

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

**Part Number:** [0878310441](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 4 Circuits, 0.38µm (15µ") Gold (Au) Plating, with Locking Window, without PCB Locator, without Center Polarization Slot, Tube

**Documents:**

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

**Agency Certification**

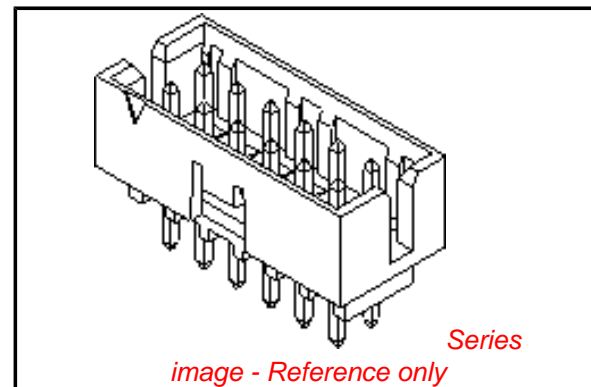
CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87831](#)  
 Application Wire-to-Board  
 Comments Contact Molex for application in automotive industry  
 Overview [milligrid](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 4  
 Circuits (maximum) 4  
 Color - Resin Black  
 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 Brass  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 2  
 Orientation Vertical  
 PC Tail Length (in) 0.098 In  
 PC Tail Length (mm) 2.50 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) 15  
 Plating min: Mating (µm) 0.38  
 Plating min: Termination (µin) 76  
 Plating min: Termination (µm) 1.88  
 Polarized to Mating Part Side Slots (2)



**EU RoHS**

**ELV and RoHS  
 Compliant**  
**REACH SVHC  
 Contains SVHC: No  
 Halogen-Free  
 Status**

**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**

[87831Series](#)

**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 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)	10
Lead-free Process Capability	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

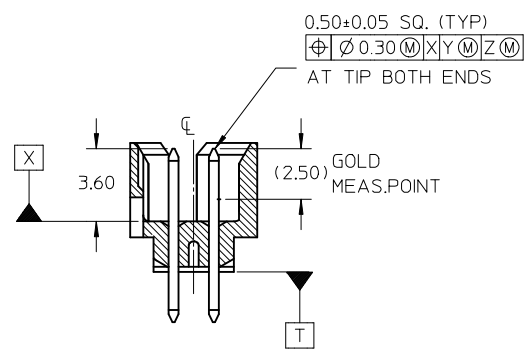
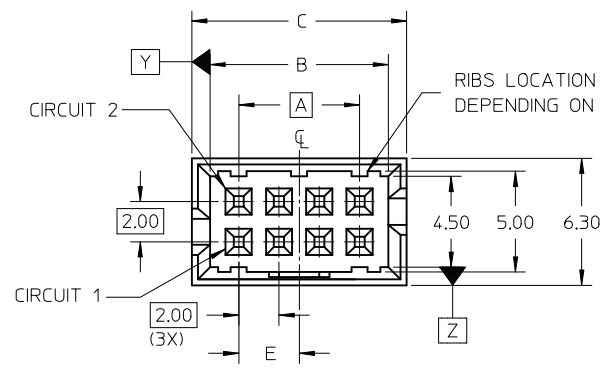
### **Material Info**

