

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

**Part Number:** [0878320810](#)  
**Status:** **Active**  
**Overview:** milligrd  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 8 Circuits, 0.38µm (15µ") Gold (Au) Plating, with Locking Window, without 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 Contact Molex for application in automotive industry  
 Overview [milligrd](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 8  
 Circuits (maximum) 8  
 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) 15  
 Plating min: Mating (µm) 0.38  
 Plating min: Termination (µin) 75  
 Plating min: Termination (µm) 1.88  
 Polarized to Mating Part Side Slots (2)  
 Polarized to PCB No  
 Shrouded Fully  
 Stackable No  
 Temperature Range - Operating -55°C to +105°C



image - Reference only

**EU RoHS**

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

**China RoHS**



**Not Halogen-Free**  
**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

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**

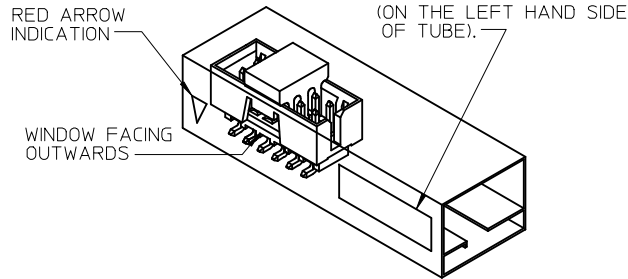
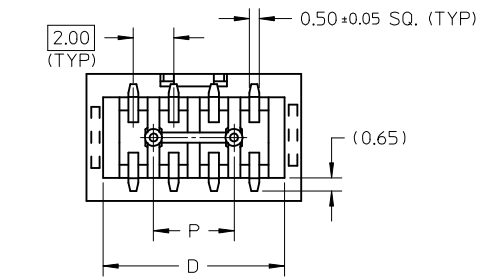
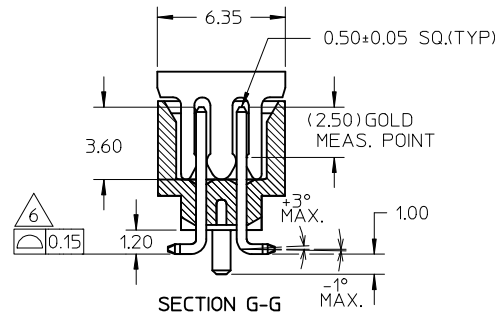
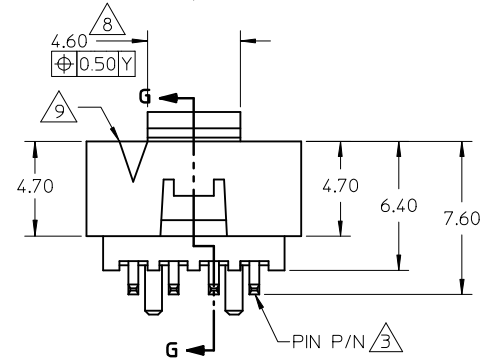
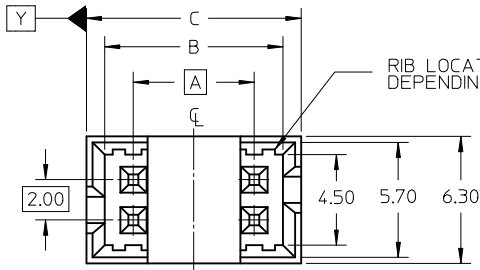
**Reference - Drawing Numbers**

