

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

**Part Number:** [0901481120](#)  
**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), 20 Circuits

**Documents:**

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

**Agency Certification**

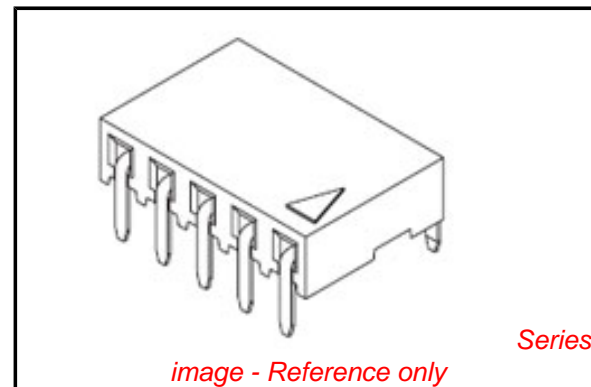
CSA LR19980  
 UL E29179

**General**

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

**Physical**

Circuits (Loaded) 20  
 Circuits (maximum) 20  
 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) 0.062 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

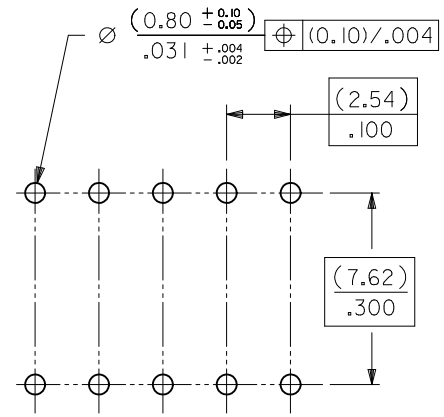
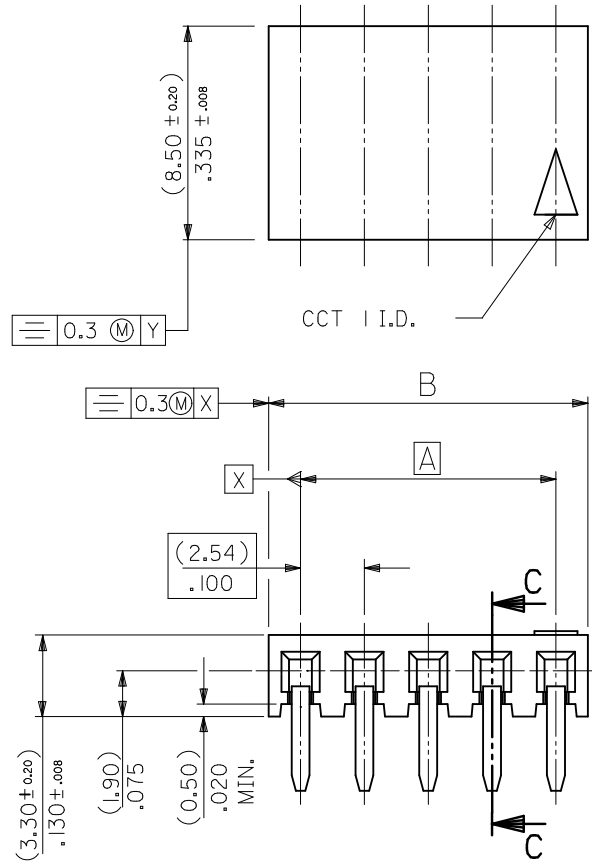
**Material Info**

**Reference - Drawing Numbers**

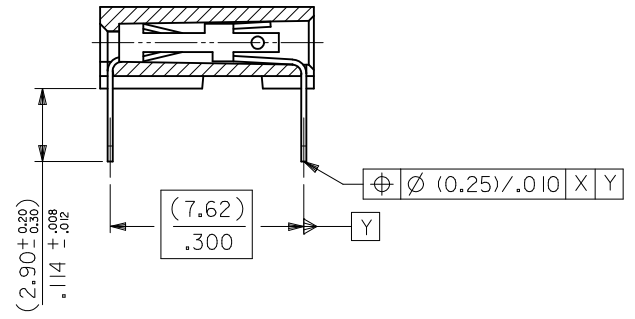
Sales Drawing SDA-90148

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	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	$F_A=0$	mm	INCH	DRAWN BY DB	DATE 1987/07/14	TITLE C-GRID III SINGLE ROW HORIZONTAL P.C BOARD CONN.		
	$F_G=0$	4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	CHECKED BY D.MORIARTY	DATE 2005/03/02	MOLEX INCORPORATED		
	$F_P=0$	2 PLACES ± 0.15 ± ---	1 PLACE ± --- ± ---	APPROVED BY J.DENNEHY	DATE 2010/06/04	MATERIAL NO. SEE TABLE	DOCUMENT NO. SDA-90148	SHEET NO. 1 OF 3
		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 <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	↑	↑ 03	↑	↑ 03	72
	04		04		04		04	52
	05		05		05		05	44
	06	90148-9X06	06		06		06	36
	07		07		07		07	30
	08		08		08		08	26
	09		09		09		09	24
	10		10		10		10	22
	11		11		11		11	18
	12		12		12		12	18
	13		13		13		13	16
	14		14		14		14	14
	15		15		15		15	14
	16		16		16		16	13
	17		17		17		17	12
	18		18		18		18	12
	19		19		19		19	12
	20		20		20		20	11
	21		21		21		21	10
	22		22		22		22	10
	23		23		23		23	10
	24		24		24		24	9
	25		25		25		25	8
	26		26		26		26	8
	27		27		27		27	8
	28		28		28		28	7
	29		29		29		29	7
	30		30		30		30	7
	↓ 31		↓ 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

