

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

**Part Number:** [0878321243](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 12 Circuits, 0.76µm (30µ") Gold (Au) Plating, with Locking Window, Pick-and-Place Cap, PCB Locator, Tube

**Documents:**

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

**Agency Certification**

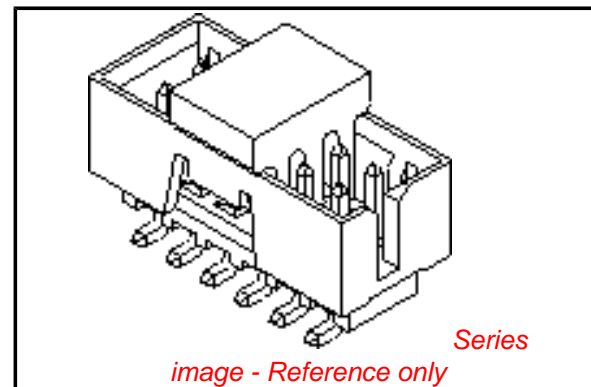
CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87832](#)  
 Application Wire-to-Board  
 Comments With Cap|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 Yes  
 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  
 PCB Locator Yes  
 PCB Retention None  
 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  
 Polarized to Mating Part Polarizing Ribs  
 Polarized to PCB Yes  
 Robotic Placement Pick and Place Cap  
 Shrouded Fully



**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**

[87832Series](#)

**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

Stackable	No
Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Surface Mount

#### **Electrical**

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

#### **Solder Process Data**

Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

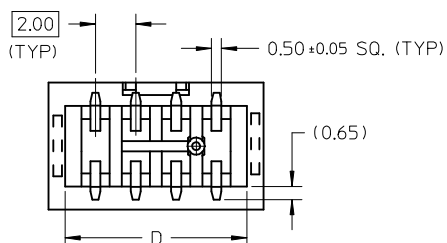
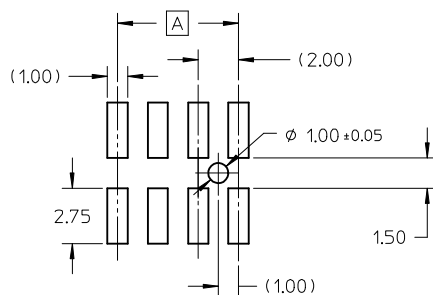
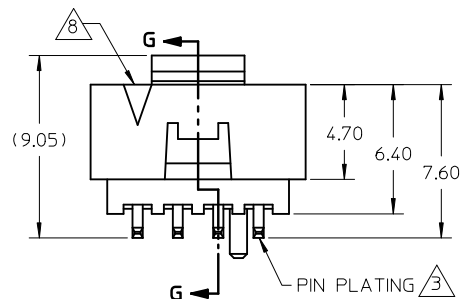
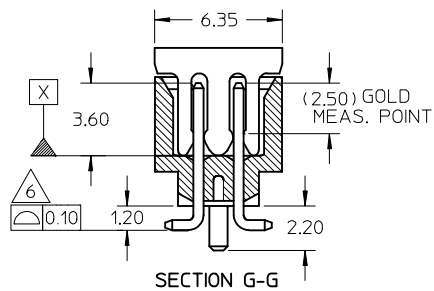
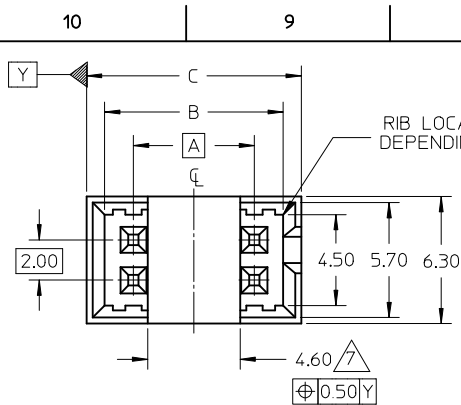
#### **Material Info**

#### **Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87832-013

This document was generated on 05/25/2010

**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**

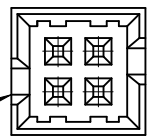


PEG OPTION	P/N WITH CAP IN TAPE & REEL		P/N WITH CAP IN TUBE		CKT SIZE	DIMENSION			
	15µm Gold	30µm Gold	15µm Gold	30µm Gold		A	B	C	D
NO	87832-0440	87832-0442	87832-0441	87832-0443	4	2.00	4.85	6.65	5.00
YES	87832-0640	87832-0642	87832-0641	87832-0643	6	4.00	6.85	8.65	7.00
YES	87832-0840	87832-0842	87832-0841	87832-0843	8	6.00	8.85	10.65	9.00
YES	87832-1040	87832-1042	87832-1041	87832-1043	10	8.00	10.85	12.65	11.00
YES	87832-1240	87832-1242	87832-1241	87832-1243	12	10.00	12.85	14.65	13.00

