

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

**Part Number:** [0878331421](#)  
**Status:** **Active**  
**Overview:** milligrd  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Right Angle, Shrouded, Lead-free, 14 Circuits, 0.76µm (30µ") Gold (Au) Plating, without PCB Locator, with Locking Windows, Center Polarization Slot, Tube

**Documents:**

[3D Model](#) [Product Specification PS-87831-027 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87833](#)  
 Application Wire-to-Board  
 Comments Contact Molex for application in automotive industry  
 Overview [milligrd](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 14  
 Circuits (maximum) 14  
 Color - Resin Black  
 Durability (mating cycles max) 100  
 First Mate / Last Break No  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part None  
 Lock to Mating Part Yes  
 Material - Metal Phosphor Bronze  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 2  
 Orientation Right Angle  
 PC Tail Length (in) 0.085 In  
 PC Tail Length (mm) 2.16 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) 0.079 In  
 Pitch - Mating Interface (mm) 2.00 mm  
 Pitch - Term. Interface (in) 0.079 In  
 Pitch - Term. Interface (mm) 2.00 mm  
 Plating min: Mating (µin) 30  
 Plating min: Mating (µm) 0.76  
 Plating min: Termination (µin) 75  
 Plating min: Termination (µm) 1.88

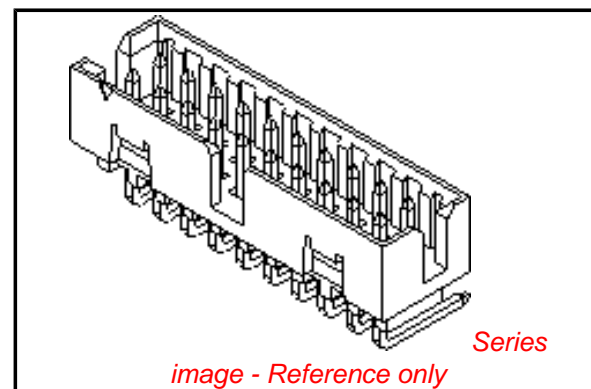


image - Reference only

**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**

[87833Series](#)

**Mates With**

[50394](#) Wire-to-Board Terminals. [51110](#) Wire-to-Board Crimp Housing. [87568](#) Wire-to-Board IDT Housings. [79107](#) Board-to-Board Top Entry Through Hole Receptacle. [79108](#) Board-to-Board FFC/FPC Top Entry Through Hole Receptacle. L

Polarized to Mating Part	Side Slots (2)
Polarized to PCB	No
Shrouded	Fully
Stackable	No
Surface Mount Compatible (SMC)	Yes
Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Through Hole

### **Electrical**

Current - Maximum per Contact	2A
Voltage - Maximum	125V

### **Solder Process Data**

Duration at Max. Process Temperature (seconds)	11
Lead-free Process Capability	SMC & Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	265

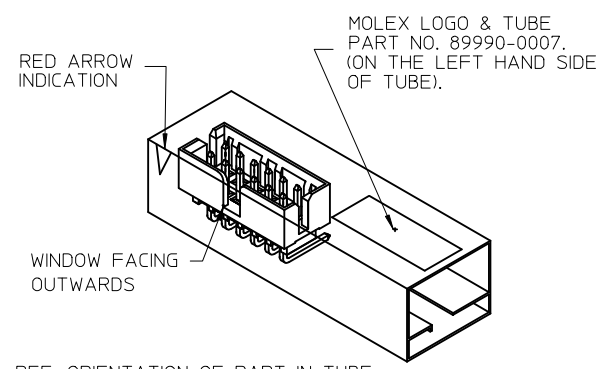
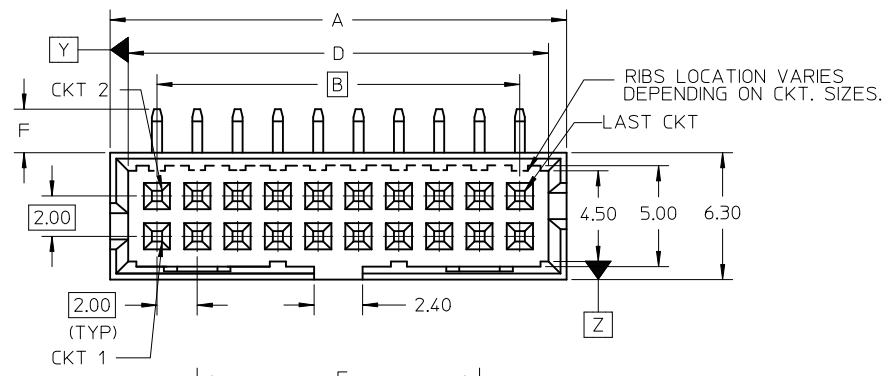
### **Material Info**

