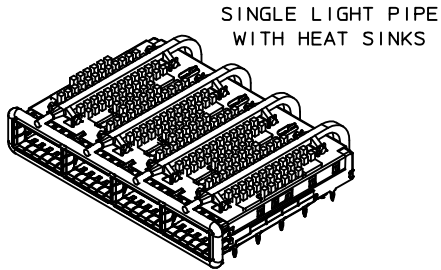


MOLEX P/N	HS	# OF REAR LEGS PER PORT
747690505	PCI	2
747690506	SAN	2
747690507	NET	2
747690508*	PCI	2
747690509*	NET	2
747690514	PCI	2
747690516**	PCI	2
747690605	PCI	0
747690606	SAN	0
747690607	NET	0

* EMI GASKET SEAM PLACED ON
LEFT SIDE VIEWING INTO PORT

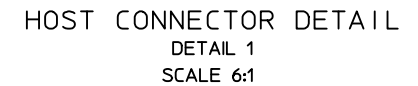
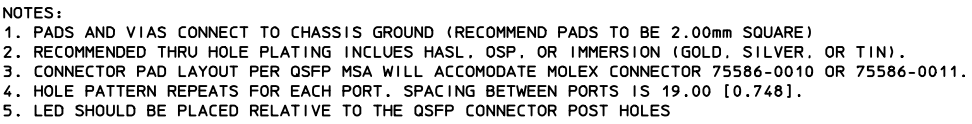
**USES LOW PROFILE RECTANGULAR GASKET

MOLEX P/N	LP	HS	# OF REAR LEGS PER PORT	DIM 'B'
747690501	SINGLE	SAN	2	60.25
747690502	SINGLE	NET	2	
747690503	DUAL	SAN	2	
747690504	DUAL	NET	2	
747690511	DUAL	PCI	2	58.63
747690515	DUAL	SAN	2	
747690601	SINGLE	SAN	0	60.25
747690602	SINGLE	NET	0	
747690603	DUAL	SAN	0	
747690604	DUAL	NET	0	

