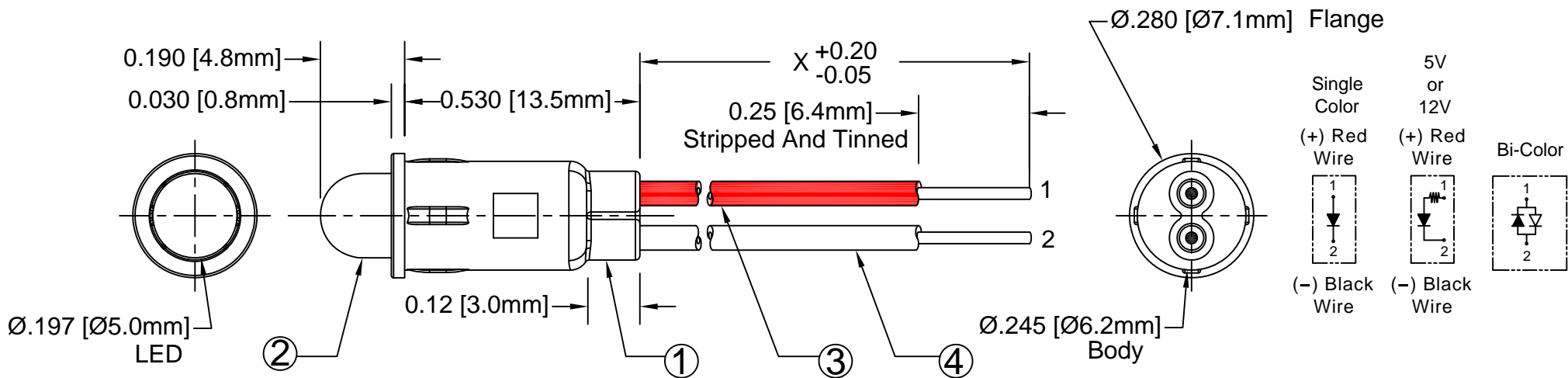


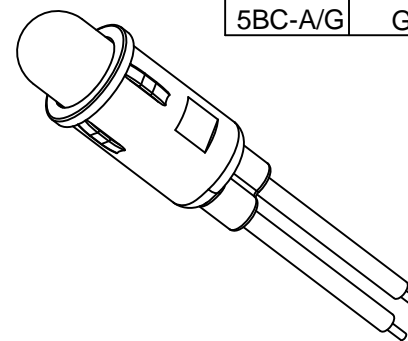
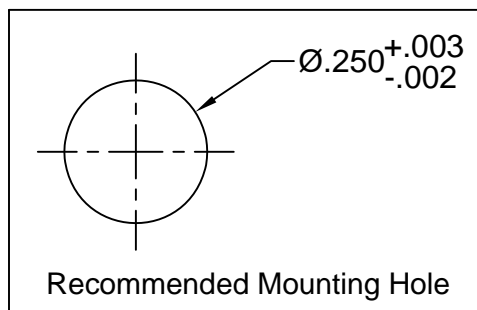
| ITEM | Q'TY | PART NUMBER   | PART DESCRIPTION  |
|------|------|---------------|---|
| 1    | 1    | PM5-XXX       | LED Holder, Panel Mount, Press Fit, (5mm)<br>PM5 (Standard LED), PM5-5V (5V LED), & PM5-12V (12V LED) |
| 2    | 1    | 5XX           | T1 3/4 (5mm) Non-Flange LED, See Following Pages  |
| 3    | 1    | BWS24-1007-RD | 24AWG Wire Lead U.L. 1007, Red  |
| 4    | 1    | BWS24-1007-BK | 24AWG Wire Lead U.L. 1007, Black  |

