

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

**Part Number:** [0878321814](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 18 Circuits, 0.38µm (15µ") Gold (Au) Plating, with Locking Windows, Center Polarization Slot, Cap, without PCB Locator, Embossed Tape on Reel

**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) 18  
 Circuits (maximum) 18  
 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 No  
 PCB Retention None  
 Packaging Type Embossed Tape on Reel  
 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



image - Reference only

**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

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

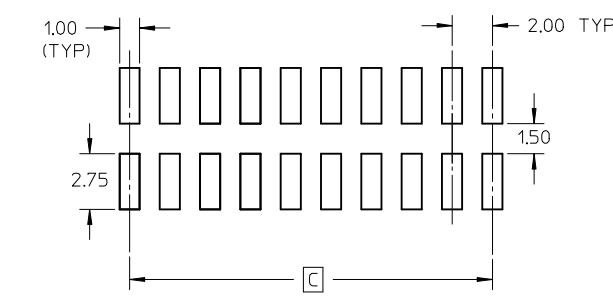
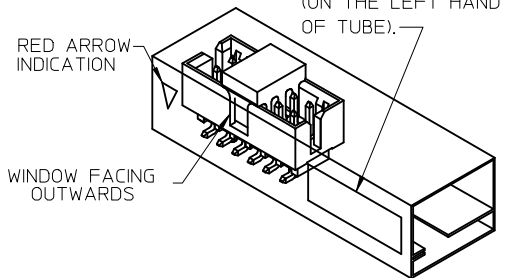
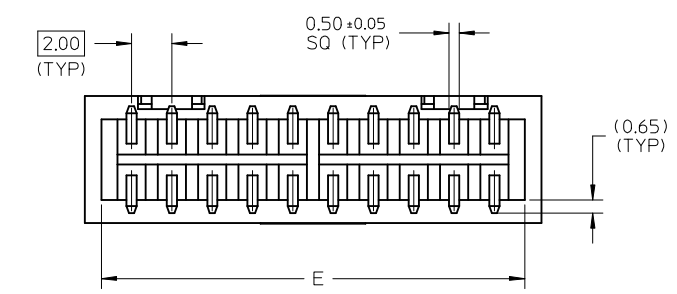
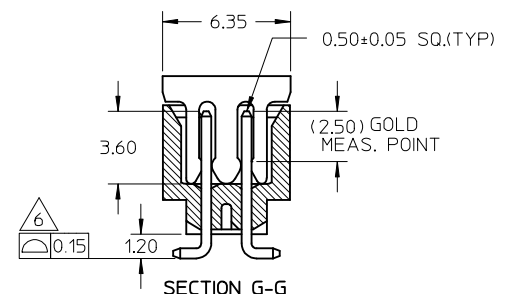
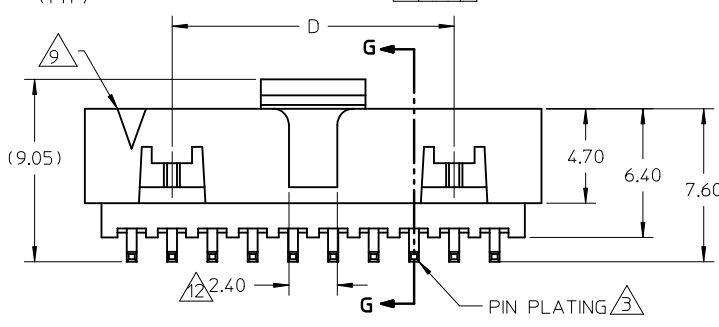
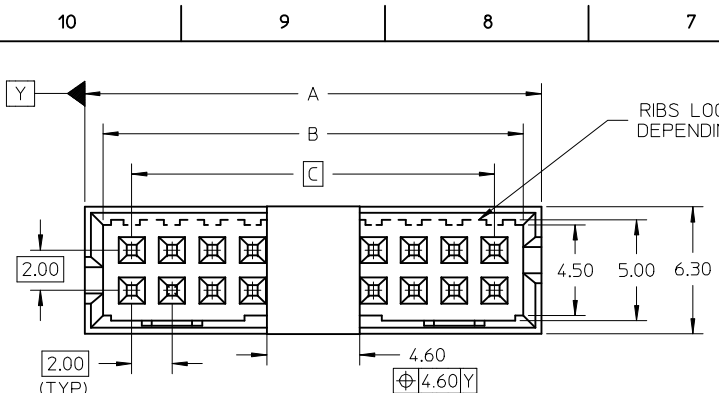
### **Material Info**

