

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0901481115](#)  
**Status:** **Active**  
**Overview:** [cgrid\\_sl\\_products](#)  
**Description:** 2.54mm (.100") Pitch C-Grid® PC Board Connector, Single Row, Right Angle, 1.0µm (40µ") Tin (Sn), 15 Circuits

**Documents:**

[3D Model](#) [RoHS Certificate of Compliance \(PDF\)](#)  
[Drawing \(PDF\)](#)

**Agency Certification**

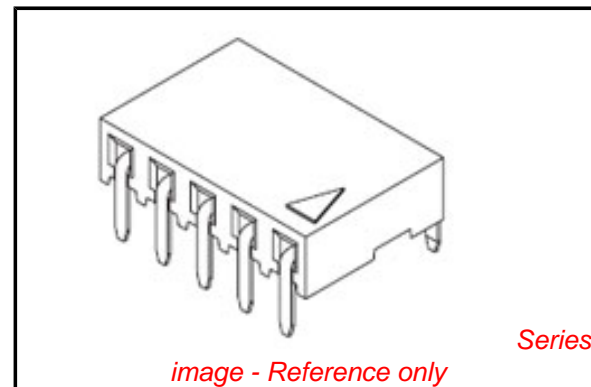
CSA LR19980  
 UL E29179

**General**

Product Family PCB Receptacles  
 Series [90148](#)  
 Application Board-to-Board  
 Overview [cgrid\\_sl\\_products](#)  
 Product Name C-Grid®

**Physical**

Circuits (Loaded) 15  
 Circuits (maximum) 15  
 Color - Resin Black  
 Durability (mating cycles max) 30  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part None  
 Lock to Mating Part No  
 Material - Metal Phosphor Bronze  
 Material - Plating Mating Tin  
 Material - Plating Termination Tin  
 Material - Resin Polyester  
 Number of Rows 1  
 Orientation Right Angle  
 PC Tail Length (in) 0.114 In  
 PC Tail Length (mm) 2.90 mm  
 PCB Locator No  
 PCB Retention None  
 PCB Thickness Recommended (in) 0.063 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Tube  
 Pitch - Mating Interface (in) 0.100 In  
 Pitch - Mating Interface (mm) 2.54 mm  
 Pitch - Term. Interface (in) 0.100 In  
 Pitch - Term. Interface (mm) 2.54 mm  
 Plating min: Mating (µin) 40  
 Plating min: Mating (µm) 1.00  
 Plating min: Termination (µin) 40  
 Plating min: Termination (µm) 1.00  
 Polarized to Mating Part Yes  
 Polarized to PCB No  
 Stackable No  
 Surface Mount Compatible (SMC) No



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC Contains SVHC: No**  
**Halogen-Free**  
**Status Not Reviewed**

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[90148Series](#)

**Mates With**

C-Grid III™ Header [90120](#) , [90121](#)

Temperature Range - Operating -55°C to +125°C  
Termination Interface: Style Through Hole

**Electrical**

Current - Maximum per Contact 3A  
Grounding to PCB No  
Voltage - Maximum 350V AC/DC

**Solder Process Data**

Lead-free Process Capability Wave Capable (TH only)

