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**Part Number:** [0877601218](#)  
**Status:** **Active**  
**Overview:** [milligrid](#)  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Right Angle, Through Hole, 12 Circuits, 2.54μm (100μ) Tin (Sn) Plating, Tray, Lead-free

**Documents:**

[3D Model](#) [RoHS Certificate of Compliance \(PDF\)](#)  
[Drawing \(PDF\)](#)

**Agency Certification**

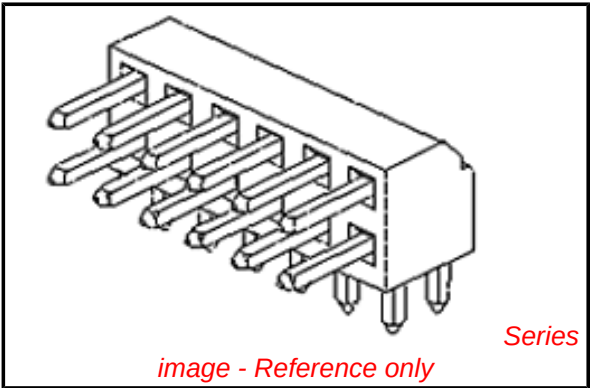
CSA LR19980  
UL E29179

**General**

Product Family PCB Headers  
Series [87760](#)  
Application Board-to-Board, Wire-to-Board  
Comments Lead-free version of 87049 series  
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 None  
Mated Height (in) 0.157 In  
Mated Height (mm) 4.00 mm  
Material - Metal Phosphor Bronze  
Material - Plating Mating Tin  
Material - Plating Termination Nickel  
Material - Resin High Temperature Thermoplastic  
Number of Rows 2  
Orientation Right Angle  
PC Tail Length (in) 0.102 In  
PC Tail Length (mm) 2.60 mm  
PCB Locator No  
PCB Retention None  
PCB Thickness Recommended (in) 0.062 In  
PCB Thickness Recommended (mm) 1.60 mm  
Packaging Type Tray  
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) 101.6  
Plating min: Mating (μm) 2.54  
Plating min: Termination (μin) 50  
Plating min: Termination (μm) 1.27



**EU RoHS**

**ELV and RoHS  
Compliant**  
**REACH SVHC**  
Not Reviewed  
**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**  
[87760Series](#)

**Mates With**  
[79107](#) Milli-Grid™ Receptacle, Vertical,  
Through Hole. [79108](#) Milli-Grid™ Flex-to-  
Board, Vertical Receptacle. Milli-Grid™  
Receptacle, Surface Mount. [79109](#). [87381](#)

|                                |                 |
|--------------------------------|-----------------|
| Polarized to Mating Part       | No              |
| Polarized to PCB               | No              |
| Shrouded                       | No              |
| 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) | 14                     |
| Lead-free Process Capability                   | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 1                      |
| Process Temperature max. C                     | 265                    |

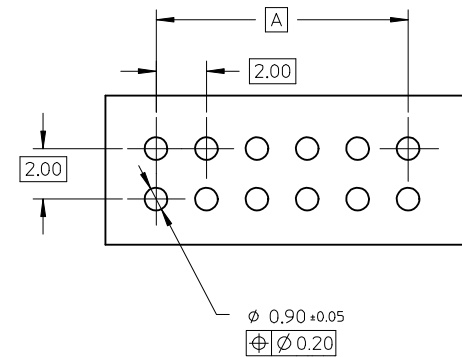
**Material Info**

**Reference - Drawing Numbers**

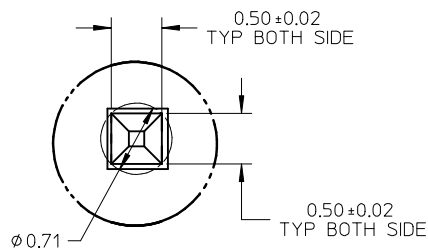
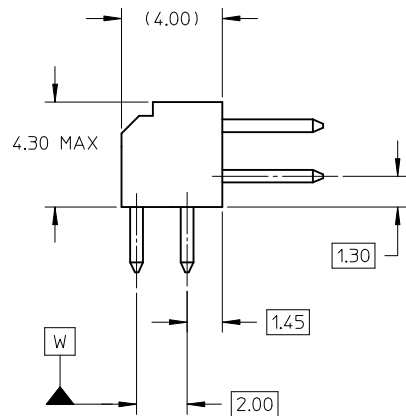
|               |              |
|---------------|--------------|
| Sales Drawing | SD-87760-109 |
|---------------|--------------|