### **Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87832-008

This document was generated on 05/25/2010

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RECOMMENDED PCB PATTERN

P/N W/CAP IN TUBE	P/N W/CAP IN T&R	P/N W/O CAP IN TUBE	CKT SIZE	DIMENSION				
				A	B	C	D	E
87832-0616	87832-0614	87832-0612	6	8.65	6.85	4.00	---	7.00
87832-0816	87832-0814	87832-0812	8	10.65	8.85	6.00	---	9.00
87832-1416	87832-1414	87832-1412	14	16.65	14.85	12.00	8.00	15.00
87832-1816	87832-1814	87832-1812	18	20.65	18.85	16.00	12.00	19.00
87832-2016	87832-2014	87832-2012	20	22.65	20.85	18.00	14.00	21.00
87832-2616	---	87832-2612	26	28.65	26.85	24.00	20.00	27.00
87832-3016	87832-3014	87832-3012	30	32.65	30.85	28.00	24.00	31.00
87832-3416	87832-3414	87832-3412	34	36.65	34.85	32.00	28.00	35.00
87832-4016	---	87832-4012	40	42.65	40.85	38.00	34.00	41.00
87832-5016	---	87832-5012	50	52.65	50.85	48.00	44.00	51.00
87832-1016	87832-1014	87832-1012	10	12.65	10.85	8.00	---	11.00
87832-1616	87832-1614	87832-1612	16	18.65	16.85	14.00	10.00	17.00

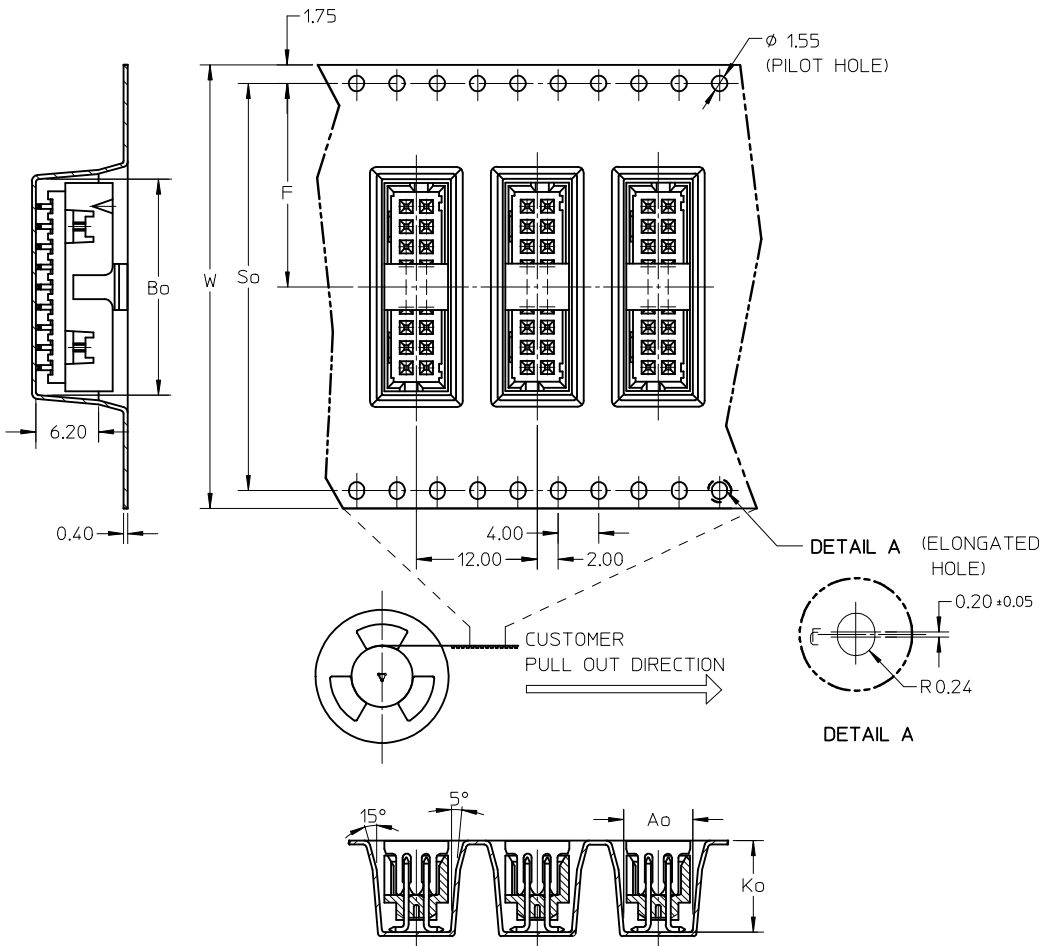
- NOTES:
- FOR ILLUSTRATION PURPOSES, 20 CIRCUIT SIZE WAFER IS SHOWN.
  - MATERIAL :  
HOUSING & CAP : NYLON 46, GLASS FILLED, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
  - PLATING:  
0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. 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.
  - NO SIDE LOCKING SLOT FROM 6, 8, AND 10 CKT SIZE.
  - 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 BARRIER BAG WITH DESICCANT GEL.
  - NO CENTRE POLARIZATION SLOT FOR CKT SIZE 6

