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**Part Number:** [0459848241](#)  
**Status:** **Active**  
**Overview:** [extreme\\_lphpower](#)  
**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Receptacle Header, Right Angle, 8 Power Contacts, 24 Signal Contacts, Select Gold (Au) Plating, for 3.18mm (.125") Thick PC Board, with Guide Posts

**Documents:**  
[3D Model](#) [Product Specification PS-45984-001 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

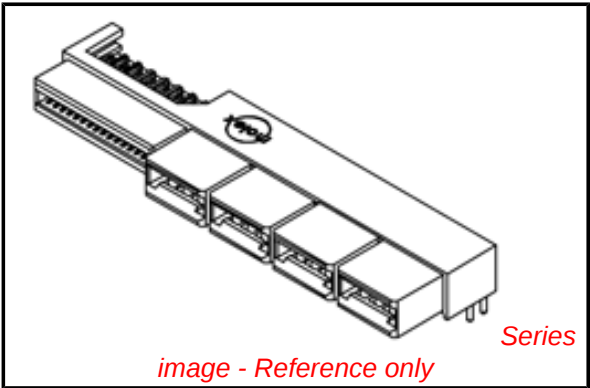
|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

**General**

|                |                                  |
|----------------|----------------------------------|
| Product Family | PCB Receptacles                  |
| Series         | <a href="#">45984</a>            |
| Application    | Board-to-Board                   |
| Overview       | <a href="#">extreme_lphpower</a> |
| Product Name   | EXTreme LPHPower™                |

**Physical**

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Circuits (Loaded)              | 32                                            |
| Circuits (maximum)             | 32                                            |
| Circuits Detail                | 8 Power, 24 Signal                            |
| Color - Resin                  | Black                                         |
| Durability (mating cycles max) | 250                                           |
| Flammability                   | 94V-0                                         |
| Glow-Wire Compliant            | No                                            |
| Guide to Mating Part           | Yes                                           |
| Keying to Mating Part          | Yes                                           |
| Lock to Mating Part            | No                                            |
| Material - Metal               | High Performance Alloy (HPA), Phosphor Bronze |
| Material - Plating Mating      | Gold                                          |
| Material - Plating Termination | Tin                                           |
| Material - Resin               | High Temperature Thermoplastic                |
| Number of Rows                 | 2                                             |
| Orientation                    | Right Angle                                   |
| PC Tail Length (in)            | 0.177 In                                      |
| PC Tail Length (mm)            | 4.50 mm                                       |
| PCB Locator                    | No                                            |
| PCB Retention                  | None                                          |
| PCB Thickness Recommended (in) | 0.125 In                                      |
| PCB Thickness Recommended (mm) | 3.18 mm                                       |
| Packaging Type                 | Tray                                          |
| Pitch - Mating Interface (in)  | 0.050 In, 0.472 In                            |
| Pitch - Mating Interface (mm)  | 1.27 mm, 12.00 mm                             |
| Plating min: Mating (µin)      | 30                                            |
| Plating min: Mating (µm)       | 0.75                                          |
| Plating min: Termination (µin) | 150, 75                                       |
| Plating min: Termination (µm)  | 1.875, 3.75                                   |
| Polarized to Mating Part       | Yes                                           |
| Polarized to PCB               | Yes                                           |
| Stackable                      | No                                            |
| Surface Mount Compatible (SMC) | Yes                                           |



**EU RoHS**  
**ELV and RoHS**  
**Compliant**  
**REACH SVHC**  
**Contains SVHC: No**  
**Halogen-Free**  
**Status**  
**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**  
[45984Series](#)

**Mates With**  
[45985](#) EXTreme LPHPower™ Headers, 1.57mm (.062") Card Edge

|                                                |                        |
|------------------------------------------------|------------------------|
| Temperature Range - Operating                  | -40°C to +105°C        |
| Termination Interface: Style                   | Through Hole           |
| <b>Electrical</b>                              |                        |
| Current - Maximum per Contact                  | 23A                    |
| Grounding to PCB                               | No                     |
| Voltage - Maximum                              | 250V AC (RMS)/DC       |
| <b>Solder Process Data</b>                     |                        |
| Duration at Max. Process Temperature (seconds) | 20                     |
| Lead-free Process Capability                   | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 3                      |
| Process Temperature max. C                     | 260                    |
| <b>Material Info</b>                           |                        |
| <b>Reference - Drawing Numbers</b>             |                        |
| Packaging Specification                        | PK-45984-001           |
| Product Specification                          | PS-45984-001           |
| Sales Drawing                                  | SD-45984-800           |