### **Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87833-010

This document was generated on 05/26/2010

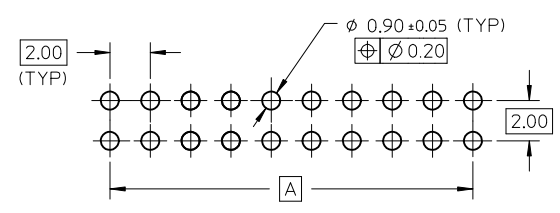
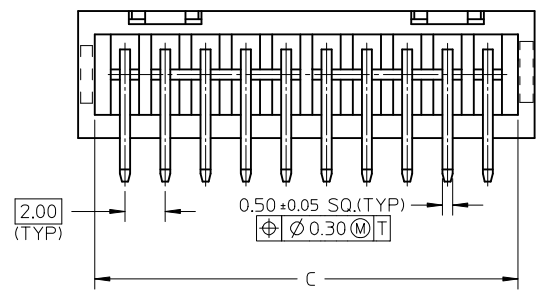
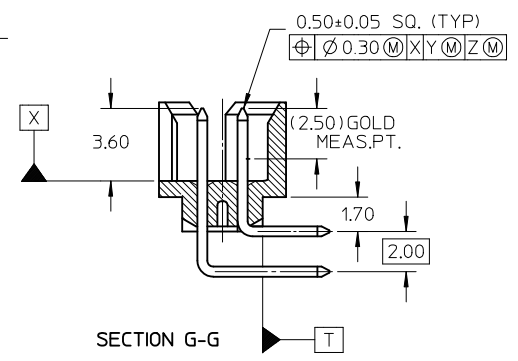
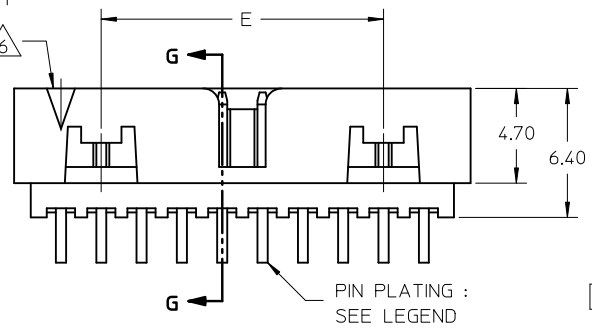
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REF: ORIENTATION OF PART IN TUBE  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY)

NOTES:

- FOR ILLUSTRATION PURPOSES, 20 CIRCUIT SIZE WAFER IS SHOWN.
- MATERIAL :  
HOUSING : NYLON 46, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
- PRODUCT SPECIFICATION PS-87831-027 APPLIES.
- NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6.
- NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
- CKT 4 & 6 HAS NO IDENTIFICATION TAG.
- THIS HEADER MATES WITH MOLEX:
  - CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
  - 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
- PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG.
- PLATING SPECIFICATION REFERRED TO SHEET 2.



ADD P/N 87833-64/6520 EC NO: S2010-0510 DRWN:SKANG 2009/12/17 CHKD:ATSEE 2010/01/04 APPR:MLONG 2010/01/05 B3	QUALITY SYMBOLS $\nabla_A = 0$ $\nabla_C = 0$ $\nabla_P = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																	
		<table border="1"> <thead> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> </thead> <tbody> <tr> <td>4 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>3 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>2 PLACES</td> <td>± 0.2</td> <td>± ---</td> </tr> <tr> <td>1 PLACE</td> <td>± ---</td> <td>± ---</td> </tr> </tbody> </table>			mm	INCH	4 PLACES	± ---	± ---	3 PLACES	± ---	± ---	2 PLACES	± 0.2	± ---	1 PLACE	± ---	± ---	DRAWN BY ATSEE		DATE 2003/10/23	TITLE MGRID, SHROUDED HEADER W/SLOT AND STANDOFF, R/A			
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ANGULAR ± 3 °		CHECKED BY KCL ING		DATE 2003/11/07	MOLEX INCORPORATED																				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		MATERIAL NO. MLONG		DATE 2010/01/05	DOCUMENT NO. SD-87833-010		SHEET NO. 1 OF 2																

