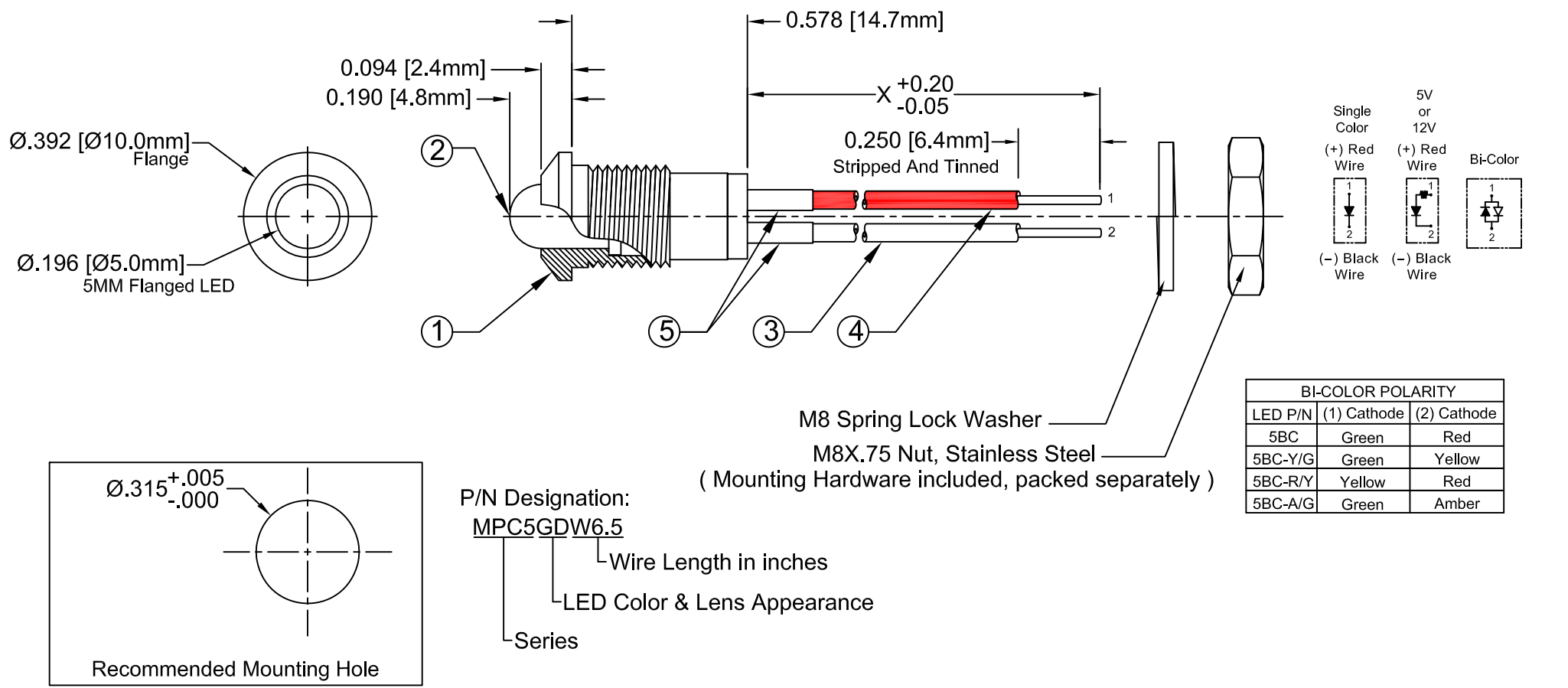


| ITEM | Q'TY | PART NUMBER   | PART DESCRIPTION                      |
|------|------|---------------|---------------------------------------|
| 1    | 1    | MPC5          | Chrome Panel Mount Holder, 5mm        |
| 2    | 1    | 5XX-F         | T-1 3/4 (5mm) Flanged LED, P.2.       |
| 3    | 1    | BWS24-1007-BK | 24AWG Wire Lead U.L. 1007, Black      |
| 4    | 1    | BWS24-1007-RD | 24AWG Wire Lead U.L. 1007, Red        |
| 5    | 2    | BST200-BK     | Shrink Tubing, Black, 0.5" Cut Length |