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

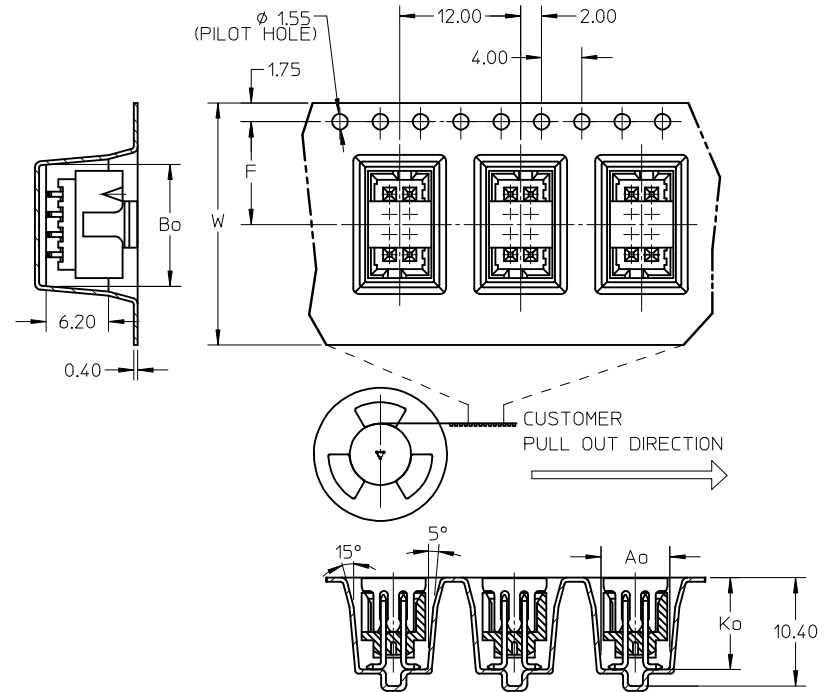
ADD IN NOTES NO.12 EC NO: S2009-0943 DRWN:YMCHEONG CHKD:SKANG APPR:MLONG 2009/07/01 2009/07/08 2009/07/16	QUALITY SYMBOLS ▽=0 C=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm      INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	DIMENSION STYLE <b>MM ONLY</b> DRAWN BY      DATE ATSEE      2003/10/14 CHECKED BY      DATE KCLING      2003/11/07 APPROVED BY      DATE SKTOH      2003/11/07	SCALE <b>NTS</b> DESIGN UNITS <b>METRIC</b>	THIRD ANGLE PROJECTION 	TITLE <b>MGRID, SHROUDED HEADER W/CAP, IN TUBE AND T&amp;R SMT</b>
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. <b>SEE TABLE</b>	MOLEX INCORPORATED DOCUMENT NO. <b>SD-87832-008</b>	SHEET NO. <b>1 OF 3</b>		
	SIZE <b>A3</b>	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
	REV <b>B4</b>	DESCRIPTION	DIMENSION STYLE <b>MM ONLY</b>	SCALE <b>NTS</b>	DESIGN UNITS <b>METRIC</b>	THIRD ANGLE PROJECTION 