| REV. | DESCRIPTION                         | DATE     | APPROVED |
|------|-------------------------------------|----------|----------|
| E    | Added 5WC2.520 & 5WC4.030 Specs     | 06/29/09 | T. Y.    |
| F    | Added 5WC7.015 & 5XRC8.515 Specs    | 10/01/09 | T. Y.    |
| G    | Added 5BC-Y/G Specs                 | 02/09/10 | T. Y.    |
| H    | Updated LED Offering                | 05/03/12 | T. Y.    |
| J    | Updated BOM item 1                  | 11/13/12 | T. Y.    |
| K    | Corrected LED P/N Typo in Table     | 04/23/14 | J. C.    |
| L    | Updated LED Optical Characteristics | 09/15/15 | J. C.    |



| BI-COLOR POLARITY |             |             |
|-------------------|-------------|-------------|
| LED P/N           | (1) Cathode | (2) Cathode |
| 5BC               | Green       | Red         |
| 5BC-Y/G           | Green       | Yellow      |
| 5BC-R/Y           | Yellow      | Red         |
| 5BC-A/G           | Green       | Amber       |

EXAMPLE:  
**PM5RDW6.5\***  
 — Wire Length in inches  
 — LED Color & Lens Appearance.  
 — Series





## 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<br>(UNLESS OTHERWISE SPECIFIED) |                | BIVAR®  |  |
|--|----------------|---|--|
| DECIMALS   | ANGULAR        | 4 THOMAS, IRVINE, CA. 92618                       |  |
| .X ± .1  | X° ± 1°        | TEL: (949) 951-8808 FAX: (949) 951-3974           |  |
| .XX ± .02  |                | <b>TITLE:</b> STD PANEL MOUNT INDICATORS W/ WIRES |  |
| .XXX ± .010  |                | <b>PART NO:</b> PM5XXWX.X                         |  |
| DESIGNED: David Green                              | DATE: 10/06/04 | REVISION: L                                       |  |
| CHECKED: T. Yin                                    | DATE: 10/06/04 | <b>CAGE CODE :</b> 32559 <b>SHEET #</b> 1 OF 4    |  |
| CAD GENERATED DOCUMENT. DO NOT MEASURE DRAWING.    |                |   |  |