Product Specification PS-87831-027  
Sales Drawing SD-87832-010

This document was generated on 05/25/2010

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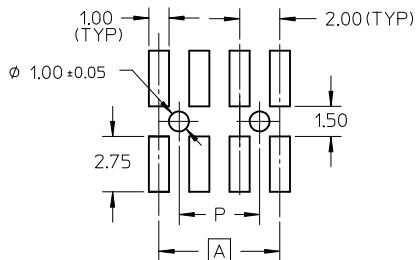
| PEG OPTION | P/N WITH CAP IN TAPE & REEL | P/N WITH CAP IN TUBE | P/N WITHOUT CAP IN TUBE | CKT SIZE | DIMENSION |       |       |       |      |
|------------|-----------------------------|----------------------|-------------------------|----------|-----------|-------|-------|-------|------|
|            |                             |                      |                         |          | A         | B     | C     | D     | P    |
| NO         | 87832-0406                  | 87832-0408           | 87832-0410              | 4        | 2.00      | 4.85  | 6.65  | 5.00  | -    |
| YES        | 87832-0606                  | 87832-0608           | 87832-0610              | 6        | 4.00      | 6.85  | 8.65  | 7.00  | 2.00 |
| YES        | 87832-0806                  | 87832-0808           | 87832-0810              | 8        | 6.00      | 8.85  | 10.65 | 9.00  | 4.00 |
| YES        | 87832-1006                  | 87832-1008           | 87832-1010              | 10       | 8.00      | 10.85 | 12.65 | 11.00 | 6.00 |
| YES        | 87832-1206                  | 87832-1208           | 87832-1210              | 12       | 10.00     | 12.85 | 14.65 | 13.00 | 8.00 |



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

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 :  
0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/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.
- BEND DEPRESSION ON SMT TAIL IS ACCEPTABLE SO LONG AS IT DOES NOT AFFECT THE OVERALL COPLANARITY OF THE TAIL.
- 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:  
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.  
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
- PARTS TO BE PACKED IN MOISTURE BARRIER BAG WITH DESICCANT GEL.
- NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 & 6.



RECOMMENDED PCB PATTERN

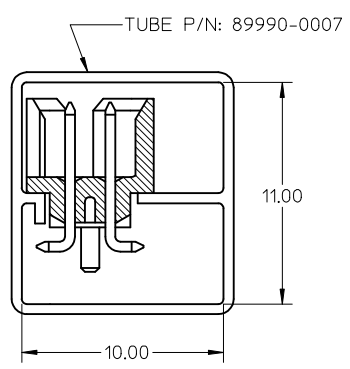
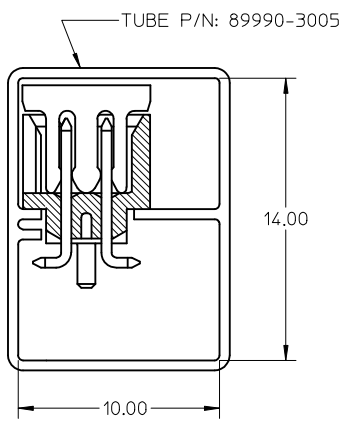
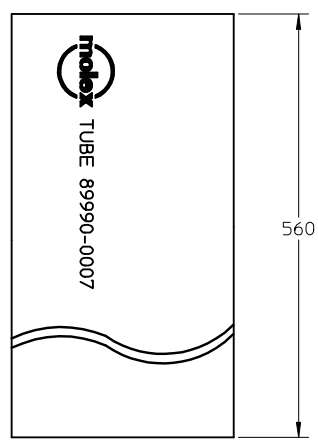
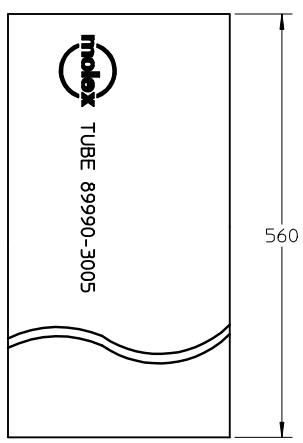
|  |  |                               |   |            |   |            |                     |   |                        |  |  |  |
|--|--|-------------------------------|---|------------|---|------------|---------------------|---|------------------------|--|--|--|
| ADD IN NOTES NO.12<br>EC NO: S2009-0943<br>DRWN:YMCCHONG<br>CHKD:SKANG<br>APPR:MLONG | 2009/07/01<br>2009/07/08<br>2009/07/16 | QUALITY SYMBOLS<br>▽=0<br>◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                   |            | DIMENSION STYLE<br>MM ONLY  |            | SCALE<br>NTS        | DESIGN UNITS<br>METRIC  | THIRD ANGLE PROJECTION |  |  |  |
|  |  |                               |   | mm         | INCH  | DRAWN BY   | DATE                | TITLE   |                        |  |  |  |
|  |  |                               | 4 PLACES  | ± ---      | ± ---   | ATSEE      | 2003/10/15          | MGRID, SHROUDED HEADER<br>W/PEGS/CAP/LOCK FEATURE<br>SMT, IN TUBE AND T&R<br>MOLEX INCORPORATED |                        |  |  |  |
|  |  |                               | 3 PLACES  | ± ---      | ± ---   | CHECKED BY | DATE                |   |                        |  |  |  |
| 2 PLACES   | ± 0.2                                  | ± ---                         | KCLING  | 2003/11/07 | SKTOH 2003/11/07<br>MATERIAL NO. SEE TABLE<br>DOCUMENT NO. SD-87832-010 |            |                     |   |                        |  |  |  |
| 1 PLACE  | ± ---                                  | ± ---                         | APPROVED BY   | DATE       |   |            |                     |   |                        |  |  |  |
| ANGULAR ± 3 °  |  |                               | DRAFT WHERE APPLICABLE<br>MUST REMAIN WITHIN DIMENSIONS |            | SIZE<br>A3  |            | SHEET NO.<br>1 OF 2 |   |                        |  |  |  |