| REV. | DESCRIPTION                                     | DATE     | APPROVED |
|------|---|----------|----------|
| C    | Shrink Tubing Update. Change Length to 0.5"     | 11/12/07 | M. C.    |
| D    | Added MPC5WC7.015WX.X Specs.                    | 06/03/08 | M. C.    |
| E    | Added MPC5XX5VWX.X Specs. and Updated .578 Dim. | 06/24/08 | M. C.    |
| F    | Added MPC5SRD5VWX.X Specs.                      | 06/27/08 | M. C.    |
| G    | Added MPC5SGDWX.X Specs and Removed 5V Specs.   | 10/06/09 | T. Y.    |
| H    | Updated LED offering                            | 05/03/12 | T. Y.    |





### ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

|  |                     |
|--|---------------------|
| REVERSE VOLTAGE                              | 5V                  |
| REVERSE CURRENT ( VR=5V)                     | 100µA               |
| OPERATING TEMPERATURE RANGE                  | -25°C ~ 85°C        |
| STORAGE TEMPERATURE                          | -30°C ~ 100°C       |
| LEAD SOLDERING TEMPERATURE (1/16" FROM BODY) | 260°C for 5 Seconds |

|   |                       |   |
|---|-----------------------|---|
| STANDARD TOLERANCE ( UNLESS OTHERWISE SPECIFIED ) |                       | <b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |
| DECIMALS  | ANGULAR               |   |
| .X ± .1   | X° ± 1°               |   |
| .XX ± .02   |                       | TITLE: STD METAL PANEL MOUNT INDICATORS W/ WIRES  |
| .XXX ± .010                                       |                       |   |
| DESIGNED: <b>David Green</b>                      | DATE: <b>01/31/05</b> | PART NO: <b>MPC5XXWX.X</b>  |
| CHECKED: <b>T. Yin</b>                            | DATE: <b>01/31/05</b> | REVISION: <b>H</b>  |
|   |                       | CAGE CODE : 32559 SHEET # 1 OF 4  |
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
|      |              |      |          |
|------|--------------|------|----------|
| REV. | DESCRIPTION  | DATE | APPROVED |
|      | SEE SHEET#1. |      |          |