| LED Assy.No.  | Chip      |                  |               | Lens Appearance | Electro-Optical Data @20mA |        |     |          | Viewing Angle 2 θ 1/2 (Deg) | LED P/N |     |
|---------------|-----------|------------------|---------------|-----------------|----------------------------|--------|-----|----------|-----------------------------|---------|-----|
|               | Material  | Peak Wave Length | Emitted Color |                 | If (mA)                    | Vf (V) |     | Iv (mcd) |                             |         |     |
|               |           |                  |               |                 |                            | MAX    | TYP | MAX      |                             |         | TYP |
| PM5BWCWX.X    | GaN/SiC   | 430              | BLUE          | WATER CLEAR     | 25                         | 4.0    | 4.5 | 25       | 20                          | 5BWC    |     |
| PM5BWDWX.X    | GaN/SiC   | 430              | BLUE          | DIFFUSED        | 25                         | 4.0    | 4.5 | 15       | 45                          | 5BWD    |     |
| PM5BWTWX.X    | GaN/SiC   | 430              | BLUE          | TINTED          | 25                         | 4.0    | 4.5 | 30       | 20                          | 5BWT    |     |
| PM5GCW.X.X    | GaP/GaP   | 568              | GREEN         | WATER CLEAR     | 30                         | 2.1    | 2.8 | 40       | 35                          | 5GC     |     |
| PM5GDWX.X     | GaP/GaP   | 568              | GREEN         | DIFFUSED        | 30                         | 2.1    | 2.8 | 25       | 45                          | 5GD     |     |
| PM5GTWX.X     | GaP/GaP   | 568              | GREEN         | TINTED          | 30                         | 2.1    | 2.8 | 40       | 35                          | 5GT     |     |
| PM5PGCW.X     | GaP/GaP   | 555              | PURE GREEN    | WATER CLEAR     | 30                         | 2.2    | 2.8 | 10       | 35                          | 5PGC    |     |
| PM5PGDWX.X    | GaP/GaP   | 555              | PURE GREEN    | DIFFUSED        | 30                         | 2.2    | 2.8 | 10       | 45                          | 5PGD    |     |
| PM5PGTWX.X    | GaP/GaP   | 555              | PURE GREEN    | TINTED          | 30                         | 2.2    | 2.8 | 10       | 35                          | 5PGT    |     |
| PM5YCW.X      | GaAsp/GaP | 590              | YELLOW        | WATER CLEAR     | 30                         | 2.0    | 2.8 | 40       | 35                          | 5YC     |     |
| PM5YDWX.X     | GaAsp/GaP | 590              | YELLOW        | DIFFUSED        | 30                         | 2.0    | 2.8 | 25       | 45                          | 5YD     |     |
| PM5YTWX.X     | GaAsp/GaP | 590              | YELLOW        | TINTED          | 30                         | 2.0    | 2.8 | 40       | 35                          | 5YT     |     |
| PM5ACWX.X     | GaAsp/GaP | 605              | AMBER         | WATER CLEAR     | 30                         | 2.0    | 2.8 | 40       | 35                          | 5AC     |     |
| PM5ADWX.X     | GaAsp/GaP | 605              | AMBER         | DIFFUSED        | 30                         | 2.0    | 2.8 | 25       | 45                          | 5AD     |     |
| PM5ATWX.X     | GaAsp/GaP | 605              | AMBER         | TINTED          | 30                         | 2.0    | 2.8 | 40       | 35                          | 5AT     |     |
| PM5HCWX.X     | GaAsp/GaP | 625              | HE RED        | WATER CLEAR     | 30                         | 2.0    | 2.8 | 40       | 35                          | 5HC     |     |
| PM5HDWX.X     | GaAsp/GaP | 625              | HE RED        | DIFFUSED        | 30                         | 2.0    | 2.8 | 25       | 45                          | 5HD     |     |
| PM5HTWX.X     | GaAsp/GaP | 625              | HE RED        | TINTED          | 30                         | 2.0    | 2.8 | 40       | 35                          | 5HT     |     |
| PM5RCWX.X     | GaP/GaP   | 700              | RED           | WATER CLEAR     | 20                         | 2.1    | 2.8 | 2        | 35                          | 5RC     |     |
| PM5RDWX.X     | GaP/GaP   | 700              | RED           | DIFFUSED        | 20                         | 2.1    | 2.8 | 2        | 45                          | 5RD     |     |
| PM5RTWX.X     | GaP/GaP   | 700              | RED           | TINTED          | 20                         | 2.1    | 2.8 | 2        | 35                          | 5RT     |     |
| PM5BCWX.X-A/G | GaAsp/GaP | 605              | AMBER         | WHITE DIFFUSED  | 30                         | 2.0    | 2.8 | 6        | 45                          | 5BC-A/G |     |
|               | GaP/GaP   | 568              | GREEN         |                 | 30                         | 2.1    | 2.8 | 6        |                             |         |     |
| PM5BCWX.X     | GaAsp/GaP | 625              | RED           | WHITE DIFFUSED  | 30                         | 2.0    | 2.8 | 6        | 45                          | 5BC     |     |
|               | GaP/GaP   | 568              | GREEN         |                 | 30                         | 2.1    | 2.8 | 8        |                             |         |     |
| PM5BCWX.X-R/Y | GaAsp/GaP | 625              | RED           | WHITE DIFFUSED  | 30                         | 2.0    | 2.8 | 6        | 45                          | 5BC-R/Y |     |
|               | GaP/GaP   | 590              | YELLOW        |                 | 30                         | 2.0    | 2.8 | 5        |                             |         |     |
| PM5BCWX.X-Y/G | GaAsp/GaP | 590              | YELLOW        | WHITE DIFFUSED  | 30                         | 2.0    | 2.8 | 5        | 45                          | 5BC-Y/G |     |
|               | GaP/GaP   | 568              | GREEN         |                 | 30                         | 2.1    | 2.8 | 8        |                             |         |     |