10 9 8 7 6 5 4 3 2 1

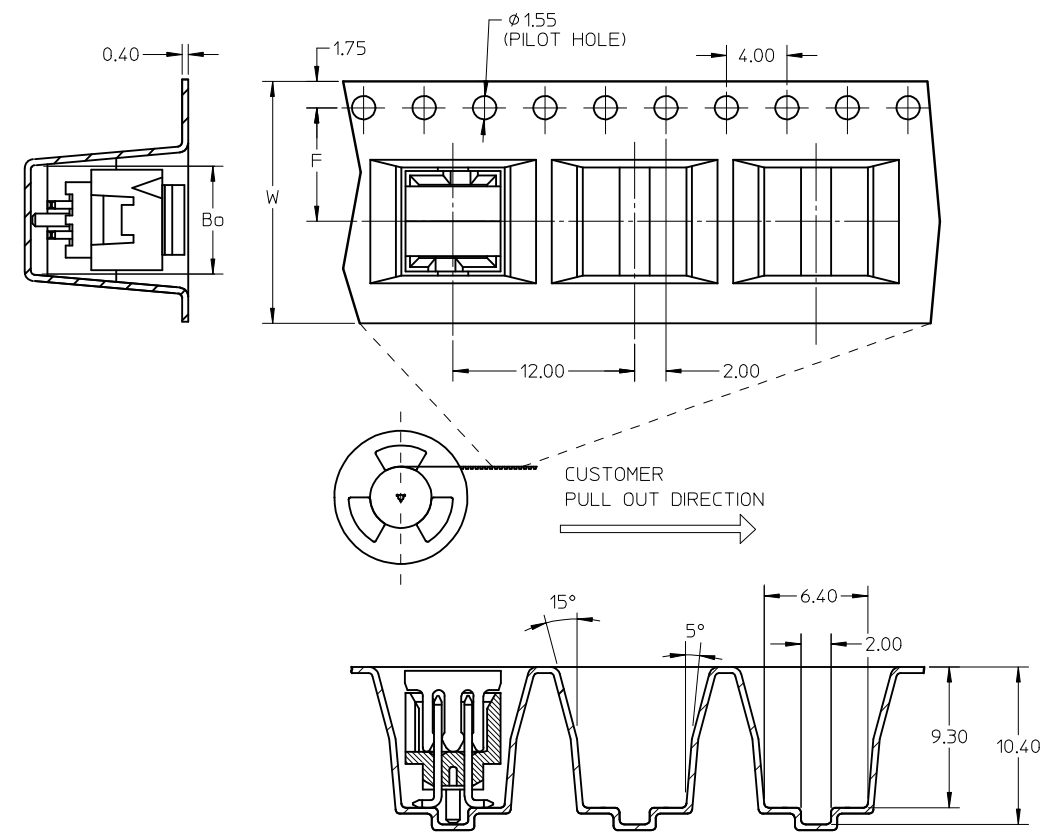
WITH CAP  
TUBE PACKAGING

WITHOUT CAP  
TUBE PACKAGING

| P/N WITH CAP IN T&R | CKT SIZE | F     | Bo    | So    | W     |
|---------------------|----------|-------|-------|-------|-------|
| 87832-0406          | 04       | 7.50  | 7.15  | -     | 16.00 |
| 87832-0606          | 06       | 11.50 | 9.15  | -     | 24.00 |
| 87832-0806          | 08       | 11.50 | 11.05 | -     | 24.00 |
| 87832-1006          | 10       | 11.50 | 13.05 | -     | 24.00 |
| 87832-1206          | 12       | 14.20 | 15.15 | 28.40 | 32.00 |

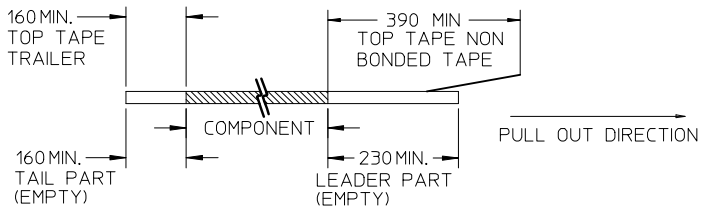


EMBOSSED CARRIER TAPE 'A'

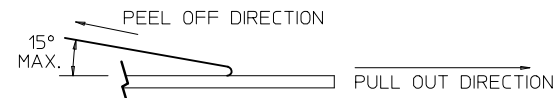


NOTES:

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.

|                    |                   |             |                       |
|--------------------|-------------------|-------------|-----------------------|
| ADD IN NOTES NO.12 | EC NO: S2009-0943 | 2009/07/01  | QUALITY SYMBOLS       |
|                    | DRWN:YMCHEONG     | 2009/07/08  |                       |
|                    | CHKD:SKANG        | 2009/07/16  |                       |
|                    | APPR:MLONG        | 2009/07/16  |                       |
| A5                 | REV               | DESCRIPTION | <p>▽=0</p> <p>⊕=0</p> |

|  |                |       |
|--|----------------|-------|