This document was generated on 05/26/2010  
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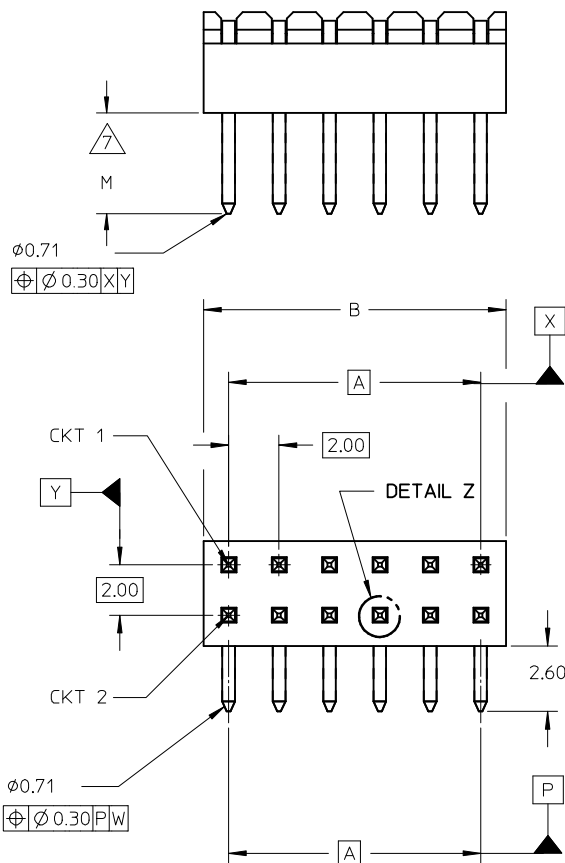
10 9 8 7 6 5 4 3 2 1



RECOMMENDED PCB LAYOUT



DETAIL Z



NOTES:

1. MATERIAL:

HSG: PCT, 30% GLASS FILLED, UL 94V-0, COLOUR BLACK.

PIN: 0.50MM SQ PHOSPHOR BRONZE 510

2. PLATING:

\*\*\*6 - 0.38um MIN GOLD IN CONTACT AREA, 1.90um MIN TIN IN SOLDER TAIL AREA, BOTH OVER 1.27um MIN NICKEL OVERALL

\*\*\*7 - 0.76um MIN GOLD IN CONTACT AREA, 1.90um MIN TIN IN SOLDER TAIL AREA, BOTH OVER 1.27um MIN NICKEL OVERALL

\*\*\*8 - 2.54um MIN TIN OVER 1.27um MIN NICKEL OVERALL

3. 12 CKT USED FOR ILLUSTRATION ONLY

4. PART TO BE PACKED IN POCKET TRAY/TUBE (SEE TABLE).

5. PRODUCT SPEC PS-87761-100 APPLIES.

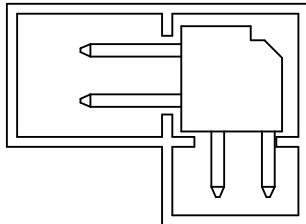
6. RECOMMENDED PCB BOARD THK 1.60 ± 0.10 MM.

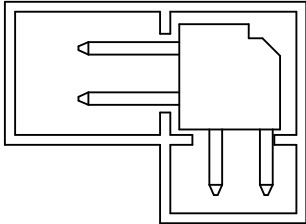
7. MATING LENGTH: 1 - 4.00MM 2 - 3.50MM 3 - 3.06MM 4 - 5.75MM

LEGEND:

87760 - \* \* \* \*  
(SEE SHT 3) — PLATING OPTION (SEE NOTE 2) —  
— MATING OPTION —

|                                                                                             |             |                                                  |                                       |       |                                                                                                                                  |                      |                              |                                          |                           |                          |  |  |  |  |
|---------------------------------------------------------------------------------------------|-------------|--------------------------------------------------|---------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------|------------------------------------------|---------------------------|--------------------------|--|--|--|--|
| 0047-DW-SIRIUS<br>EC NO: S2010-0177<br>DRWN:SKANG<br>CHKD:ATSEE<br>APPR:MLONG<br>REV<br>A11 | DESCRIPTION | QUALITY SYMBOLS<br><div>▽=0</div> <div>◻=0</div> | GENERAL TOLERANCES (UNLESS SPECIFIED) |       | DIMENSION STYLE<br>MM ONLY                                                                                                       |                      | SCALE<br>NTS                 | DESIGN UNITS<br>METRIC                   | THIRD ANGLE<br>PROJECTION |                          |  |  |  |  |
|                                                                                             |             |                                                  |                                       | mm    | INCH                                                                                                                             | DRAWN BY<br>KSEE     | DATE<br>2003/10/15           | TITLE<br>MGRID, 2MM DUAL ROW HDR.<br>R/A |                           |                          |  |  |  |  |
|                                                                                             |             |                                                  | 4 PLACES                              | ± --- | ± ---                                                                                                                            | CHECKED BY<br>KCLING | DATE<br>2003/12/02           |                                          |                           |                          |  |  |  |  |
|                                                                                             |             |                                                  | 3 PLACES                              | ± --- | ± ---                                                                                                                            | APPROVED BY<br>SKTOH |                              | DATE<br>2003/12/11                       |                           | molex MOLEX INCORPORATED |  |  |  |  |
|                                                                                             |             |                                                  | 2 PLACES                              | ± 0.2 | ± ---                                                                                                                            |                      |                              |                                          |                           |                          |  |  |  |  |
| 1 PLACE                                                                                     | ± ---       | ± ---                                            | ANGULAR ± 3 °                         |       | MATERIAL NO.<br>SEE TABLE                                                                                                        |                      | DOCUMENT NO.<br>SD-87760-109 |                                          | SHEET NO.<br>1 OF 2       |                          |  |  |  |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                  |             |                                                  | SIZE<br>A3                            |       | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                      |                              |                                          |                           |                          |  |  |  |  |