| LED Assy. No.  | Chip      |                  |               | Lens Appearance | Electro-Optical Data @ 20mA |        |     |          | Viewing Angle<br>2 θ ½<br>(Deg) | LED P/N   |
|----------------|-----------|------------------|---------------|-----------------|-----------------------------|--------|-----|----------|---------------------------------|-----------|
|                | Material  | Peak Wave Length | Emitted Color |                 | If (mA)                     | Vf (V) |     | Iv (mcd) |                                 |           |
|                |           |                  |               |                 | MAX                         | TYP    | MAX | TYP      |                                 |           |
| MPC5BWCWX.X    | GaN/SiC   | 430              | BLUE          | WATER CLEAR     | 25                          | 4      | 4.5 | 25       | 20                              | 5BWC-F    |
| MPC5BWDWX.X    | GaN/SiC   | 430              | BLUE          | DIFFUSED        | 25                          | 4      | 4.5 | 15       | 45                              | 5BWD-F    |
| MPC5BWTWX.X    | GaN/SiC   | 430              | BLUE          | TINTED          | 25                          | 4      | 4.5 | 30       | 20                              | 5BWT-F    |
| MPC5GCWX.X     | GaP/GaP   | 568              | GREEN         | WATER CLEAR     | 30                          | 2.1    | 2.8 | 40       | 35                              | 5GC-F     |
| MPC5GDWX.X     | GaP/GaP   | 568              | GREEN         | DIFFUSED        | 30                          | 2.1    | 2.8 | 25       | 45                              | 5GD-F     |
| MPC5GTWX.X     | GaP/GaP   | 568              | GREEN         | TINTED          | 30                          | 2.1    | 2.8 | 40       | 35                              | 5GT-F     |
| MPC5UGCWX.X    | AlGaInP   | 570              | GREEN         | WATER CLEAR     | 30                          | 2.1    | 2.4 | 600      | 35                              | 5UGC-F    |
| MPC5PGCWX.X    | GaP/GaP   | 555              | PURE GREEN    | WATER CLEAR     | 30                          | 2.2    | 2.8 | 10       | 35                              | 5PGC-F    |
| MPC5PGDWX.X    | GaP/GaP   | 555              | PURE GREEN    | DIFFUSED        | 30                          | 2.2    | 2.8 | 10       | 45                              | 5PGD-F    |
| MPC5PGTWX.X    | GaP/GaP   | 555              | PURE GREEN    | TINTED          | 30                          | 2.2    | 2.8 | 10       | 35                              | 5PGT-F    |
| MPC5YCWX.X     | GaAsP/GaP | 590              | YELLOW        | WATER CLEAR     | 30                          | 2      | 2.8 | 40       | 35                              | 5YC-F     |
| MPC5YDWX.X     | GaAsP/GaP | 590              | YELLOW        | DIFFUSED        | 30                          | 2      | 2.8 | 25       | 45                              | 5YD-F     |
| MPC5YTWX.X     | GaAsP/GaP | 590              | YELLOW        | TINTED          | 30                          | 2      | 2.8 | 40       | 35                              | 5YT-F     |
| MPC5ACWX.X     | GaAsP/GaP | 605              | AMBER         | WATER CLEAR     | 30                          | 2      | 2.8 | 40       | 35                              | 5AC-F     |
| MPC5ADWX.X     | GaAsP/GaP | 605              | AMBER         | DIFFUSED        | 30                          | 2      | 2.8 | 25       | 45                              | 5AD-F     |
| MPC5ATWX.X     | GaAsP/GaP | 605              | AMBER         | TINTED          | 30                          | 2      | 2.8 | 40       | 35                              | 5AT-F     |
| MPC5HCWX.X     | GaAsP/GaP | 625              | HE RED        | WATER CLEAR     | 30                          | 2      | 2.8 | 40       | 35                              | 5HC-F     |
| MPC5HDWX.X     | GaAsP/GaP | 625              | HE RED        | DIFFUSED        | 30                          | 2      | 2.8 | 25       | 45                              | 5HD-F     |
| MPC5HTWX.X     | GaAsP/GaP | 625              | HE RED        | TINTED          | 30                          | 2      | 2.8 | 40       | 35                              | 5HT-F     |
| MPC5RCWX.X     | GaP/GaP   | 700              | RED           | WATER CLEAR     | 20                          | 2.1    | 2.8 | 2        | 35                              | 5RC-F     |
| MPC5RDWX.X     | GaP/GaP   | 700              | RED           | DIFFUSED        | 20                          | 2.1    | 2.8 | 2        | 45                              | 5RD-F     |
| MPC5RTWX.X     | GaP/GaP   | 700              | RED           | TINTED          | 20                          | 2.1    | 2.8 | 2        | 35                              | 5RT       |
| MPC5BCWX.X-A/G | GaAsP/GaP | 605              | AMBER         | WHITE DIFFUSED  | 30                          | 2.0    | 2.8 | 6        | 45                              | 5BC-A/G-F |
|                | GaP/GaP   | 568              | GREEN         |                 | 30                          | 2.1    | 2.8 | 6        |                                 |           |
| MPC5BCWX.X     | GaAsP/GaP | 625              | RED           | WHITE DIFFUSED  | 30                          | 2.0    | 2.8 | 6        | 45                              | 5BC-F     |
|                | GaP/GaP   | 568              | GREEN         |                 | 30                          | 2.1    | 2.8 | 8        |                                 |           |
| MPC5BCWX.X-R/Y | GaAsP/GaP | 625              | RED           | WHITE DIFFUSED  | 30                          | 2.0    | 2.8 | 6        | 45                              | 5BC-R/Y-F |
|                | GaAsP/GaP | 590              | YELLOW        |                 | 30                          | 2.0    | 2.8 | 5        |                                 |           |
| MPC5BCWX.X-Y/G | GaAsP/GaP | 590              | YELLOW        | WHITE DIFFUSED  | 30                          | 2.0    | 2.8 | 5        | 45                              | 5BC-Y/G-F |
|                | GaP/GaP   | 568              | GREEN         |                 | 30                          | 2.1    | 2.8 | 8        |                                 |           |