NOTES:

- FOR ILLUSTRATION PURPOSES, 8 CIRCUIT SIZE WAFER IS SHOWN.
- MATERIAL :  
HOUSING & CAP : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
- PLATING :  
40, 41 - 0.38µm/15uin GOLD IN CONTACT AREA AND 1.88µm/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27µm/50uin MIN. NICKEL OVERALL.  
42, 43 - 0.76µm/30uin GOLD IN CONTACT AREA AND 1.88µm/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27µm/50uin MIN. NICKEL OVERALL.
- PIN PUSHOUT FORCE : 0.91 KG MIN. IN EITHER DIRECTION.
- PRODUCT SPECIFICATION PS-87831-027 APPLIES.
- COPLANARITY IS TO BE MEASURED BY RESTING THE SOLDER TAIL ON A GAUGE SURFACE.
- CAP TO BE POSITION IN THE CENTER OF HEADER FOR PICK AND PLACE.
- 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 SHALL BE PACKED IN MOISTURE BAG WITH DESICCANT GEL.
- NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6.

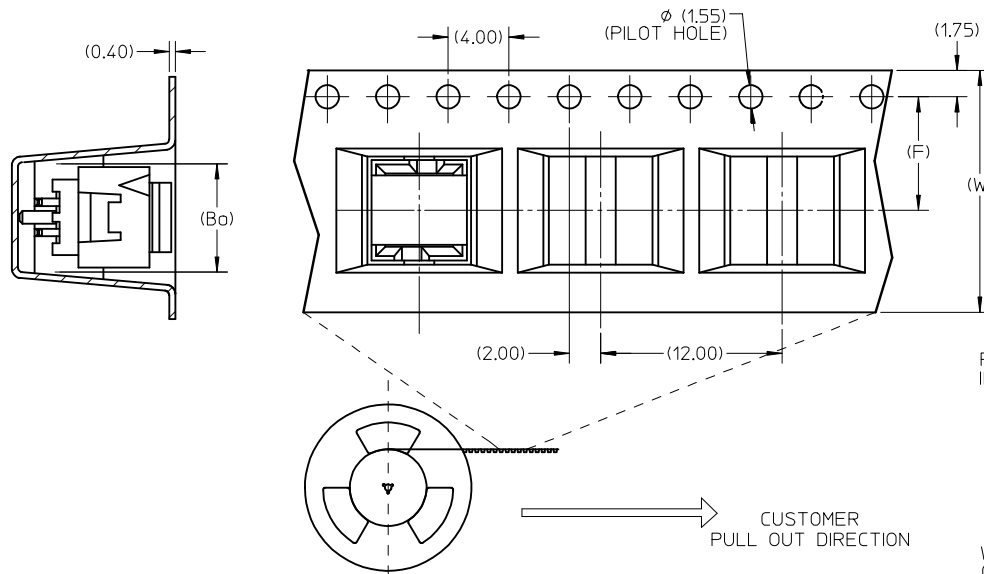
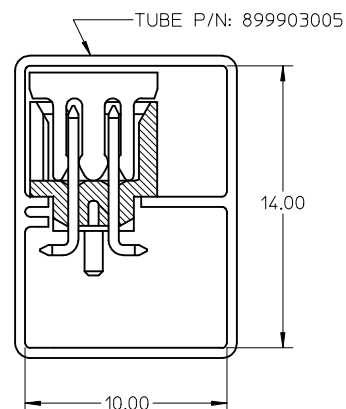
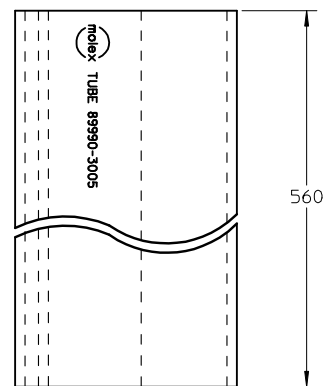
4 CKT:  
BOTH SIDE WITH POLARIZATION SLOT  
6 CKT & ABV:  
ONLY 1 SIDE WITH POLARIZATION SLOT



