

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

**Part Number:** [0878311243](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 12 Circuits, 0.38µm (15µ") Gold (Au) Plating, with Center Locking Window and Single Side Slot, 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**

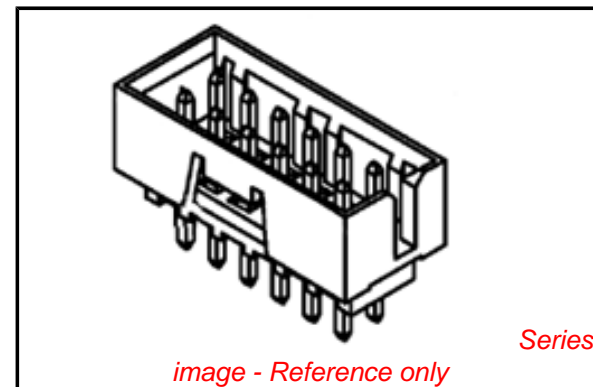
CSA LR19980  
 UL E29179

**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) 12  
 Circuits (maximum) 12  
 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 Phosphor Bronze  
 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 Slot (1)



**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**

[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**

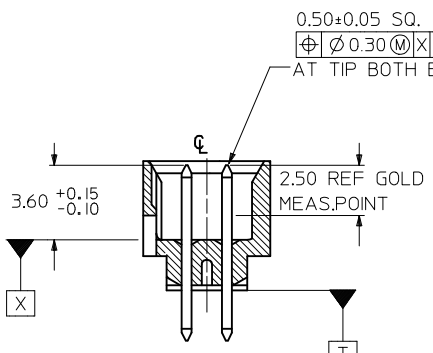
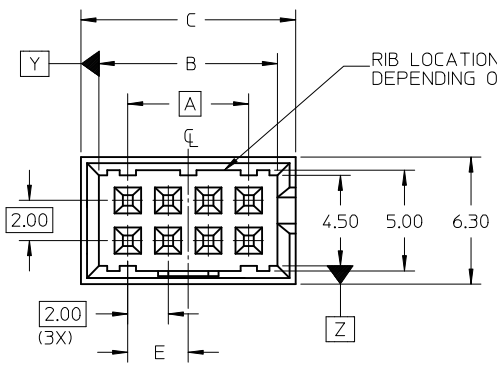
Current - Maximum per Contact	2A
Voltage - Maximum	125V

**Material Info****Reference - Drawing Numbers**

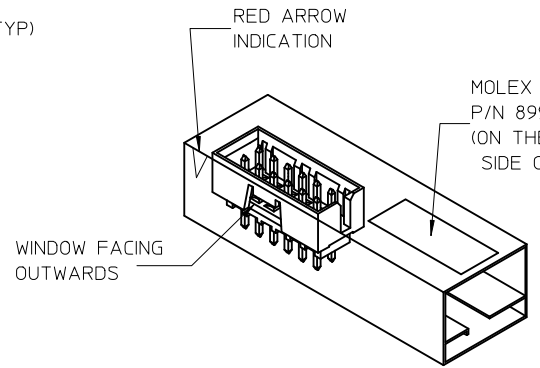
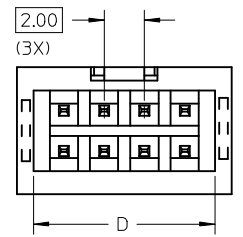
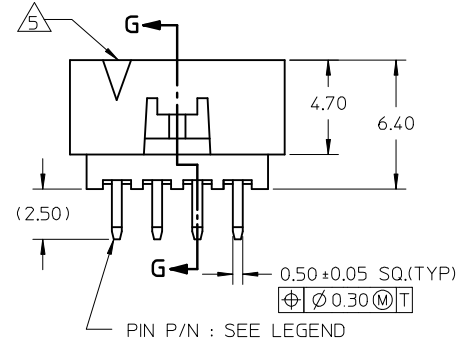
Product Specification	PS-87831-027
Sales Drawing	SD-87831-036

This document was generated on 05/26/2010

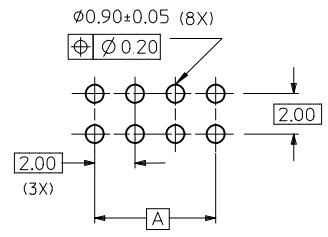
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SECTION G-G



ORIENTATION OF PART IN TUBE.



RECOMMENDED PCB PATTERN

P/N IN TUBE W/O CAP	CKT SIZE	DIMENSION				
		A	B	C	D	E
87831-044*	4	2.00	4.85	6.65	5.00	1.00
87831-064*	6	4.00	6.85	8.65	7.00	2.00
87831-084*	8	6.00	8.85	10.65	9.00	3.00
87831-104*	10	8.00	10.85	12.65	11.00	4.00
87831-124*	12	10.00	12.85	14.65	13.00	5.00

PART NUMBER LEGEND

87831 - \* \* 4 \*  
 CKT SIZE

- PLATING OPTION
- 3 - 0.38µm/ 15µm GOLD IN CONTACT AREA AND 1.88µm/ 75µm MIN. TIN IN SOLDER TAIL AREA OVER 1.27µm/ 50µm MIN. NICKEL OVERALL.
  - 4 - 0.76µm/ 30µm GOLD IN CONTACT AREA AND 1.88µm/ 75µm MIN. TIN IN SOLDER TAIL AREA OVER 1.27µm/ 50µm MIN. NICKEL OVERALL.

- NOTES: ILLUSTRATION PURPOSES, 8 CIRCUIT SIZE WAFER IS SHOWN.
2. MATERIAL : HOUSING : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK. PIN : 0.50MM SQ.PHOSPHOR BRONZE.
  3. PIN PUSHOUT FORCE : 0.91 KG MIN. IN EITHER DIRECTION.
  4. PRODUCT SPECIFICATION PS-87831-027 APPLIES.
  5. CKT 4 & 6 HAS NO IDENTIFICATION TAG.
  6. THIS HEADER MATES WITH MOLEX :
    - a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES
    - b) 2mm MILLIGRID DUAL ROW IDT, 87568 SERIES.
  7. PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG.
  8. NO CENTRE POLARIZATION FOR CKT CKT SIZE 4 & 6.

ADD IN NOTES NO. 8 EC NO: S2009-0952 DRWN: YMC HONG CHKD: SKANG APPR: MLONG	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY ATSEE	DATE 2004/08/24	TITLE MGRID, VERTICAL SHROUDED HDR., W/LOCKING FEATURE AND SINGLE SIDE SLOT				
		3 PLACES ± --- ± ---		CHECKED BY SHONG	DATE 2004/11/22	MOLEX INCORPORATED				
		2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± ---		APPROVED BY SKTOH	DATE 2004/11/23	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87831-036		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		ANGULAR ± 3 °		SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				