|   |                          |  |                       |
|---|--------------------------|--|-----------------------|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>±10% ALL VALUES               |                          | <br><b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |                       |
| ANGULAR<br>X° ± 5°  |                          |  |                       |
|  |                          | TITLE: STD METAL PANEL MOUNT INDICATORS W/ WIRES   |                       |
| DESIGNED:<br><b>David Green</b>   | DATE:<br><b>01/31/05</b> | PART NO:<br><b>MPC5XXWX.X</b>  | REVISION:<br><b>H</b> |
| CHECKED:<br><b>T. Yin</b>   | DATE:<br><b>01/31/05</b> | CAGE CODE : <b>32559</b>   | SHEET # <b>2 OF 4</b> |
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| REV. | DESCRIPTION  | DATE | APPROVED |
|      | SEE SHEET#1. |      |          |
|      |              |      |          |



| LED Assy. No. | Chip        |                  |               | Lens Appearance | Electro-Optical Data @ 20mA |        |     |          | Viewing Angle 2θ½ (Deg) | LED P/N    |
|---------------|-------------|------------------|---------------|-----------------|-----------------------------|--------|-----|----------|-------------------------|------------|
|               | Material    | Peak Wave Length | Emitted Color |                 | If (mA)                     | Vf (V) |     | Iv (mcd) |                         |            |
|               |             |                  |               |                 | MAX                         | TYP    | MAX | TYP      |                         |            |
| MPC5UBWCWX.X  | InGaN/SiC   | 468              | BLUE          | WATER CLEAR     | 76                          | 3.7    | 4.5 | 2500     | 15                      | 5BWC2.515F |
| MPC5SGCWX.X   | GaP/GaP     | 568              | GREEN         | WATER CLEAR     | 30                          | 2.1    | 2.8 | 60       | 35                      | 5SGC-F     |
| MPC5SGDWX.X   | GaP/GaP     | 568              | GREEN         | DIFFUSED        | 30                          | 2.1    | 2.8 | 50       | 40                      | 5SGD-F     |
| MPC5SGTWX.X   | GaP/GaP     | 568              | GREEN         | TINTED          | 30                          | 2.1    | 2.8 | 60       | 35                      | 5SGT-F     |
| MPC5SYCWX.X   | GaAsP/GaP   | 590              | YELLOW        | WATER CLEAR     | 30                          | 2.0    | 2.8 | 600      | 35                      | 5SYC-F     |
| MPC5SYDWX.X   | GaAsP/GaP   | 590              | YELLOW        | DIFFUSED        | 30                          | 2.0    | 2.8 | 150      | 40                      | 5SYD-F     |
| MPC5SYTWX.X   | GaAsP/GaP   | 590              | YELLOW        | TINTED          | 30                          | 2.0    | 2.8 | 600      | 35                      | 5SYT-F     |
| MPC5SRCWX.X   | GaAlAs/GaAs | 645              | SUPER RED     | WATER CLEAR     | 30                          | 1.7    | 2.4 | 60       | 35                      | 5SRC-F     |
| MPC5SRDWX.X   | GaAlAs/GaAs | 645              | SUPER RED     | DIFFUSED        | 30                          | 1.7    | 2.4 | 40       | 40                      | 5SRD-F     |
| MPC5SRTWX.X   | GaAlAs/GaAs | 645              | SUPER RED     | TINTED          | 30                          | 1.7    | 2.4 | 60       | 35                      | 5SRT-F     |
| MPC5UGCWX.X   | AlGaInP     | 570              | GREEN         | WATER CLEAR     | 30                          | 2.1    | 2.4 | 400      | 35                      | 5UGC-F     |
| MPC5UGCWX.X   | AlGaInP     | 570              | GREEN         | WATER CLEAR     | 30                          | 2.1    | 2.4 | 300      | 35                      | 5SUGC-F    |
| MPC5UYCWX.X   | AlGaInP     | 590              | YELLOW        | WATER CLEAR     | 30                          | 2.0    | 2.4 | 1000     | 30                      | 5UYC-F     |
| MPC5SUycwx.x  | AlGaInP     | 590              | YELLOW        | WATER CLEAR     | 30                          | 2.0    | 2.4 | 700      | 35                      | 5SUyc-F    |
| MPC5UUycwx.x  | AlGaInP     | 590              | YELLOW        | WATER CLEAR     | 30                          | 2.0    | 2.4 | 500      | 35                      | 5UUyc-F    |
| MPC5UOCWX.X   | AlGaInP     | 625              | ORANGE        | WATER CLEAR     | 30                          | 1.8    | 2.4 | 1400     | 35                      | 5UOC-F     |
| MPC5UOCWX.X   | AlGaInP     | 625              | ORANGE        | WATER CLEAR     | 30                          | 1.8    | 2.4 | 1300     | 35                      | 5SUOC-F    |
| MPC5URCWX.X   | GaAlAs/GaAs | 645              | RED           | WATER CLEAR     | 30                          | 1.7    | 2.4 | 400      | 30                      | 5URC-F     |
| MPC5SURCWX.X  | AlGaInP     | 640              | RED           | WATER CLEAR     | 30                          | 1.8    | 2.4 | 500      | 35                      | 5SURC-F    |
| MPC5UWCWX.X   | InGaN/SiC   | 6500K            | WHITE         | WATER CLEAR     | 100                         | 3.5    | 4.2 | 2700     | 30                      | 5WC2.730F  |