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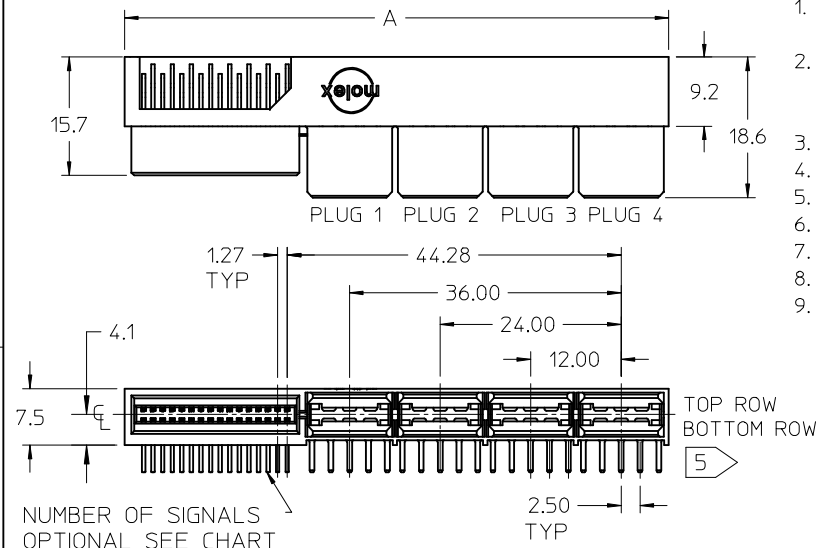
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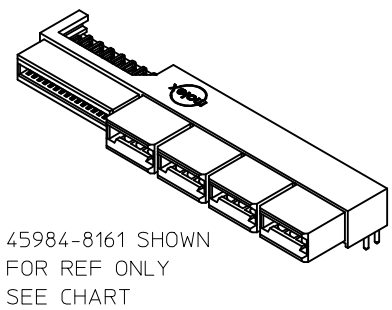
B

A

- NOTES:
1. MATERIAL HOUSING: LCP, 94V-0, COLOR-BLACK.  
CONTACT: COPPER ALLOY.
  2. FINISH: SELECT GOLD - .762  $\mu$ M/30 MI MIN. CONTACT AREA.  
SELECT TIN - 3.81  $\mu$ M/150 MI MIN. TAIL AREA.  
BOTH OVER NICKEL - 1.27  $\mu$ M/50 MI MIN.
  3. POWER TERMINALS LUBRICATED IN CONTACT AREA.
  4. PRODUCT SPECIFICATION: PS-45984-001.
  5. PACKAGING: TRAY PER PK-45984-001.
  6. SEE SHEET 5 FOR CKT IDENTIFICATION.
  7. PARTS ARE RoHS COMPLIANT.
  8. PEG HOLES ARE OPTIONAL SEE SHEET 3 AND 4.
  9. MATES TO 1577.062 CARD EDGE OR MOLEX P/N 45985-8\*\*\*.



PCB LAYOUT: COMPONENT SIDE  
PEG HOLES OPTIONAL

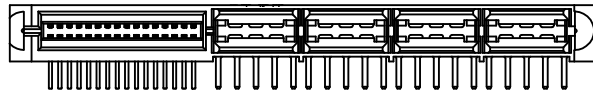


| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM P | PCB THK |
|--------------|-----------------|-------|-------|---------|
| 12           | 45984-8111      | 59.5  | 4.50  | 3.18    |
| 16           | 45984-8121      | 62.0  |       |         |
| 20           | 45984-8131      | 64.6  |       |         |
| 24           | 45984-8141      | 67.1  |       |         |
| 28           | 45984-8151      | 69.6  |       |         |
| 32           | 45984-8161      | 72.2  | 3.60  | 2.36    |
| 36           | 45984-8171      | 74.7  |       |         |
| 40           | 45984-8181      | 77.3  |       |         |
| 12           | 45984-8112      | 59.5  |       |         |
| 16           | 45984-8122      | 62.0  |       |         |
| 20           | 45984-8132      | 64.6  |       |         |
| 24           | 45984-8142      | 67.1  |       |         |
| 28           | 45984-8152      | 69.6  |       |         |
| 32           | 45984-8162      | 72.2  | 2.90  | 1.57    |
| 36           | 45984-8172      | 74.7  |       |         |
| 40           | 45984-8182      | 77.3  |       |         |
| 12           | 45984-8113      | 59.5  |       |         |
| 16           | 45984-8123      | 62.0  |       |         |
| 20           | 45984-8133      | 64.6  |       |         |
| 24           | 45984-8143      | 67.1  |       |         |
| 28           | 45984-8153      | 69.6  |       |         |
| 32           | 45984-8163      | 72.2  |       |         |
| 36           | 45984-8173      | 74.7  |       |         |
| 40           | 45984-8183      | 77.3  |       |         |