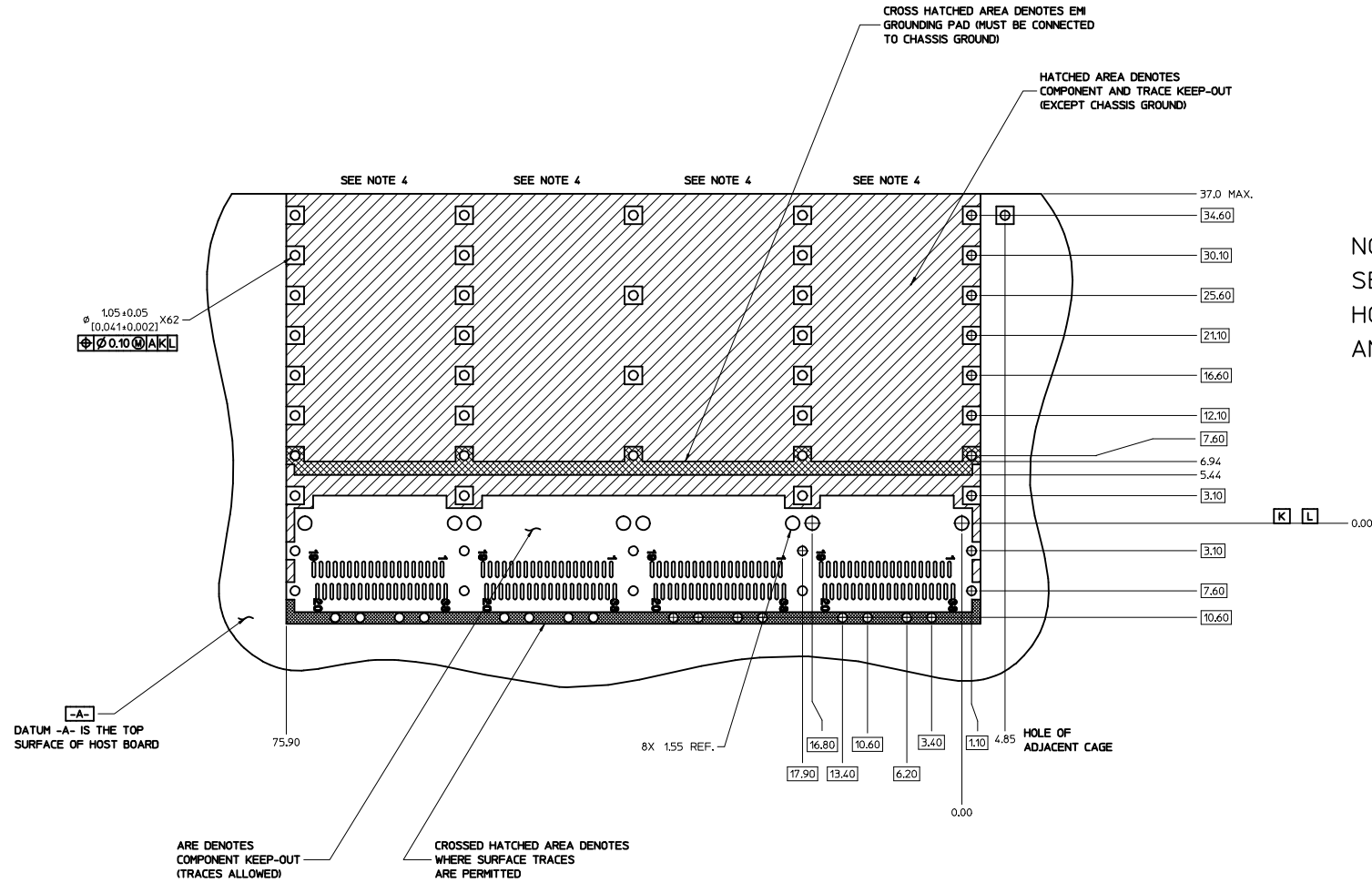


SEE REV HISTORY EC NO: CPG2014-0365 DRAWN BY: TDRWENEDINA CHECKED BY: CHYD:JERWIN APPR:KLLOYD DATE: 2013/08/28 2013/10/21 2013/11/20	DESCRIPTION	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 1.5:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	TITLE QSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET molex	DOCUMENT NO. SD-74769-0501	SHEET NO. 4 OF 9
			mm INCH		DRAWN BY JERWIN	DATE 2011/05/03	SEE TABLE					
			3 PLACES ± --- ± ---		CHECKED BY CHIRSCHY	DATE 2011/05/03						
			2 PLACES ± 0.15 ± ---		APPROVED BY RMAHMOOD	DATE 2011/06/10						
			1 PLACE ± 0.25 ± ---		MATERIAL NO.							
			0 PLACE ± --- ± ---		ANGULAR ± 1 °							
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE D		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
----	----	----	----	----	----	----	----	----	----	----	---	---	---	---	---	---	---	---	---

[illegible]