|   |  |   |                                  |
|---|--|---|----------------------------------|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>±10% ALL VALUES               |  | <br><b>BIVAR</b> ®<br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |                                  |
| ANGULAR<br>X° ± 5°  |  |   |                                  |
|  |  | TITLE: STD METAL PANEL MOUNT INDICATORS W/ WIRES  |                                  |
|   |  | DESIGNED: David Green   | DATE: 03/02/05                   |
| CHECKED: T. Yin   |  | DATE: 03/02/05  | CAGE CODE : 32559 SHEET # 3 OF 4 |
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| REV. | DESCRIPTION  | DATE | APPROVED |
|      | SEE SHEET#1. |      |          |

| LED Assy. No. | Peak Wave Length<br>$\lambda_p$ (nm) | Emitted Color | Lens Appearance | Max. Rating | Electro-Optical Data @ 2mA |     |             | Viewing Angle<br>2 $\theta$ 1/2<br>(Deg) | LED P/N |
|---------------|--------------------------------------|---------------|-----------------|-------------|----------------------------|-----|-------------|--|---------|
|               |                                      |               |                 | If<br>(mA)  | Vf<br>(V)                  |     | Iv<br>(mcd) |  |         |
|               |                                      |               |                 | MAX         | TYP                        | MAX | TYP         |  |         |
| MPC5BWDLWX.X  | 430                                  | BLUE          | DIFFUSED        | 7           | 3.8                        | 4.2 | 4           | 40                                       | 5BWDL-F |
| MPC5PGDLWX.X  | 555                                  | PURE GREEN    | DIFFUSED        | 7           | 2.1                        | 2.6 | 1           | 40                                       | 5PGDL-F |
| MPC5GDLWX.X   | 568                                  | GREEN         | DIFFUSED        | 7           | 2.1                        | 2.6 | 4           | 40                                       | 5GDL-F  |
| MPC5YDLWX.X   | 590                                  | YELLOW        | DIFFUSED        | 7           | 2.0                        | 2.6 | 4           | 40                                       | 5YDL-F  |
| MPC5ADLWX.X   | 605                                  | AMBER         | DIFFUSED        | 7           | 2.0                        | 2.6 | 4           | 40                                       | 5ADL-F  |
| MPC5HDLWX.X   | 625                                  | HE RED        | DIFFUSED        | 7           | 2.0                        | 2.6 | 5           | 40                                       | 5HDL-F  |
| MPC5SRDLWX.X  | 645                                  | SUPER RED     | DIFFUSED        | 7           | 1.7                        | 2.3 | 6           | 40                                       | 5SRDL-F |