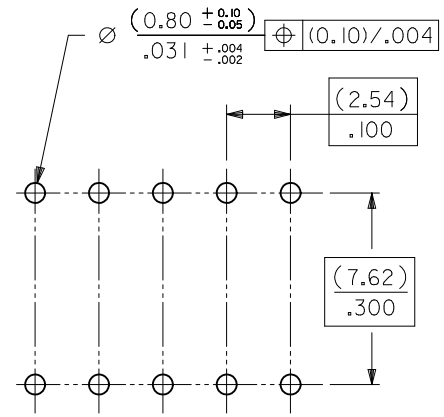
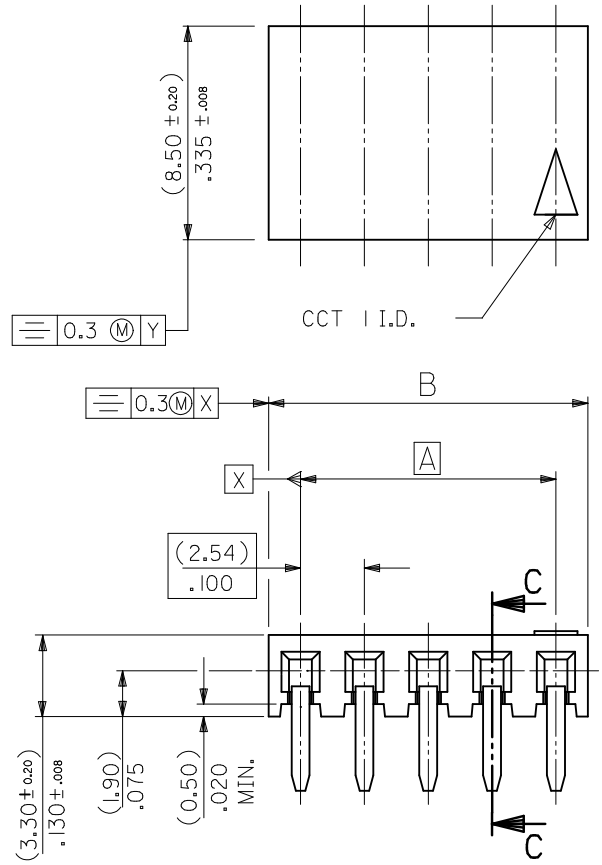
**Material Info**

**Reference - Drawing Numbers**

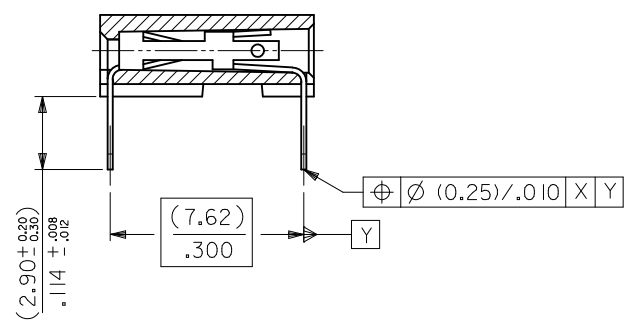
Sales Drawing SDA-90148

This document was generated on 05/22/2010

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RECOMMENDED P.C. BOARD HOLE PATTERN FOR STRAIGHT PINS



SECTION C-C SHOWING STRAIGHT PINS

NOTES

- 1) CONTACT-PLATED PHOSPHOR BRONZE.  
(SEE SHEET 2)
- 2) HOUSING  
POLYESTER (PBT), 15% GLASS FILL, UL94-V0.  
COLOR: BLACK.  
ALSO  
POLYAMIDE (PA4/6), 30% GLASS FILL, UL94-V0.  
COLOR: NATURAL.
- 3) FOR (0.635)±.025 SQ. MALE PINS THE LENGTH MUST BE (5.65)±.222 MIN & (7.00)±.276 MAX. TO ENSURE GOOD CONNECTION WITH CONTACT.
- 4) PRODUCT SPECIFICATION: PS-99020-0001
- 5) PCB THICKNESS 1.6MM

UPDATE TOL. SYMMETRY EC NO: S2010-0968 DRWN:SKANG 2010/05/26 CHKD:ATSEE 2010/06/04 APPR:MLONG 2010/06/05	QUALITY SYMBOLS $F_{\Delta} = 0$ $F_{\square} = 0$ $F_{\nabla} = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION C-GRID III SINGLE ROW HORIZONTAL P.C BOARD CONN. MOLEX INCORPORATED SDA-90148	
				MM ONLY	NTS	METRIC		
				DRAWN BY	DATE	TITLE		
				CHECKED BY	DATE			
AK	REV	4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.15 ± --- 1 PLACE ± --- ± ---		APPROVED BY	DATE			
		ANGULAR ± 2 °		J. DENNEHY	2010/06/04			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		DOCUMENT NO.		SHEET NO.
				SEE TABLE				1 OF 3