PCB LAYOUT FOR BELLY TO BELLY MOUNTING



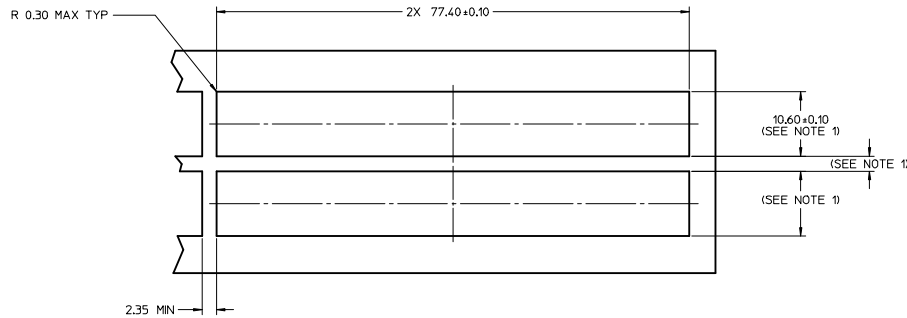
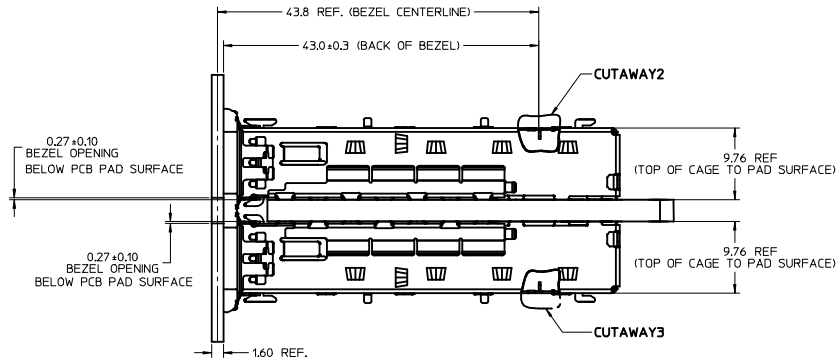
NOTE:
SEE PREVIOUS SHEET FOR
HOST CONNECTOR DETAIL
AND LED LOCATION DETAILS

NOTES:

1. PADS AND VIAS CONNECT TO CHASSIS GROUND (RECOMMEND PADS TO BE 2.00mm SQUARE)
2. RECOMMENDED THRU HOLE PLATING INCLUDES HASL, OSP, OR IMMERSION (GOLD, SILVER, OR TIN).
3. CONNECTOR PAD LAYOUT PER QSFP MSA WILL ACCOMMODATE MOLEX CONNECTOR 75586-0010 OR 75586-0011.
4. HOLE PATTERN REPEATS FOR EACH PORT. SPACING BETWEEN PORTS IS 19.00 [0.748].

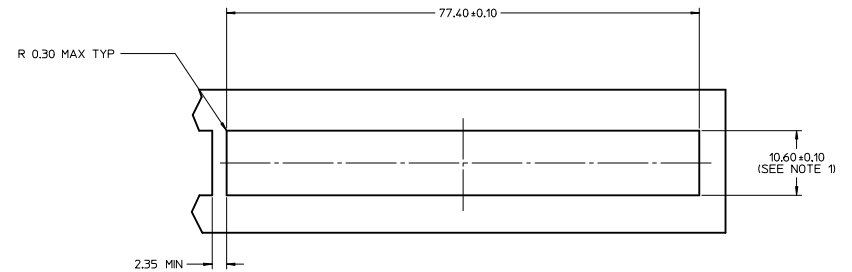
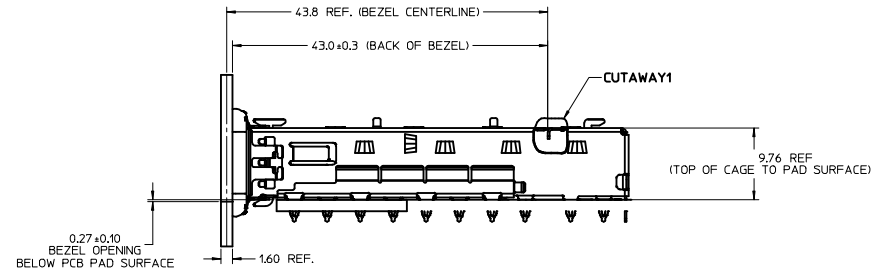
REVISION SHEET		QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE		DESIGN UNITS		THIRD ANGLE PROJECTION	
REV	DESCRIPTION	SYMBOL	VALUE	mm	INCH	MM ONLY	DATE	4:1	METRIC				
1	DRWN: JERWIN	▽=0	4 PLACES	±---	±---		2011/05/03						
2	CHKD: JERWIN	▽=0	3 PLACES	±---	±---		DATE						
3	APPD: KLOID	▽=0	2 PLACES	±0.15	±---		2011/05/03						
			1 PLACE	±0.25	±---		DATE						
			0 PLACE	±---	±---		2011/06/10						
			ANGULAR ± 1°										
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS										
MATERIAL NO.		SEE TABLE		DOCUMENT NO.		SD-74769-0501		SHEET NO.		6 OF 9			
TITLE		QSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET											
DRAWN BY		JERWIN											
CHECKED BY		CHIRSCHY											
APPROVED BY		RMAHMOOD											