| Assembly P/N   | Peak Wave Length<br>$\lambda_p$ (nm) | Emitted Color | Lens Appearance | Electro-Optical Data |           |     |             | Viewing Angle<br>2 $\theta$ 1/2<br>(Deg) | LED P/N  |
|----------------|--------------------------------------|---------------|-----------------|----------------------|-----------|-----|-------------|--|----------|
|                |                                      |               |                 | If<br>(mA)           | Vf<br>(V) |     | Iv<br>(mcd) |  |          |
|                |                                      |               |                 | MAX                  | TYP       | MAX | TYP         |  |          |
| <b>5 Volt</b>  |                                      |               |                 | <b>Data @ 5V</b>     |           |     |             |  |          |
| MPC5BWD5VWX.X  | BLUE                                 | 430           | DIFFUSED        | -                    | -         | 5   | 15          | 40                                       | 5BWD5V-F |
| MPC5GC5VWX.X   | GREEN                                | 568           | WATER CLEAR     | -                    | -         | 5   | 40          | 40                                       | 5GC5V-F  |
| MPC5GD5VWX.X   | GREEN                                | 568           | DIFFUSED        | -                    | -         | 5   | 25          | 40                                       | 5GD5V-F  |
| MPC5GT5VWX.X   | GREEN                                | 568           | TINTED          | -                    | -         | 5   | 40          | 40                                       | 5GT5V-F  |
| MPC5AD5VWX.X   | AMBER                                | 605           | DIFFUSED        | -                    | -         | 5   | 25          | 40                                       | 5AD5V-F  |
| MPC5HD5VWX.X   | HE RED                               | 625           | DIFFUSED        | -                    | -         | 5   | 30          | 40                                       | 5HD5V-F  |
| MPC5RD5VWX.X   | RED                                  | 700           | DIFFUSED        | -                    | -         | 5   | 1.5         | 40                                       | 5RD5V-F  |
| MPC5YD5VWX.X   | YELLOW                               | 590           | DIFFUSED        | -                    | -         | 5   | 25          | 40                                       | 5YD5V-F  |
| <b>12 Volt</b> |                                      |               |                 | <b>Data @ 12V</b>    |           |     |             |  |          |
| MPC5GC12VWX.X  | GREEN                                | 568           | WATER CLEAR     | -                    | -         | 12  | 40          | 35                                       | 5GC12V-F |
| MPC5GD12VWX.X  | GREEN                                | 568           | DIFFUSED        | -                    | -         | 12  | 25          | 40                                       | 5GD12V-F |
| MPC5HC12VWX.X  | HE RED                               | 625           | WATER CLEAR     | -                    | -         | 12  | 50          | 35                                       | 5HC12V-F |
| MPC5HD12VWX.X  | HE RED                               | 625           | DIFFUSED        | -                    | -         | 12  | 30          | 40                                       | 5HD12V-F |
| MPC5RC12VWX.X  | RED                                  | 700           | WATER CLEAR     | -                    | -         | 12  | 2           | 35                                       | 5RC12V-F |
| MPC5RD12VWX.X  | RED                                  | 700           | DIFFUSED        | -                    | -         | 12  | 1.5         | 40                                       | 5RD12V-F |
| MPC5YC12VWX.X  | YELLOW                               | 590           | WATER CLEAR     | -                    | -         | 12  | 25          | 35                                       | 5YC12V-F |
| MPC5YD12VWX.X  | YELLOW                               | 590           | DIFFUSED        | -                    | -         | 12  | 20          | 40                                       | 5YD12V-F |

|   |                          |  |                       |
|---|--------------------------|--|-----------------------|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>$\pm 10\%$ ALL VALUES         |                          | <br><b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |                       |
| ANGULAR<br>X° $\pm$ 5°  |                          |  |                       |
|  |                          | TITLE: STD METAL PANEL MOUNT INDICATORS W/ WIRES   |                       |
| DESIGNED:<br><b>David Green</b>   | DATE:<br><b>03/02/05</b> | PART NO:<br><b>MPC5XXWX.X</b>  | REVISION:<br><b>H</b> |
| CHECKED:<br><b>T. Yin</b>   | DATE:<br><b>03/02/05</b> | CAGE CODE : <b>32559</b>   | SHEET # <b>4 OF 4</b> |
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