### **Reference - Drawing Numbers**

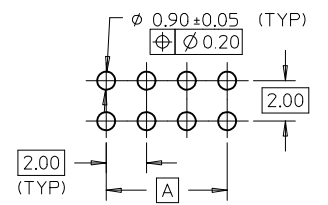
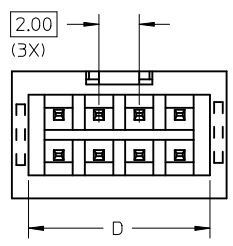
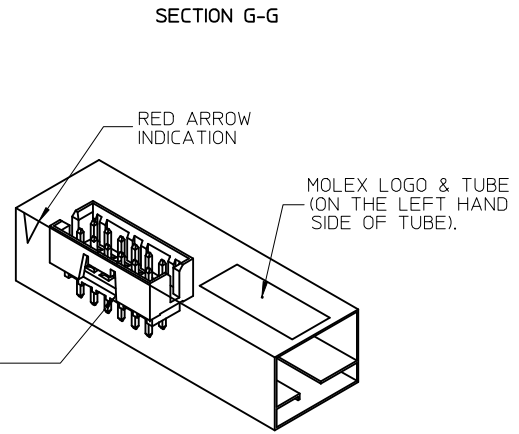
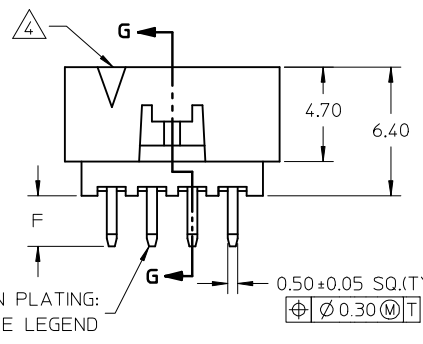
Product Specification	PS-87831-027
Sales Drawing	SD-87831-012

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P/N IN TUBE	CKT SIZE	VOID PIN	DIMENSION					
			A	B	C	D	E	F
87831-04**	4	-	2.00	4.85	6.65	5.00	1.00	2.50
87831-06**	6	-	4.00	6.85	8.65	7.00	2.00	2.50
87831-08**	8	-	6.00	8.85	10.65	9.00	3.00	2.50
87831-10**	10	-	8.00	10.85	12.65	11.00	4.00	2.50
87831-12**	12	-	10.00	12.85	14.65	13.00	5.00	2.50
87831-51**	4	-	2.00	4.85	6.65	5.00	1.00	3.50
87831-52**	6	-	4.00	6.85	8.65	7.00	2.00	3.50
87831-53**	12	1	10.00	12.85	14.65	13.00	5.00	2.50
87831-54**	8	-	6.00	8.85	10.65	9.00	3.00	3.50
87831-55**	8	-	6.00	8.85	10.65	9.00	3.00	2.80
87831-56**	12	10	10.00	12.85	14.65	13.00	5.00	2.50
87831-61**	4	-	2.00	4.85	6.65	5.00	1.00	2.80
87831-62**	6	-	4.00	6.85	8.65	7.00	2.00	2.80



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

PART NUMBER LEGEND :

87831 - \* \* \* \*

CIRCUIT SIZE  
(SEE TABLE)

PLATING OPTIONS

- 41 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 42 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.

NOTES:

- FOR ILLUSTRATION PURPOSES, 8 CIRCUIT SIZE WAFER IS SHOWN.
- MATERIAL :  
HOUSING : GLASS FILLED, NYLON 46, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ. PHOSPHOR BRONZE.
- PRODUCT SPECIFICATION PS-87831-027 APPLIES.
- CKT 4 & 6 HAS NO IDENTIFICATION TAG.
- THIS HEADER MATES WITH MOLEX :  
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.  
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
- PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG.
- NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6

ADD NOTE NO. 7 EC NO: S2009-0952 DRWN: YMCHONG CHKD: SKANG APPR: MLONG	QUALITY SYMBOLS ▽=0 ◁=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		mm	INCH	DRAWN BY	DATE	TITLE				
		4 PLACES ± ---	± ---	ATSEE	2003/10/03	MGRID, SHROUDED HEADER VERTICAL, W/LOCK FEATURE				
		3 PLACES ± ---	± ---	CHECKED BY	DATE	MOLEX INCORPORATED				
2 PLACES ± 0.2	± ---	KCL ING	2003/11/07	MATERIAL NO. SKTOH 2003/11/07						
1 PLACE ± ---	± ---	APPROVED BY	DATE	DOCUMENT NO. SD-87831-012						
ANGULAR ± 3 °		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SHEET NO. 1 OF 1				
				SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				