BOARD POSITION AND BEZEL DIMENSIONS FOR BELLY TO BELLY MOUNTING



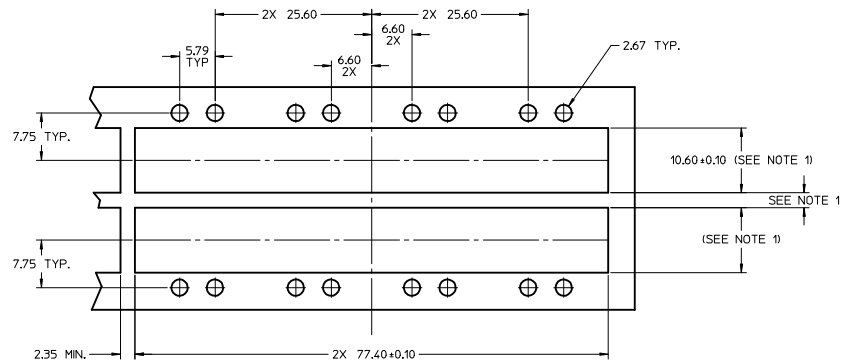
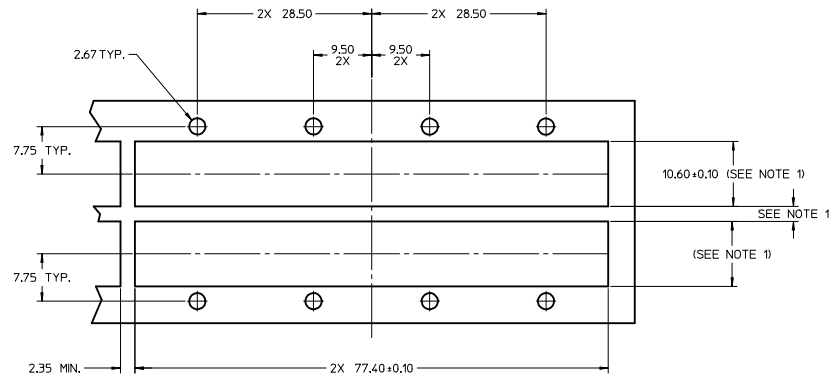
- NOTES:
- SEE QSFP MSA SPECIFICATION FOR BEZEL LOCATION TOLERANCE.
 - PCB THICKNESS VARIATION MUST BE CONSIDERED WHEN DETERMINING BEZEL OPENING, SIZE, AND LOCATION

BOARD POSITION AND BEZEL DIMENSIONS FOR SINGLE SIDE MOUNTING

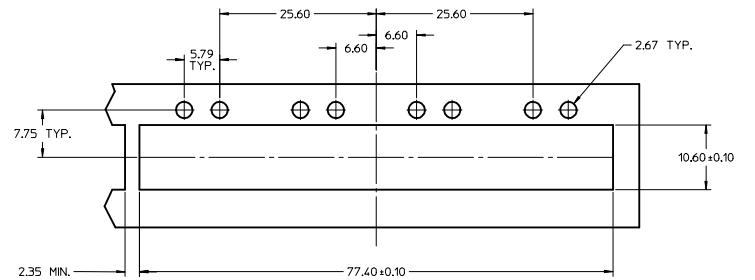
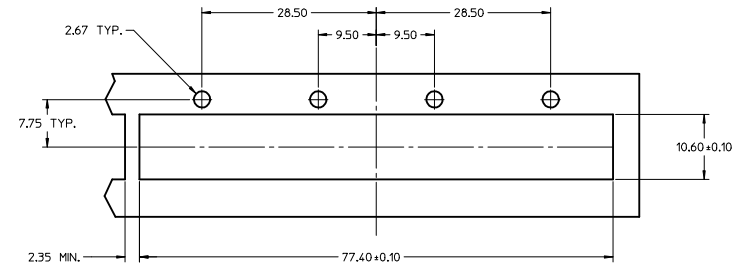