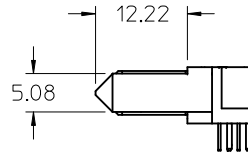
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|--------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|--------|----------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------|--|--|---------------------|
| REVISED<br>EC NO: UCP2009-0971<br>DRWN:MBANDURA<br>CHKD:<br>APPR:APATEL<br>REV | DESCRIPTION<br>2008/11/13<br>2008/11/14<br>2008/11/17 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        | DIMENSION STYLE<br>MM ONLY |                           | SCALE<br>1:1                                                                                                                     | DESIGN UNITS<br>METRIC                                                    | THIRD ANGLE<br>PROJECTION |  |  |                     |
|                                                                                |                                                       |                                                            | mm     | INCH                       | DRAWN BY<br>DATE          |                                                                                                                                  | TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR |                           |  |  |                     |
|                                                                                |                                                       | 4 PLACES                                                   | ± ---  | ± ---                      | SAMIEC<br>2005/05/13      |                                                                                                                                  |                                                                           |                           |  |  |                     |
|                                                                                |                                                       | 3 PLACES                                                   | ± ---  | ± ---                      | CHECKED BY<br>DATE        |                                                                                                                                  |                                                                           |                           |  |  |                     |
|                                                                                |                                                       | 2 PLACES                                                   | ± 0.25 | ± ---                      | SAMIEC<br>2005/05/13      |                                                                                                                                  | MOLEX<br>MOLEX INCORPORATED                                               |                           |  |  |                     |
|                                                                                |                                                       | 1 PLACE                                                    | ± ---  | ± ---                      | APPROVED BY<br>DATE       |                                                                                                                                  |                                                                           |                           |  |  |                     |
|                                                                                |                                                       | ANGULAR ±1/2°                                              |        |                            | MARGULIS<br>2005/05/13    |                                                                                                                                  | DOCUMENT NO.<br>SD-45984-800                                              |                           |  |  |                     |
|                                                                                |                                                       | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |                            | MATERIAL NO.<br>SEE CHART |                                                                                                                                  |                                                                           |                           |  |  | SHEET NO.<br>1 OF 5 |
|                                                                                |                                                       |                                                            |        |                            | SIZE<br>A                 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                           |                           |  |  |                     |



OPTIONAL GUIDES  
SEE CHART



NO OF SIGNALS  
OPTIONAL  
SEE CHART



### GUIDE POST OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM P | PCB THK |
|--------------|-----------------|-------|-------|---------|
| 12           | 45984-8211      | 59.5  | 4.50  | 3.18    |
| 16           | 45984-8221      | 62.0  |       |         |
| 20           | 45984-8231      | 64.6  |       |         |
| 24           | 45984-8241      | 67.1  |       |         |
| 28           | 45984-8251      | 69.6  |       |         |
| 32           | 45984-8261      | 72.2  |       |         |
| 36           | 45984-8271      | 74.7  | 3.60  | 2.36    |
| 40           | 45984-8281      | 77.3  |       |         |
| 12           | 45984-8212      | 59.5  |       |         |
| 16           | 45984-8222      | 62.0  |       |         |
| 20           | 45984-8232      | 64.6  |       |         |
| 24           | 45984-8242      | 67.1  |       |         |
| 28           | 45984-8252      | 69.6  |       |         |
| 32           | 45984-8262      | 72.2  |       |         |
| 36           | 45984-8272      | 74.7  | 2.90  | 1.57    |
| 40           | 45984-8282      | 77.3  |       |         |
| 12           | 45984-8213      | 59.5  |       |         |
| 16           | 45984-8223      | 62.0  |       |         |
| 20           | 45984-8233      | 64.6  |       |         |
| 24           | 45984-8243      | 67.1  |       |         |
| 28           | 45984-8253      | 69.6  |       |         |
| 32           | 45984-8263      | 72.2  |       |         |
| 36           | 45984-8273      | 74.7  |       |         |
| 40           | 45984-8283      | 77.3  |       |         |