P/N W/CAP IN T&R	CKT SIZE	W	F	Bo	So	Ao	Ko	TYPE	T&R QUANTITY (PCS/REEL)
87832-0614	06	24.00	11.50	9.15	-	6.40	9.30	A	500
87832-0814	08	24.00	11.50	11.05	-	6.40	9.30	A	
87832-1014	10	24.00	11.50	13.05	-	6.40	9.30	A	
87832-1414	14	32.00	14.20	17.05	28.40	6.40	9.30	C	
87832-1614	16	32.00	14.20	19.05	28.40	6.40	9.30	C	
87832-1814	18	44.00	20.20	21.05	40.40	6.40	9.30	B	
87832-2014	20	44.00	20.20	23.05	40.40	6.40	9.30	C	
87832-3014	30	44.00	20.20	33.05	40.40	6.40	9.30	B	
87832-3414	34	56.00	26.20	37.05	52.40	6.40	9.30	B	

EMBOSSED CARRIER TAPE 'B'

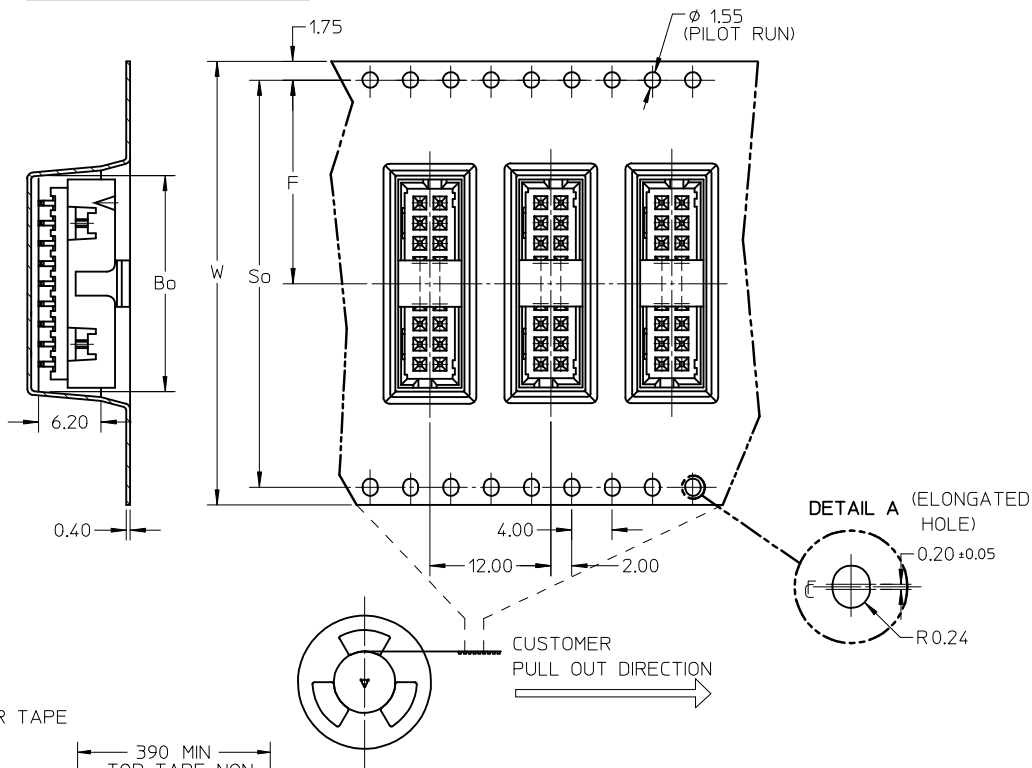


EMBOSSED CARRIER TAPE 'A'