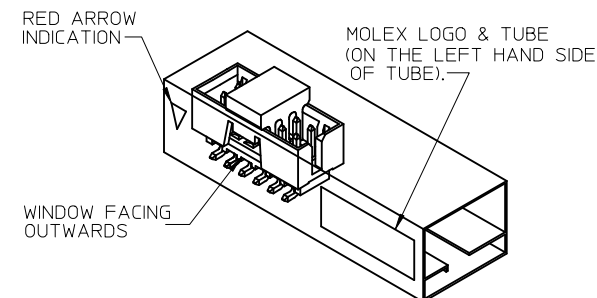
4 CKT TOP VIEW

REVISED EC NO: S2009-0943 DRWN:YMCCHONG CHKD:SKANG APPR:MLONG	DESCRIPTION 2009/07/01 2009/07/08 2009/07/16	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
		$\nabla=0$ $\nabla=0$	mm	INCH	MM ONLY		NTS	METRIC		
		4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE			
		3 PLACES	± ---	± ---	ATSEE	2004/07/29	MGRID, SHROUDED HEADER W/PEG/CAP/LOCK FEATURES SMT, IN TUBE AND T&R			
		2 PLACES	± 0.15	± ---	CHECKED BY	DATE	MOLEX INCORPORATED			
		1 PLACE	± ---	± ---	KCLING	2004/08/05	MOLEX INCORPORATED			
		ANGULAR ± 3 °		APPROVED BY	DATE	DOCUMENT NO.				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SKTOH	2004/08/05	SEE TABLE		SD-87832-013		SHEET NO.
				MATERIAL NO.	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					1 OF 2

WITH CAP IN TUBE PACKAGING



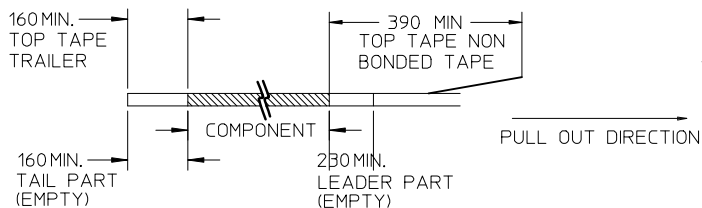
EMBOSSED CARRIER TAPE 'A'



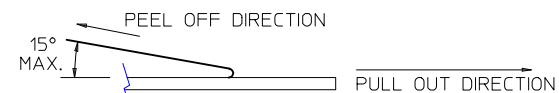
REF : ORIENTATION OF PART IN TUBE.  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY.)

NOTES:

1. LEADER AND TRAILER TAPE

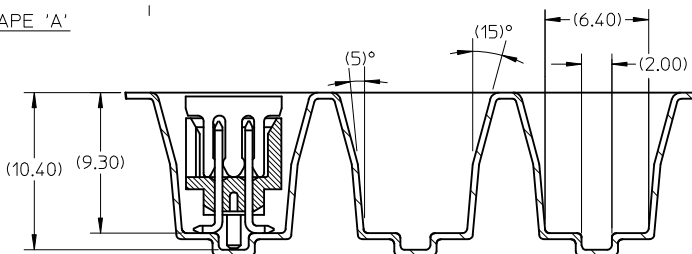


2. PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.  
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



3. PACKAGING STANDARD IS AS PER EIA-481.

PART NUMBER WITH CAP IN TAPE/REEL		CKT SIZE	EMBOSS TAPE PART NUMBER	TOP TAPE NUMBER	REEL NUMBER	(F)	(Bo)	(So)	(W)
87832-0440	87832-0442	4	89990-7601	89990-5602	89990-5709	7.50	7.15	-	16.00
87832-0640	87832-0642	6	89990-7752	89990-5603	89990-5710	11.50	9.15	-	24.00
87832-0840	87832-0842	8	89990-7753	89990-5603	89990-5710	11.50	11.05	-	24.00
87832-1040	87832-1042	10	89990-7754	89990-5603	89990-5710	11.50	13.05	-	24.00
87832-1240	87832-1242	12	89990-7755	89990-5604	89990-5711	14.20	15.15	28.40	32.00



REVISED	EC NO: S2009-0943	2009/07/01	DRWN:YCHONG	2009/07/08	CHKD:SKANG	2009/07/16	APPR:MLONG	DESCRIPTION	QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
									mm	INCH	MM ONLY	NTS	METRIC	DATE	TITLE			
									▽=0	□=0	4 PLACES	± ---	± ---	DRAWN BY	DATE			
											3 PLACES	± ---	± ---	ATSEE	2004/07/29			
											2 PLACES	± 0.15	± ---	CHECKED BY	DATE			
											1 PLACE	± ---	± ---	KCL ING	2004/08/05			
											ANGULAR ± 3 °		APPROVED BY	DATE				
											DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SKTOH	2004/08/05				
													MATERIAL NO.	SEE TABLE				
													SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
													A3					

MGRID, SHROUDED HEADER  
W/PEG/CAP/LOCK FEATURES  
SMT, IN TUBE AND T&R

MOLEX INCORPORATED

DOCUMENT NO. SD-87832-013 SHEET NO. 2 OF 2