

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

**Part Number:** [0878314010](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, 40 Circuits, 0.38µm (15µ") Gold (Au) Plating, with Center Polarization Slot and Locking Windows, 3.5mm (.138") Tail Length, Tube, Lead-free

**Documents:**

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

**Agency Certification**

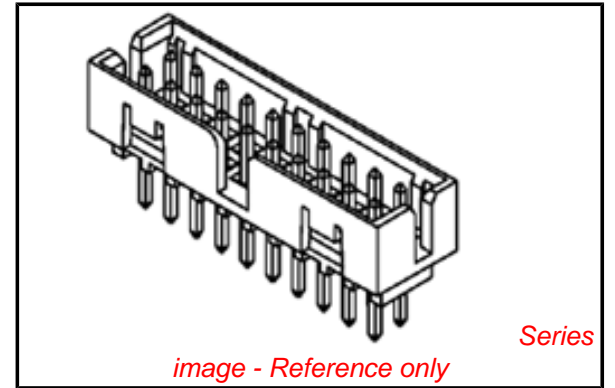
CSA LR19980  
 UL E29179

**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) 40  
 Circuits (maximum) 40  
 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) 0.138 In  
 PC Tail Length (mm) 3.50 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 Yes



**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, [79109](#) Board

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	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	265

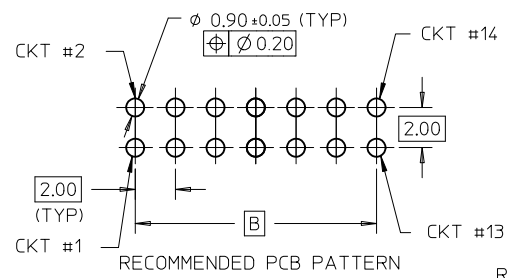
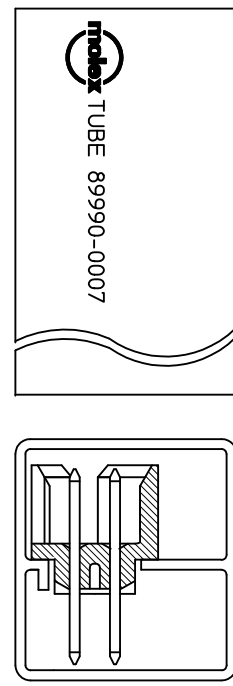
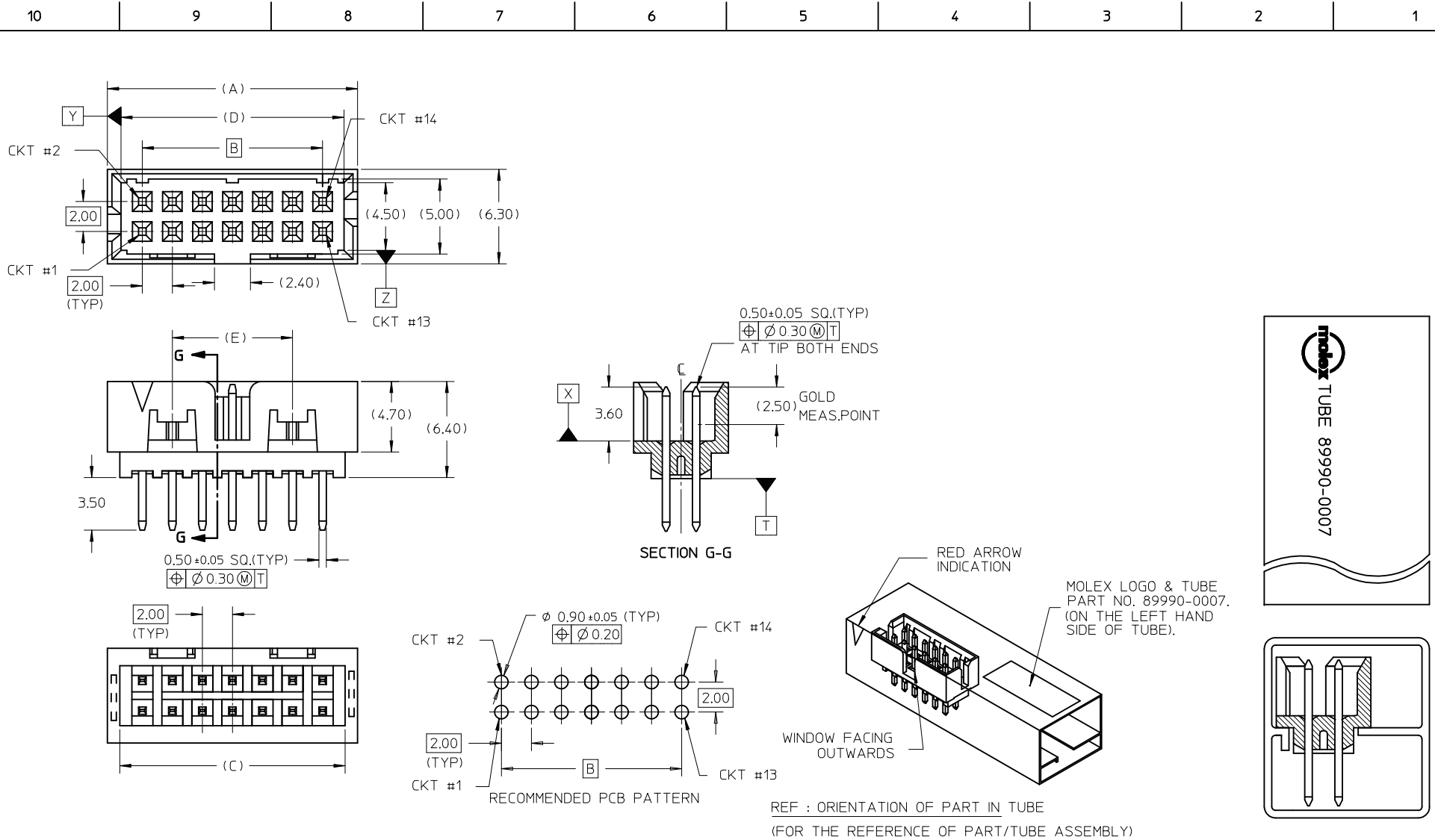
### **Material Info**