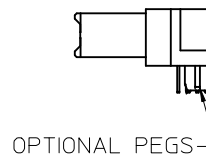
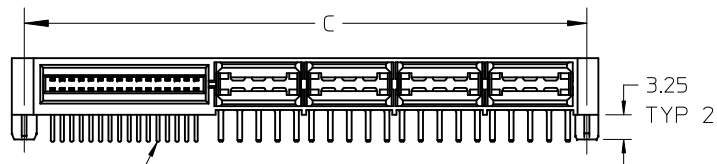
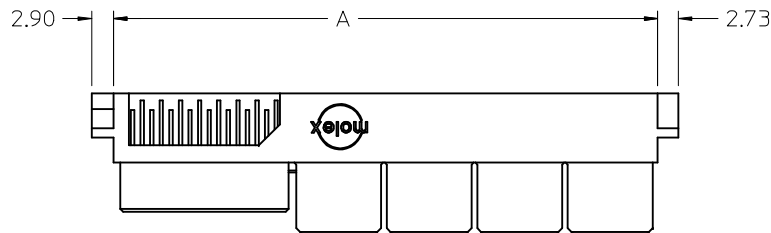
45984-8261 SHOWN  
FOR REF ONLY  
SEE CHART

|         |                     |               |            |       |            |             |            |
|---------|---------------------|---------------|------------|-------|------------|-------------|------------|
| REVISED | EC NO: UCP2009-0971 | DRWN:MBANDURA | 2008/11/13 | CHKD: | 2008/11/14 | APPR:APATEL | 2008/11/17 |
| REV     |                     |               |            |       |            |             |            |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       |
|------------------------------------------------------------|--------|-------|
|                                                            | mm     | INCH  |
| 4 PLACES                                                   | ± ---  | ± --- |
| 3 PLACES                                                   | ± ---  | ± --- |
| 2 PLACES                                                   | ± 0.25 | ± --- |
| 1 PLACE                                                    | ± ---  | ± --- |
| ANGULAR ±1/2°                                              |        |       |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |

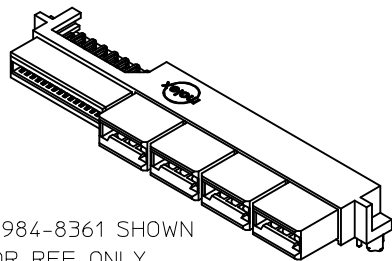
| DIMENSION STYLE<br>MM ONLY |            |
|----------------------------|------------|
| DRAWN BY                   | DATE       |
| SAMIEC                     | 2005/05/13 |
| CHECKED BY                 | DATE       |
| SAMIEC                     | 2005/05/13 |
| APPROVED BY                | DATE       |
| MARGULIS                   | 2005/05/13 |
| MATERIAL NO.<br>SEE CHART  |            |
| SIZE                       |            |
| A                          |            |

|                                                                                                          |                        |                                                                                                                 |
|----------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| SCALE<br>1:1                                                                                             | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                |                        |                                                                                                                 |
|  MOLEX INCORPORATED |                        |                                                                                                                 |
| DOCUMENT NO.<br>SD-45984-800                                                                             |                        | SHEET NO.<br>2 OF 5                                                                                             |
| THIS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION           |                        |                                                                                                                 |



OPTIONAL PEGS

### MOUNTING PEG OPTIONS



45984-8361 SHOWN  
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|         |                     |               |            |       |            |             |            |             |
|---------|---------------------|---------------|------------|-------|------------|-------------|------------|-------------|
| REVISED | EC NO: UCP2009-0971 | DRWN:MBANDURA | 2008/11/13 | CHKD: | 2008/11/14 | APPR:APATEL | 2008/11/17 | DESCRIPTION |
|         |                     |               |            |       |            |             |            |             |
|         |                     |               |            |       |            |             |            |             |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       |
|------------------------------------------------------------|--------|-------|
|                                                            | mm     | INCH  |
| 4 PLACES                                                   | ± ---  | ± --- |
| 3 PLACES                                                   | ± ---  | ± --- |
| 2 PLACES                                                   | ± 0.25 | ± --- |
| 1 PLACE                                                    | ± ---  | ± --- |
| ANGULAR ±1/2°                                              |        |       |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |

| DIMENSION STYLE<br>MM ONLY |            |
|----------------------------|------------|
| DRAWN BY                   | DATE       |
| SAMIEC                     | 2005/05/13 |
| CHECKED BY                 | DATE       |
| SAMIEC                     | 2005/05/13 |
| APPROVED BY                | DATE       |
| MARGULIS                   | 2005/05/13 |
| MATERIAL NO.               |            |
| SEE CHART                  |            |
| SIZE                       |            |
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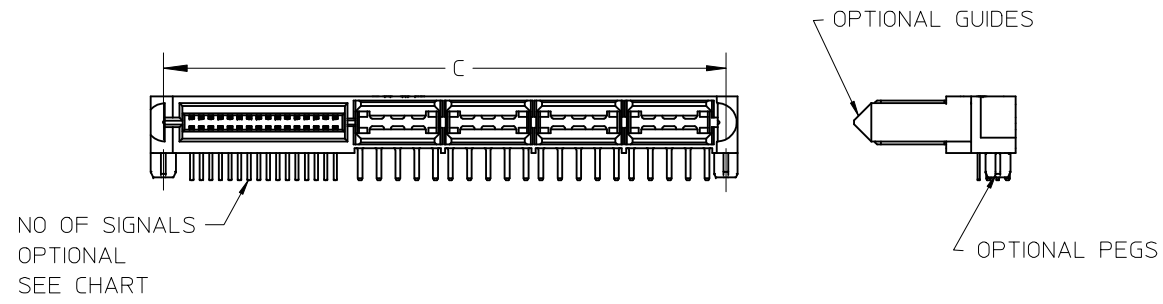
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|----------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------|
| SCALE<br>1:1                                                                                             | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |                     |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                |                        |                                                                                                                 |                     |
|  MOLEX INCORPORATED |                        |                                                                                                                 |                     |
| DOCUMENT NO.<br>SD-45984-800                                                                             |                        |                                                                                                                 | SHEET NO.<br>3 OF 5 |
| THIS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION           |                        |                                                                                                                 |                     |

D

C

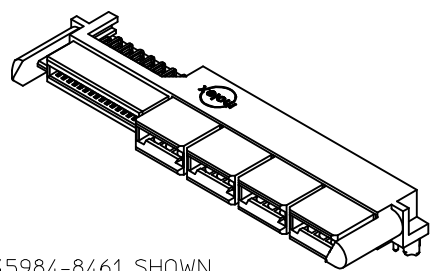
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GUIDE POST & MOUNTING PEG OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM C | DIM P | PCB THK |
|--------------|-----------------|-------|-------|-------|---------|
| 12           | 45984-8411      | 59.5  | 61.90 | 4.50  | 3.18    |
| 16           | 45984-8421      | 62.0  | 64.44 |       |         |
| 20           | 45984-8431      | 64.6  | 66.98 |       |         |
| 24           | 45984-8441      | 67.1  | 69.52 |       |         |
| 28           | 45984-8451      | 69.6  | 72.06 |       |         |
| 32           | 45984-8461      | 72.2  | 74.60 |       |         |
| 36           | 45984-8471      | 74.7  | 77.14 | 3.60  | 2.36    |
| 40           | 45984-8481      | 77.3  | 79.68 |       |         |
| 12           | 45984-8412      | 59.5  | 61.90 |       |         |
| 16           | 45984-8422      | 62.0  | 64.44 |       |         |
| 20           | 45984-8432      | 64.6  | 66.98 |       |         |
| 24           | 45984-8442      | 67.1  | 69.52 |       |         |
| 28           | 45984-8452      | 69.6  | 72.06 |       |         |
| 32           | 45984-8462      | 72.2  | 74.60 | 2.90  | 1.57    |
| 36           | 45984-8472      | 74.7  | 77.14 |       |         |
| 40           | 45984-8482      | 77.3  | 79.68 |       |         |
| 12           | 45984-8413      | 59.5  | 61.90 |       |         |
| 16           | 45984-8423      | 62.0  | 64.44 |       |         |
| 20           | 45984-8433      | 64.6  | 66.98 |       |         |
| 24           | 45984-8443      | 67.1  | 69.52 |       |         |
| 28           | 45984-8453      | 69.6  | 72.06 |       |         |
| 32           | 45984-8463      | 72.2  | 74.60 |       |         |
| 36           | 45984-8473      | 74.7  | 77.14 |       |         |
| 40           | 45984-8483      | 77.3  | 79.68 |       |         |