PART NO's - STRAIGHT PINS		PART NO.	NO OF CKTS.	DIM. A		DIM. B <sup>(+0.30)</sup> <sub>-0.02</sub>		NO. PER TUBE	
STANDARD	CUSTOMER SPECIFIC								
90148-1X02		90148-4X02	2	( 2.54 )	.100	( 5.08 )	.200	105	
↑	↑ 03	↑	↑ 03	3	( 5.08 )	.200	( 7.62 )	.300	72
	04		04	4	( 7.62 )	.300	( 10.16 )	.400	52
	05		05	5	( 10.16 )	.400	( 12.70 )	.500	44
	06	90148-9X06	06	6	( 12.70 )	.500	( 15.24 )	.600	36
	07		07	7	( 15.24 )	.600	( 17.78 )	.700	30
	08		08	8	( 17.78 )	.700	( 20.32 )	.800	26
	09		09	9	( 20.32 )	.800	( 22.86 )	.900	24
	10		10	10	( 22.86 )	.900	( 25.40 )	1.000	22
	11		11	11	( 25.40 )	1.000	( 27.94 )	1.100	18
	12		12	12	( 27.94 )	1.100	( 30.48 )	1.200	18
	13		13	13					16
	14		14	14	( 33.02 )	1.300	( 35.56 )	1.400	14
	15		15	15	( 35.56 )	1.400	( 38.10 )	1.500	14
	16		16	16					13
	17		17	17					12
	18		18	18	( 43.18 )	1.700	( 45.72 )	1.800	12
	19		19	19	( 45.72 )	1.800	( 48.26 )	1.900	12
	20		20	20	( 48.26 )	1.900	( 50.80 )	2.000	11
	21		21	21					10
	22		22	22					10
	23		23	23					10
	24		24	24					9
	25		25	25	( 60.96 )	2.400	( 63.50 )	2.500	8
	26		26	26	( 63.50 )	2.500	( 66.04 )	2.600	8
	27		27	27					8
	28		28	28					7
	29		29	29					7
	30		30	30	( 73.66 )	2.900	( 76.20 )	3.000	7
	↓ 31		↓ 31	31					7
90148-1X32		90148-4X32	32	( 78.74 )	3.100	( 81.28 )	3.200	6	

PLATING VERSION A

PRE-PLATED HOT DIP TIN

1.0 TO 2.5 microns (.00004" TO .00010").

PLATING VERSION E

1.27 TO 1.78 microns (.00005" TO .00007") NICKEL

OVERALL, 0.38 TO 0.64 microns (.000015" TO .000025")

GOLD ON CONTACT AREA (OVER NICKEL).

3 TO 5 microns (.00012" TO .00020") TIN

ON SOLDER TAILS (OVER NICKEL).

PLATING VERSION F.

1.27 TO 1.78 microns (.00005" TO .00007") NICKEL

OVERALL, 0.76 TO 1.0 microns (.00003" TO .00004")

GOLD ON CONTACT AREA (OVER NICKEL).

3 TO 5 microns (.00012" TO .00020") TIN

ON SOLDER TAILS (OVER NICKEL).