|   | 10          | 9                 | 8        | 7     | 6     | 5                | 4              | 3                                                                                                                  | 2 | 1 |  |
|---|-------------|-------------------|----------|-------|-------|------------------|----------------|--------------------------------------------------------------------------------------------------------------------|---|---|--|
|   | PART NUMBER | VOID PIN LOCATION | CKT SIZE | A     | B     | M                | PACKAGING TYPE |                                                                                                                    |   |   |  |
| F | 87760-04**  | -                 | 04       | 2.00  | 4.00  | REFER TO NOTE 7. | TRAY           | <div></div> <p>PART IN TUBE</p> |   |   |  |
|   | 87760-06**  | -                 | 06       | 4.00  | 6.00  |                  |                |                                                                                                                    |   |   |  |
|   | 87760-08**  | -                 | 08       | 6.00  | 8.00  |                  |                |                                                                                                                    |   |   |  |
|   | 87760-10**  | -                 | 10       | 8.00  | 10.00 |                  |                |                                                                                                                    |   |   |  |
| E | 87760-12**  | -                 | 12       | 10.00 | 12.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-14**  | -                 | 14       | 12.00 | 14.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-16**  | -                 | 16       | 14.00 | 16.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-18**  | -                 | 18       | 16.00 | 18.00 |                  |                |                                                                                                                    |   |   |  |
| D | 87760-20**  | -                 | 20       | 18.00 | 20.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-22**  | -                 | 22       | 20.00 | 22.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-24**  | -                 | 24       | 22.00 | 24.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-26**  | -                 | 26       | 24.00 | 26.00 |                  |                |                                                                                                                    |   |   |  |
| C | 87760-28**  | -                 | 28       | 26.00 | 28.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-30**  | -                 | 30       | 28.00 | 30.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-32**  | -                 | 32       | 30.00 | 32.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-34**  | -                 | 34       | 32.00 | 34.00 |                  |                |                                                                                                                    |   |   |  |
| B | 87760-36**  | -                 | 36       | 34.00 | 36.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-38**  | -                 | 38       | 36.00 | 38.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-40**  | -                 | 40       | 38.00 | 40.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-42**  | -                 | 42       | 40.00 | 42.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-44**  | -                 | 44       | 42.00 | 44.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-46**  | -                 | 46       | 44.00 | 46.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-48**  | -                 | 48       | 46.00 | 48.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-50**  | -                 | 50       | 48.00 | 50.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-5116  | 5, 6 & 26         | 50       | 48.00 | 50.00 |                  |                |                                                                                                                    |   |   |  |
|   | 87760-5248  | -                 | 28       | 26.00 | 28.00 |                  |                |                                                                                                                    |   |   |  |



PART IN TUBE

|                                                                                                                |                               |                                       |                                             |                            |                                                                                               |                                                |                                                                |                              |                     |
|----------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------|---------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------|------------------------------|---------------------|
| 0047-DW-SIRIUS<br>EC NO: S2010-0177<br>DRWN:SKANG 2009/10/21<br>CHKD:ATSEE 2009/10/22<br>APPR:MLONG 2009/10/23 | 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       |                     |
|                                                                                                                |                               | DESCRIPTION<br>REV                    | 4 PLACES<br>3 PLACES<br>2 PLACES<br>1 PLACE | mm<br>INCH                 | DRAWN BY<br>KSEE<br>CHECKED BY<br>KCLING<br>APPROVED BY<br>SKTOH<br>MATERIAL NO.<br>SEE TABLE | DATE<br>2003/10/15<br>2003/12/02<br>2003/12/11 | TITLE<br>MGRID, 2MM DUAL ROW HDR.<br>R/A<br>MOLEX INCORPORATED | DOCUMENT NO.<br>SD-87760-109 | SHEET NO.<br>2 OF 2 |
|                                                                                                                |                               |                                       |                                             |                            |                                                                                               |                                                |                                                                |                              |                     |
|                                                                                                                |                               |                                       |                                             |                            |                                                                                               |                                                |                                                                |                              |                     |
|                                                                                                                |                               |                                       |                                             |                            |                                                                                               |                                                |                                                                |                              |                     |