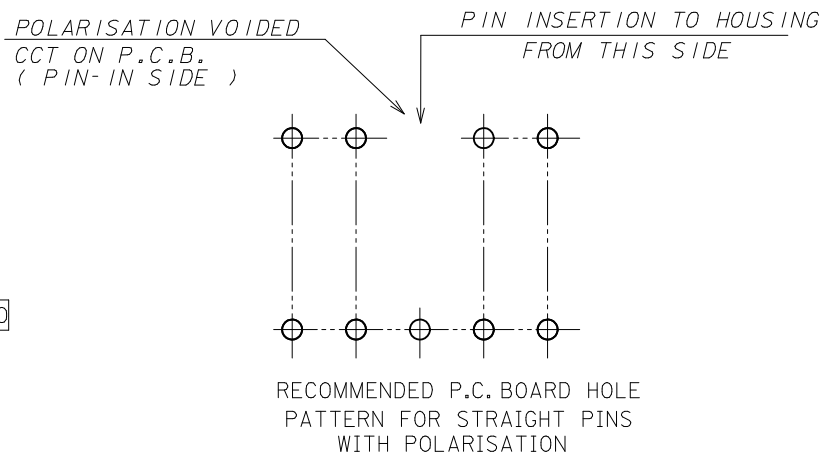
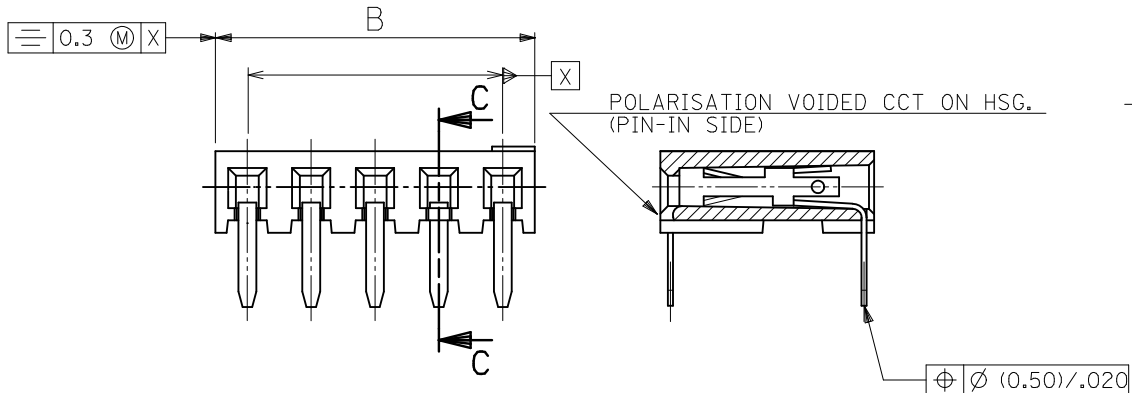
4 = STRAIGHT PINS NYLON 46

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

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



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	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$\nabla = 0$	4 PLACES	MM ONLY	NTS	METRIC	
	$\nabla = 0$	3 PLACES	mm INCH	DRAWN BY	DATE	TITLE
	$\nabla = 0$	2 PLACES	mm INCH	DB	1987/07/14	C-GRID III SINGLE ROW HORIZONTAL P.C. BOARD CONN.
	1 PLACE	ANGULAR $\pm 2^\circ$	CHECKED BY	DATE		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	D. MORIARTY	2005/03/02		
			APPROVED BY	DATE		
			J. DENNEHY	2010/06/04		
			MATERIAL NO.	DOCUMENT NO.		
			SEE TABLE		MOLEX INCORPORATED	
			SIZE A3		SDA-90148	SHEET NO. 3 OF 3
			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
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").

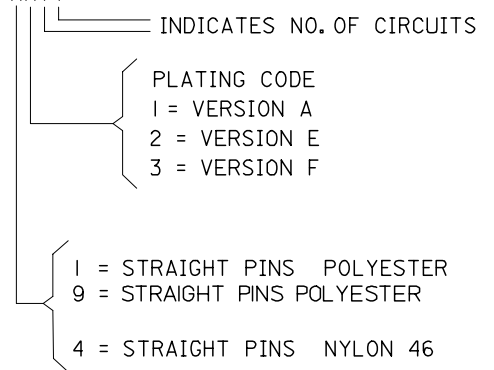
PLATING VERSION E

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-XXXX



ADD NEW P/N EC NO: E2007-0823 DRWN:DBYRNES CHKD: APPR:EDMAHONY 2007/03/29 2007/03/29 2007/04/04	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	TITLE C-GRID III SINGLE ROW HORIZONTAL P.C. BOARD CONNECTOR
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE CHART	MATERIAL NO. DOCUMENT NO. SDA-90148	SHEET NO. 2 OF 3	
	SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
	AJ				