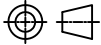
|   |  |  |  |
|---|--|--|--|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>±10% ALL VALUES |  | <br><b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |  |
| ANGULAR<br>X° ± 1°  |  |  |  |
| DESIGNED:<br><b>David Green</b>   |  | <br><b>TITLE:</b> STD PANEL MOUNT INDICATORS W/ WIRES   |  |
| DATE:<br><b>10/06/04</b>  |  | <b>PART NO:</b><br><b>PM5XXWX.X</b>  |  |
| CHECKED:<br><b>T. Yin</b>   |  | <b>REVISION:</b><br><b>L</b>   |  |
| DATE:<br><b>10/06/04</b>  |  | <b>CAGE CODE : 32559</b>   |  |
|   |  | <b>SHEET # 2 OF 4</b>  |  |
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| LED Assy.No. | Chip        |                  |               | Lens Appearance | Electro-Optical Data @20mA |        |     |          | Viewing Angle 2 θ 1/2 (Deg) | LED P/N   |
|--------------|-------------|------------------|---------------|-----------------|----------------------------|--------|-----|----------|-----------------------------|-----------|
|              | Material    | Peak Wave Length | Emitted Color |                 | If (mA)                    | Vf (V) |     | Iv (mcd) |                             |           |
|              |             |                  |               |                 |                            | MAX    | TYP |          |                             |           |
| PM5UBWCWX.X  | InGaN/SiC   | 468              | BLUE          | WATER CLEAR     | 50                         | 3.2    | 3.6 | 5000     | 15                          | 5BWC2.515 |
| PM5SGCWX.X   | GaP/GaP     | 568              | GREEN         | WATER CLEAR     | 30                         | 2.1    | 2.8 | 60       | 35                          | 5SGC      |
| PM5SGDWX.X   | GaP/GaP     | 568              | GREEN         | DIFFUSED        | 30                         | 2.1    | 2.8 | 50       | 40                          | 5SGD      |
| PM5SGTWX.X   | GaP/GaP     | 568              | GREEN         | TINTED          | 30                         | 2.1    | 2.8 | 60       | 35                          | 5SGT      |
| PM5SYCWX.X   | GaAsP/GaP   | 590              | YELLOW        | WATER CLEAR     | 30                         | 2.0    | 2.8 | 600      | 35                          | 5SYC      |
| PM5SYDWX.X   | GaAsP/GaP   | 590              | YELLOW        | DIFFUSED        | 30                         | 2.0    | 2.8 | 150      | 40                          | 5SYD      |
| PM5SYTWX.X   | GaAsP/GaP   | 590              | YELLOW        | TINTED          | 30                         | 2.0    | 2.8 | 600      | 35                          | 5SYT      |
| PM5SRCWX.X   | GaAIAs/GaAs | 645              | SUPER RED     | WATER CLEAR     | 30                         | 1.7    | 2.4 | 60       | 35                          | 5SRC      |
| PM5SRDWX.X   | GaAIAs/GaAs | 645              | SUPER RED     | DIFFUSED        | 30                         | 1.7    | 2.4 | 40       | 40                          | 5SRD      |
| PM5SRTWX.X   | GaAIAs/GaAs | 645              | SUPER RED     | TINTED          | 30                         | 1.7    | 2.4 | 60       | 35                          | 5SRT      |
| PM5UGCWX.X   | AlGaInP     | 570              | GREEN         | WATER CLEAR     | 30                         | 2.1    | 2.4 | 600      | 35                          | 5UGC      |
| PMTSUGCWX.X  | AlGaInP     | 570              | GREEN         | WATER CLEAR     | 30                         | 2.1    | 2.4 | 300      | 35                          | 5SUGC     |
| PM5UYCWX.X   | AlGaInP     | 590              | YELLOW        | WATER CLEAR     | 30                         | 2.0    | 2.4 | 1000     | 30                          | 5UYC      |
| PM5SUYCWX.X  | AlGaInP     | 590              | YELLOW        | WATER CLEAR     | 30                         | 2.0    | 2.4 | 700      | 35                          | 5SUYC     |
| PM5UOCWX.X   | AlGaInP     | 590              | YELLOW        | WATER CLEAR     | 30                         | 2.0    | 2.4 | 500      | 35                          | 5UUYC     |
| PM5UOCWX.X   | AlGaInP     | 625              | ORANGE        | WATER CLEAR     | 30                         | 1.8    | 2.4 | 1400     | 35                          | 5UOC      |
| PM5SUOCWX.X  | AlGaInP     | 625              | ORANGE        | WATER CLEAR     | 30                         | 1.8    | 2.4 | 1300     | 35                          | 5SUOC     |
| PM5URCWX.X   | GaAIAs/GaAs | 645              | RED           | WATER CLEAR     | 30                         | 1.7    | 2.4 | 400      | 30                          | 5URC      |
| PM5SURCWX.X  | AlGaInP     | 640              | RED           | WATER CLEAR     | 30                         | 1.8    | 2.4 | 500      | 35                          | 5SURC     |
| PM5UWCWX.X   | InGaN/SiC   | 6500K            | WHITE         | WATER CLEAR     | 100                        | 3.5    | 4.2 | 2700     | 30                          | 5WC2.730  |