### **Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87831-026

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)

ADD P/N: 87831-2011 EC NO: S2010-0715 DRWN:SKANG CHKD:ATSEE APPR:MLONG 2010/02/26 2010/03/09 2010/03/13	QUALITY SYMBOLS $F_{\Delta} = 0$ $F_{\square} = 0$ $F_{\nabla} = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM ONLY</b>		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± ---	mm      INCH	DRAWN BY ATSEE	DATE 2004/01/07	TITLE <b>MGRID, SHROUDED HEADER          VERTICAL          WITH 3.50MM TAIL LENGTH</b>			
		ANGULAR ± 3 °		CHECKED BY KCLING	DATE 2004/01/14	<b>MOLEX INCORPORATED</b>			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPROVED BY MLONG	DATE 2010/03/12	MATERIAL NO. <b>SEE TABLE</b>	DOCUMENT NO. <b>SD-87831-026</b>	SHEET NO. <b>1 OF 2</b>	

10 9 8 7 6 5 4 3 2 1

ASSY P/N IN TUBE	CKT SIZE	VOID PIN LOCATION	DIMENSION					PLATING OPTIONS
			A	B	C	D	E	
87831-1010	10	-	12.65	8.00	11.00	10.85	----	1
87831-1410	14	-	16.65	12.00	15.00	14.85	8.00	1
87831-2010	20	-	22.65	18.00	21.00	20.85	14.00	1
87831-2011	20	-	22.65	18.00	21.00	20.85	14.00	3
87831-2610	26	-	28.65	24.00	27.00	26.85	20.00	1
87831-3010	30	-	32.65	28.00	31.00	30.85	24.00	1
87831-7101	34	21	36.65	32.00	35.00	34.85	28.00	1
87831-7102	34	21	36.65	32.00	35.00	34.85	28.00	2
87831-4010	40	-	42.65	38.00	41.00	40.85	34.00	1

**NOTES:**

1. MATERIAL :  
HOUSING : NYLON 46 GLASS FILLED, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ. PHOSPHOR BRONZE.
2. PLATING OPTIONS :  
1 - 0.38um/15uin MIN. GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN  
IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.  
2 - GOLD FLASH IN CONTACT AREA AND 1.88um/75uin MIN.TIN  
IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.  
3 - 0.76um/30uin MIN. GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN  
IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
3. PRODUCT SPECIFICATION PS-87831-027 APPLIES.
4. THIS HEADER MATES WITH MOLEX :  
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL,  
50394 SERIES.  
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
5. NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
6. PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG.

ADD P/N: 87831-2011 EC NO: S2010-0715 DRWN:SKANG 2010/02/26 CHKD:ATSEE 2010/03/09 APPR:MLONG 2010/03/13	REV DESCRIPTION A9	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 ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	DRAWN BY DATE ATSEE 2004/01/07 CHECKED BY DATE KCLING 2004/01/14 APPROVED BY DATE MLONG 2010/03/12	TITLE MGRID, SHROUDED HEADER VERTICAL WITH 3.50MM TAIL LENGTH MOLEX INCORPORATED
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE	DOCUMENT NO. SD-87831-026		SHEET NO. 2 OF 2	
				SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			

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