90148-XXYY

INDICATES NO. OF CIRCUITS

PLATING CODE

1 = VERSION A

2 = VERSION E

3 = VERSION F

1 = STRAIGHT PINS POLYESTER

9 = STRAIGHT PINS POLYESTER

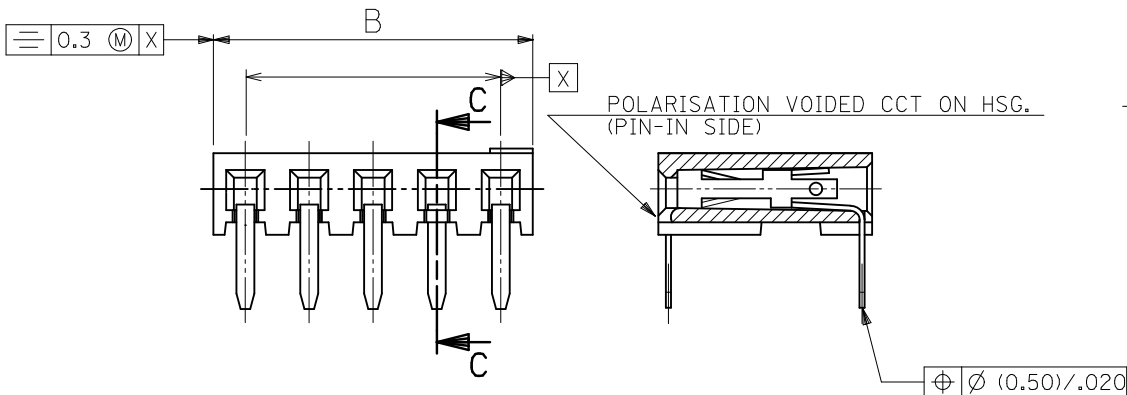
4 = STRAIGHT PINS NYLON 46

UPDATE TOL. SYMMETRY EC NO: S2010-0968 DRWN:SKANG 2010/05/26 CHKD:ATSEE 2010/06/04 APPR:MLONG 2010/06/05	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▽ <sub>A</sub> =0 ▽ <sub>C</sub> =0 ▽ <sub>P</sub> =0	mm INCH	MM ONLY	NTS	METRIC		
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.15 ± --- 1 PLACE ± --- ± ---	DRAWN BY DATE DB 1987/07/14	TITLE C-GRID III SINGLE ROW HORIZONTAL P.C BOARD CONN.			
		ANGULAR ± 2 °	CHECKED BY DATE D.MORIARTY 2005/03/02	MOLEX INCORPORATED			
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	APPROVED BY DATE J.DENNEHY 2010/06/04	MATERIAL NO.	DOCUMENT NO.	SHEET NO.		
AK		SEE TABLE	SDA-90148		2 OF 3		
		SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

PART NO.	POLARISED CCT NO.	NO. OF CKTS.	DIM. A	DIM. B ( $\pm 0.30$ ) ( $\pm 0.012$ )	NO. PER TUBE
90148-3X01	2	3	( 5.08 ) .200	( 7.62 ) .300	72

**NON-STANDARD PRODUCTS**

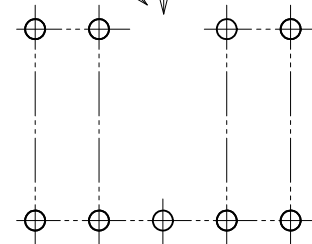
90148-XXYY  
 OPTION NUMBER (NOT RELATING TO CCT SIZE OR OTHERWISE )  
 PLATING CODE (SEE SHEET 2 )  
 3 = STRAIGHT PINS POLYESTER, POLARISED



SECTION C-C SHOWING POLARISED CCT

POLARISATION VOIDED  
 CCT ON P.C.B.  
 ( PIN-IN SIDE )

PIN INSERTION TO HOUSING FROM THIS SIDE



RECOMMENDED P.C. BOARD HOLE PATTERN FOR STRAIGHT PINS WITH POLARISATION

**NOTES**

- 1) SEE SHEET 1 FOR ALL UNSPECIFIED DIMENSIONS AND NOTES.
- 2) PARTS NOT STACKABLE.

UPDATE TOL. SYMMETRY EC NO: SZ010-0968 DRWN: SKANG CHKD: ATSEE APPR: MLONG 2010/05/26 2010/06/04 2010/06/05	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM ONLY</b>		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY DB	DATE 1987/07/14	TITLE C-GRID III SINGLE ROW HORIZONTAL P.C. BOARD CONN.			
		3 PLACES ± --- ± ---	± 0.15 ± ---	CHECKED BY D. MORIARTY	DATE 2005/03/02	MOLEX INCORPORATED			
		2 PLACES ± --- ± ---	± --- ± ---	APPROVED BY J. DENNEHY	DATE 2010/06/04	MATERIAL NO. SEE TABLE	DOCUMENT NO. SDA-90148	SHEET NO. 3 OF 3	
1 PLACE ± --- ± ---	ANGULAR ± 2 °	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