PART NO.	CKT SIZE	VOID PIN LOCATION	DIMENSION						F	PLATING OPTION
			A	B	C	D	E	F		
87833-04**	4	-	6.65	2.00	5.00	4.85	—	2.16	19,20 OR 21	
87833-06**	6	-	8.65	4.00	7.00	6.85	—			
87833-08**	8	-	10.65	6.00	9.00	8.85	—			
87833-10**	10	-	12.65	8.00	11.00	10.85	—			
87833-12**	12	-	14.65	10.00	13.00	12.85	—			
87833-14**	14	-	16.65	12.00	15.00	14.85	8.00			
87833-16**	16	-	18.65	14.00	17.00	16.85	10.00			
87833-18**	18	-	20.65	16.00	19.00	18.85	12.00			
87833-20**	20	-	22.65	18.00	21.00	20.85	14.00			
87833-22**	22	-	24.65	20.00	23.00	22.85	16.00			
87833-24**	24	-	26.65	22.00	25.00	24.85	18.00			
87833-26**	26	-	28.65	24.00	27.00	26.85	20.00			
87833-28**	28	-	30.65	26.00	29.00	28.85	22.00			
87833-30**	30	-	32.65	28.00	31.00	30.85	24.00			
87833-32**	32	-	34.65	30.00	33.00	32.85	26.00			
87833-34**	34	-	36.65	32.00	35.00	34.85	28.00			
87833-36**	36	-	38.65	34.00	37.00	36.85	30.00			
87833-38**	38	-	40.65	36.00	39.00	38.85	32.00			
87833-40**	40	-	42.65	38.00	41.00	40.85	34.00			
87833-42**	42	-	44.65	40.00	43.00	42.85	36.00			
87833-44**	44	-	46.65	42.00	45.00	44.85	38.00			
87833-46**	46	-	48.65	44.00	47.00	46.85	40.00			
87833-48**	48	-	50.65	46.00	49.00	48.85	42.00			
87833-50**	50	-	52.65	48.00	51.00	50.85	44.00			
87833-7000	34	21	36.65	32.00	35.00	34.85	28.00			
87833-5121	26	14	28.65	24.00	27.00	26.85	20.00			
87833-5120	10	7	12.65	8.00	11.00	10.85	—			
87833-5520	40	21	42.65	38.00	41.00	40.85	34.00			
87833-5620	20	14	22.65	18.00	21.00	20.85	14.00			
87833-5720	24	13	26.65	22.00	25.00	24.85	18.00			
87833-5820	14	1	16.65	12.00	15.00	14.85	8.00			
87833-63**	8	-	10.65	6.00	9.00	8.85	—			
87833-53**	14	-	16.65	12.00	15.00	14.85	8.00			
87833-5420	34	-	36.65	32.00	35.00	34.85	28.00			
87833-5920	4	-	6.65	2.00	5.00	4.85	—			
87833-6020	12	-	14.65	10.00	13.00	12.85	—			
87833-6120	16	-	18.65	14.00	17.00	16.85	10.00			
87833-6220	18	-	20.65	16.00	19.00	18.85	12.00			
87833-6420	6	-	8.65	4.00	7.00	6.85	-			
87833-6520	20	-	22.65	18.00	21.00	20.85	14.00			
								3.18	20 OR 21	
								20	20	

PLS REFER TO PART 87833-\*\*\*3\* FOR CENTER LOCKING SLOT OPTION.

PART NUMBER LEGEND:  
87833 - \* \* \* \* \*

- 9 PLATING OPTIONS:
- 18 - 0.38um/15uin PdNi WITH GOLD FLASH IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
  - 19 - 0.05 - 0.13um/2 - 5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
  - 00/ 20 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
  - 21 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.

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	$F_A=0$ $F_C=0$ $F_P=0$	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	DRAWN BY ATSEE DATE 2003/10/23 CHECKED BY KCLING DATE 2003/11/07 APPROVED BY MLONG DATE 2010/01/05	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE	MGRID, SHROUDED HEADER W/SLOT AND STANDOFF, R/A		MOLEX INCORPORATED	
				SD-87833-010		SHEET NO. 2 OF 2	

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