SEE REVISION SHEET IEC NO: CPG2014-0365 DRAWN BY: JERWIN CHECKED BY: CHIRSCY APPROVED BY: MAHMOOD DATE: 2013/08/28 DATE: 2013/10/21 DATE: 2013/11/20	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE 2.5:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
		mm	INCH	DRAWN BY JERWIN	DATE 2011/05/03	TITLE QSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET molex DOCUMENT NO. SD-74769-0501	
		4 PLACES ±---	±---	CHECKED BY CHIRSCY	DATE 2011/05/03		
		3 PLACES ±---	±---	APPROVED BY MAHMOOD	DATE 2011/06/10		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SIZE D	2 PLACES ±0.15	±---	SEE TABLE		SHEET NO. 7 OF 9	
		1 PLACE ±0.25	±---	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
		0 PLACE ±---	±---				
		ANGULAR ± 1°					

BEZEL AND LIGHTPIPE CUTOUT DIMENSIONS
FOR BELLY TO BELLY MOUNTING



BEZEL AND LIGHTPIPE CUTOUT DIMENSIONS
FOR SINGLE SIDED MOUNTING



SEE REV HISTORY EC NO: CPG2014-0365 DRW: JERWIN CHKD: JERWIN APPR: KLOYD	2013/08/28	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2.5:1	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION
	2013/10/21					DRAWN BY DATE JERWIN 2011/05/03		TITLE OSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET		
	2013/10/21					CHECKED BY DATE CHIRSCHY 2011/05/03		molex		
	2013/11/20					APPROVED BY DATE RAHMOOD 2011/06/10		SD-74769-0501		
				MATERIAL NO.		DOCUMENT NO.				
				SEE TABLE		8 OF 9				
				SIZE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