PART NO's - STRAIGHT PINS		PART NO.	NO OF CKTS.	DIM. A	DIM. B $(\pm \frac{0.30}{.32})$	NO. PER TUBE
STANDARD	CUSTOMER SPECIFIC					
90148-1X02		90148-4X02	2	( 2.54 ) .100	( 5.08 ) .200	105
↑ 03	↑	↑ 03	3	( 5.08 ) .200	( 7.62 ) .300	72
04	↓	04	4	( 7.62 ) .300	(10.16) .400	52
05		05	5	(10.16) .400	(12.70) .500	44
06	90148-9X06	06	6	(12.70) .500	(15.24) .600	36
07		07	7	(15.24) .600	(17.78) .700	30
08	↑	08	8	(17.78) .700	(20.32) .800	26
09		09	9	(20.32) .800	(22.86) .900	24
10		10	10	(22.86) .900	(25.40) 1.000	22
11		11	11	(25.40) 1.000	(27.94) 1.100	18
12		12	12	(27.94) 1.100	(30.48) 1.200	18
13		13	13			16
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15		15	15	(35.56) 1.400	(38.10) 1.500	14
16		16	16			13
17		17	17			12
18		18	18	(43.18) 1.700	(45.72) 1.800	12
19		19	19	(45.72) 1.800	(48.26) 1.900	12
20		20	20	(48.26) 1.900	(50.80) 2.000	11
21		21	21			10
22		22	22			10
23		23	23			10
24		24	24			9
25		25	25	(60.96) 2.400	(63.50) 2.500	8
26		26	26	(63.50) 2.500	(66.04) 2.600	8
27		27	27			8
28		28	28			7
29		29	29			7
30		30	30	(73.66) 2.900	(76.20) 3.000	7
↓ 31	↓	↓ 31	31			7
90148-1X32		90148-4X32	32	(78.74) 3.100	(81.28) 3.200	6

PLATING VERSION A

PRE-PLATED HOT DIP TIN  
1.0 TO 2.5 microns (.00004" TO .00010").

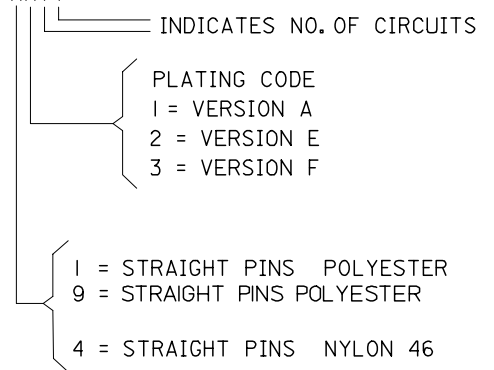
PLATING VERSION E

1.27 TO 1.78 microns (.00005" TO .00007") NICKEL  
OVERALL, 0.38 TO 0.64 microns (.000015" TO .000025")  
GOLD ON CONTACT AREA (OVER NICKEL).  
3 TO 5 microns (.00012" TO .00020") TIN  
ON SOLDER TAILS (OVER NICKEL).

PLATING VERSION F.

1.27 TO 1.78 microns (.00005" TO .00007") NICKEL  
OVERALL, 0.76 TO 1.0 microns (.00003" TO .00004")  
GOLD ON CONTACT AREA (OVER NICKEL).  
3 TO 5 microns (.00012" TO .00020") TIN  
ON SOLDER TAILS (OVER NICKEL).

90148-XXXX



ADD NEW P/N EC NO: E2007-0823 DRWN:DBYRNES 2007/03/29 CHKD: 2007/03/29 APPR: EOMAHONY 2007/04/04 REV AJ	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± --- ± --- 1 PLACE ± --- ± --- ANGULAR ± ---°	DIMENSION STYLE MM ONLY DRAWN BY DATE DB 1987/07/14 CHECKED BY DATE D.MORIARTY APPROVED BY DATE J.DENNEHY	SCALE --- DESIGN UNITS METRIC THIRD ANGLE PROJECTION	C-GRID III SINGLE ROW HORIZONTAL P.C. BOARD CONNECTOR MOLEX INCORPORATED SDA-90148 SHEET NO. 2 OF 3	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE CHART	MATERIAL NO. DOCUMENT NO.	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		