45984-8461 SHOWN  
FOR REF ONLY  
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|                                                                         |                                        |             |                                                            |        |       |                            |                                                                                                                                  |                                                                                                          |                              |                                                                                                                 |                     |
|-------------------------------------------------------------------------|----------------------------------------|-------------|------------------------------------------------------------|--------|-------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------|
| REVISED<br>EC NO: UCP2009-0971<br>DRWN:MBANDURA<br>CHKD:<br>APPR:APATEL | 2008/11/13<br>2008/11/14<br>2008/11/17 | DESCRIPTION | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       | DIMENSION STYLE<br>MM ONLY |                                                                                                                                  | SCALE<br>1:1                                                                                             | DESIGN UNITS<br>METRIC       |  THIRD ANGLE<br>PROJECTION |                     |
|                                                                         |                                        |             |                                                            | mm     | INCH  | DRAWN BY<br>SAMIEC         | DATE<br>2005/05/13                                                                                                               | TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                |                              |                                                                                                                 |                     |
|                                                                         |                                        |             | 4 PLACES                                                   | ± ---  | ± --- | CHECKED BY                 | DATE                                                                                                                             |                                                                                                          |                              |                                                                                                                 |                     |
|                                                                         |                                        |             | 3 PLACES                                                   | ± ---  | ± --- | SAMIEC                     | 2005/05/13                                                                                                                       |                                                                                                          |                              |                                                                                                                 |                     |
|                                                                         |                                        |             | 2 PLACES                                                   | ± 0.25 | ± --- | APPROVED BY                | DATE                                                                                                                             |                                                                                                          |                              |                                                                                                                 |                     |
|                                                                         |                                        |             | 1 PLACE                                                    | ± ---  | ± --- | MARGULIS                   | 2005/05/13                                                                                                                       |  MOLEX INCORPORATED |                              |                                                                                                                 |                     |
|                                                                         |                                        |             | ANGULAR ±1/2°                                              |        |       | MATERIAL NO.<br>SEE CHART  |                                                                                                                                  |                                                                                                          | DOCUMENT NO.<br>SD-45984-800 |                                                                                                                 | SHEET NO.<br>4 OF 5 |
|                                                                         |                                        |             | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       | SIZE<br>A                  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                                                          |                              |                                                                                                                 |                     |



|         |                     |            |               |            |       |            |             |            |             |
|---------|---------------------|------------|---------------|------------|-------|------------|-------------|------------|-------------|
| REVISED | EC NO: UCP2009-0971 | 2008/11/13 | DRWN:MBANDURA | 2008/11/14 | CHKD: | 2008/11/17 | APPR:APATEL | 2008/11/17 | DESCRIPTION |
| REV     |                     |            |               |            |       |            |             |            |             |

| GENERAL TOLERANCES (UNLESS SPECIFIED)                      |        |       |
|------------------------------------------------------------|--------|-------|
|                                                            | mm     | INCH  |
| 4 PLACES                                                   | ± ---  | ± --- |
| 3 PLACES                                                   | ± ---  | ± --- |
| 2 PLACES                                                   | ± 0.25 | ± --- |
| 1 PLACE                                                    | ± ---  | ± --- |
| ANGULAR ±1/2°                                              |        |       |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |

| DIMENSION STYLE |            |
|-----------------|------------|
| MM ONLY         |            |
| DRAWN BY        | DATE       |
| SAMIEC          | 2005/05/13 |
| CHECKED BY      | DATE       |
| SAMIEC          | 2005/05/13 |
| APPROVED BY     | DATE       |
| MARGULIS        | 2005/05/13 |
| MATERIAL NO.    |            |
| SIZE            |            |
| A               |            |

|                                                                                                                 |                        |                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| SCALE<br>2:1                                                                                                    | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                       |                        |                                                                                                                 |
|  MOLEX INCORPORATED        |                        |                                                                                                                 |
| DOCUMENT NO.<br>SD-45984-800                                                                                    |                        | SHEET NO.<br>5 OF 5                                                                                             |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |                                                                                                                 |