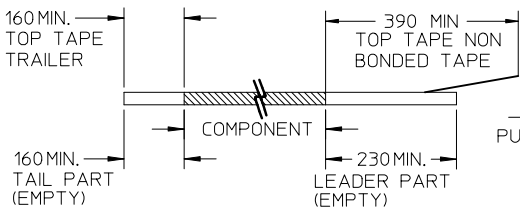
ADD IN NOTES NO.12 EC NO: S2009-0943 2009/07/04 DRWN: YMCHONG 2009/07/08 CHKD: SKANG 2009/07/08 APPR: MLONG 2009/07/16	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	DIMENSION STYLE MM ONLY DRAWN BY ATSEE DATE 2003/10/14 CHECKED BY KCL ING DATE 2003/11/07 APPROVED BY SKTOH DATE 2003/11/07 MATERIAL NO. SKTOH	SCALE NTS DESIGN UNITS METRIC THIRD ANGLE PROJECTION	TITLE MGRID, SHROUDED HEADER W/CAP, IN TUBE AND T&R SMT MOLEX INCORPORATED DOCUMENT NO. SD-87832-008 SHEET NO. 2 OF 3	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SIZE A3 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
	B4	REV				
	ADD IN NOTES NO.12 EC NO: S2009-0943 2009/07/04 DRWN: YMCHONG 2009/07/08 CHKD: SKANG 2009/07/08 APPR: MLONG 2009/07/16					
	QUALITY SYMBOLS ▽=0 ◻=0					

EMBOSSED CARRIER TAPE 'C'

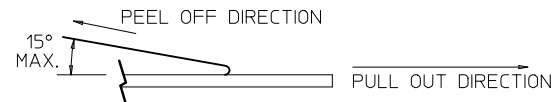


NOTES:

1. LEADER AND TRAILER TAPE



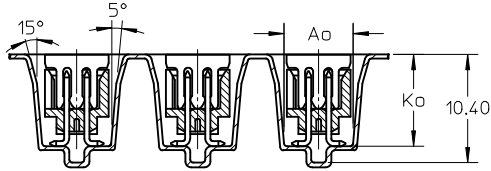
2. PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.  
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



3. PACKAGING STANDARD IS AS PER EIA-481.

4. TAPE AND REEL QUANTITY = SEE TABLE ON SHEET 2

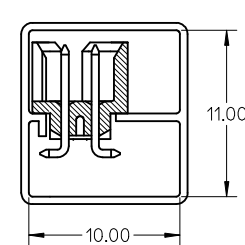
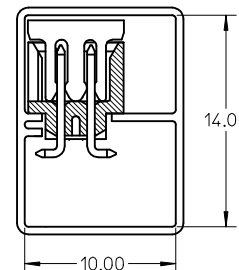
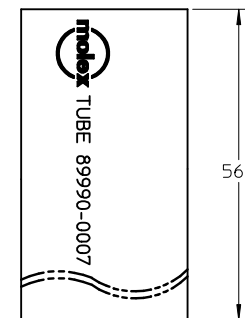
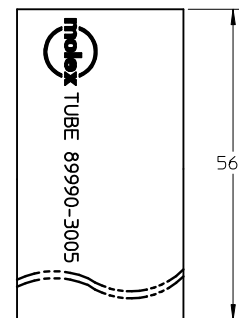
5. THE TAPE IS TREATED FOR ANTI-STATIC.



P/N W/CAP IN TUBE TUBE : 89990-3005	P/N W/O CAP IN TUBE TUBE : 89990-0007
87832-0616	87832-0612
87832-0816	87832-0812
87832-1416	87832-1412
87832-1816	87832-1812
87832-2016	87832-2012
87832-2616	87832-2612
87832-3016	87832-3012
87832-3416	87832-3412
87832-4016	87832-4012
87832-5016	87832-5012
87832-1016	87832-1012
87832-1616	87832-1612

ASSY WITH CAP TUBE

ASSY WITHOUT CAP IN TUBE



ADD IN NOTES NO.12 EC NO: S2009-0943 DRWN:YMCHEONG CHKD:SKANG APPR:MLONG	2009/07/01	2009/07/08	2009/07/16
	DESCRIPTION		
	REV		
	B4		

QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm	INCH
▽=0	4 PLACES ± ---	± ---
◻=0	3 PLACES ± ---	± ---
	2 PLACES ± 0.2	± ---
	1 PLACE ± ---	± ---
	ANGULAR ± 3 °	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY		NTS	METRIC	⊙
DRAWN BY	DATE	TITLE		
ATSEE	2003/10/14	MGRID, SHROUDED HEADER W/CAP, IN TUBE AND T&R SMT		
CHECKED BY	DATE	Molex MOLEX INCORPORATED		
KCL ING	2003/11/07	DOCUMENT NO. SD-87832-008		
APPROVED BY	DATE	SHEET NO. 3 OF 3		
SKTOH	2003/11/07	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
MATERIAL NO.	SEE TABLE			
SIZE	A3			