| GENERAL TOLERANCES (UNLESS SPECIFIED)                | mm             | INCH  |
|  | 4 PLACES ± --- | ± --- |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | 3 PLACES ± --- | ± --- |
|  | 2 PLACES ± 0.2 | ± --- |
| ANGULAR ± 3 °  | 1 PLACE ± ---  | ± --- |
|  | SEE TABLE      |       |

|                 |            |   |              |                        |
|-----------------|------------|---|--------------|------------------------|
| DIMENSION STYLE |            | SCALE   | DESIGN UNITS | THIRD ANGLE PROJECTION |
| MM ONLY         |            | NTS   | METRIC       | ⊕ □                    |
| DRAWN BY        | DATE       | TITLE   |              |                        |
| ATSEE           | 2003/10/15 | MGRID, SHROUDED HEADER W/PEGS/CAP/LOCK FEATURE SMT, IN TUBE AND T&R   |              |                        |
| CHECKED BY      | DATE       | MOLEX INCORPORATED  |              |                        |
| KCL ING         | 2003/11/07 | DOCUMENT NO. SD-87832-010   |              |                        |
| APPROVED BY     | DATE       | SHEET NO. 2 OF 2  |              |                        |
| SKTOH           | 2003/11/07 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |              |                        |
| MATERIAL NO.    | SIZE       |   |              |                        |
|                 | A3         |   |              |                        |

9 8 7 6 5 4 3 2 1