DATE	REV	DESCRIPTION
2011/05/03	A	1. INITIAL RELEASE
2012/11/21	B	1. ADDED P/N 747690514 AND 747690515 TO CHART ON SHEET 1. 2. ADDED DIM 'B' IN SHEET 1.
2013/06/03	C	1. CHANGED 5.39 TYP TO, 5.39 REF (TO CENTER OF LEG) SHEET 1. 2. ADDED P/N'S 747690508, 747690509 AND 747690516 TO CHART ON SHEET 1. 3. MOVED DIM 15.99 FROM DETAIL 1 TO MAIN BOARD VIEW SHEET 2. SHT1: REARRANGED VIEWS AND MANAGED OUT PARTS TO ADD CAGES WITHOUT HEATSINKS AND LIGHT PIPES. MOVED LIGHT PIPE DIMENSIONS FROM FRONT VIEW TO SHT 3. ADDED ISO VIEW TO SHOW UNDERBELLY EMI FINGERS AND REAR LEGS. ADDED SHEET TITLE 'CAGE DETAILS' WITH P/N SHOWN. MOVED P/N TABLE TO SHT 4. MOVED HEATSINK HEIGHT TABLE TO SHT 2. ADDED DIMS FOR GASKET FRAME. REMOVED NOTES 3, 4, AND 7. CHANGED NOTE 1 TO READ QSFP+ ASSEMBLES ALSO AVAILABLE AND 1X1 (74750 SERIES), 1X2 (74767 SERIES), 1X3 (74768 SERIES), AND 1X6 (74771 SERIES) CONFIGURATIONS. ADDED NICKEL TO CAGE MATERIAL NOTE. SHT2: MOVED ALL VIEWS AND NOTES TO SHT 5. ADDED RIGHT SIDE VIEW AND VIEWS OF SINGLE AND DUAL HEATSINKS. ADDED TOL TO TABLE. SHT3: MOVED SHT 3 TO NEW SHT 6. ADDED TOP VIEW AND VIEWS OF SINGLE AND DUAL LIGHT PIPES. ADDED BACK VIEWS TO SHOW REAR LEG OPTIONS. ADDED ISO VIEWS TO SHOW ELASTOMERIC OPTIONS. SHT4: MOVED SHT 3 TO NEW SHT 7. ADDED ISO VIEWS TO SHOW CAGE ASSEMBLY OPTIONS. CHANGED THE P/N TABLE TO INDIVIDUAL TABLES SHOWING OPTIONS FOR NO HEATSINK AND LIGHT PIPES, NO LIGHT PIPES, AND HEATSINKS AND LIGHT PIPES. SHT5: MOVED REV HISTORY TO NEW SHT 9. SHT7: ADDED THE WORD 'PAD' TO NOTE 'BELOW PCB SURFACE' @I18, J18, AND I8. REMOVED DIM 10.60 +/- 0.10 @E12. SHT8: ADDED SHT 8 WITH BEZEL LIGHTPIPE CUTOUT POSITIONS DIMENSIONS. REMOVED DIM 10.60 +/- 0.10 D12 AND I12.
2013/08/08	D	SHT1: CHANGED FIXED TEXT @F20 & E16 TO READ RECTANGULAR INSTEAD OF SQUARE. SHT3: CORRECTED DIMENSIONS LISTED FOR THE ELASTOMER GASKETS. SHT4: ADDED P/N 747690217 TO TABLE @H11. ADDED NOTE 'USES LOW PROFILE RECTANGULAR GASKET' @H11 & C17. ALIGNED THE ISO VIEWS AND TABLES. SHT5: ALIGNED TEXT 'HOLE OF ADJACENT CAGE' TO CORRESPONDING DIM 4.85. ADDED TEXT HOST CONNECTOR DETAIL @C3. SHT7: ADDED REF & 'TOP OF CAGE TO PAD SURFACE TO DIMS 9.76 @J12, I12, & J2. SHT8: REMOVED MULTIPLIER FROM DIM 5.79 AND MADE IT TYP @F17.
2013/08/09	E	SHT4: REMOVED LIGHTPIPE OPTION FROM P/N'S 747690514 & 747690516. MOVED P/N'S TO TABLE WITH HEATSINK NO LIGHTPIPE.
2013/09/02	F	SHT1: CHANGED TITLE TO READ 'BASE CAGE DETAILS' @M10. REMOVED P/N AND 'SHOWN' FROM TITLE. REMOVED NOTE LIGHT PIPE REMOVED FOR CLARITY @F4. ADDED NOTE 'INNER SPRING FINGERS HAVE BEEN REMOVED FOR CLARITY' @D16. SHT2: DIM 16.0 REF WAS BROUGHT OUT TO TWO DECIMAL PLACES AND IS NOW 15.99 REF @L15. SHT3: REMOVED P/N AND 'SHOWN' FROM TITLE @L10. SHT4: HEATSINK AND LIGHT PIPE CLIP WERE MISSING FROM VIEWS @K4 & E4 AND WERE MANAGED INTO THE VIEWS. SHT5: CHANGED MULTIPLIER FOR DIAMETER DIM 1.05 +/-0.05 FROM X34 TO X33 @H20. SHT6: CHANGED MULTIPLIER FOR DIAMETER DIM 1.05 +/-0.05 FROM X68 TO X62 @I18.

SEE REVISION SHEET EC NO. CPG2014-0365 DRAWN BY: TDRWNEEDINA CHECKED BY: CHYO:JERWIN APPROVED BY: APPR:KLLOYD	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
					DRAWN BY JERWIN		DATE 2011/05/03	TITLE QSFP+ 1X4 GANGED CAGE ASSEMBLYS WITH ELASTOMER GASKET molex	
					CHECKED BY CHIRSCHY		DATE 2011/05/03		
					APPROVED BY RMAHMOOD		DATE 2011/06/10		
					MATERIAL NO.		DOCUMENT NO. SD-74769-0501		
							SHEET NO. 9 OF 9		
REV		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	ANGULAR ± 1 °		SEE TABLE		SIZE D THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		