|   |                          |   |  |   |
|---|--------------------------|---|--|---|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>±10% ALL VALUES      ANGULAR<br>X° ± 1° |                          | <br><b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808    FAX: (949) 951-3974 |  |   |
|            |                          |   |  | <b>TITLE:</b> STD PANEL MOUNT INDICATORS W/ WIRES |
| DESIGNED:<br><b>David Green</b>   | DATE:<br><b>10/06/04</b> | <b>PART NO:</b><br>PM5XXWX.X  |  | REVISION:<br><b>L</b>                             |
| CHECKED:<br><b>T. Yin</b>   | DATE:<br><b>10/06/04</b> | <b>CAGE CODE :</b> 32559  |  | <b>SHEET #</b> 3 OF 4                             |
| CAD GENERATED DOCUMENT. DO NOT MEASURE DRAWING.   |                          |   |  |   |

| LED Assy. No. | Peak Wave Length<br>$\lambda_p$ (nm) | Emitted Color | Lens Appearance | Max. Rating | Electro-Optical Data @ 2mA |     |          | Viewing Angle<br>2 $\theta$ $\frac{1}{2}$<br>(Deg) | LED P/N |
|---------------|--------------------------------------|---------------|-----------------|-------------|----------------------------|-----|----------|--|---------|
|               |                                      |               |                 | If (mA)     | Vf (V)                     |     | Iv (mcd) |  |         |
|               |                                      |               |                 | MAX         | TYP                        | MAX | TYP      |  |         |
| PM5BWDLWX.X   | 430                                  | BLUE          | DIFFUSED        | 7           | 3.8                        | 4.2 | 4        | 45   | 5BWDL   |
| PM5PGDLWX.X   | 555                                  | PURE GREEN    | DIFFUSED        | 7           | 2.1                        | 2.6 | 1        | 45   | 5PGDL   |
| PM5GDLWX.X    | 568                                  | GREEN         | DIFFUSED        | 7           | 2.1                        | 2.6 | 5        | 45   | 5GDL    |
| PM5YDLWX.X    | 590                                  | YELLOW        | DIFFUSED        | 7           | 2.0                        | 2.6 | 4        | 45   | 5YDL    |
| PM5ADLWX.X    | 605                                  | AMBER         | DIFFUSED        | 7           | 2.0                        | 2.6 | 4        | 45   | 5ADL    |
| PM5HDLWX.X    | 625                                  | HE RED        | DIFFUSED        | 7           | 2.0                        | 2.6 | 5        | 45   | 5HDL    |
| PM5SRDLWX.X   | 645                                  | SUPER RED     | DIFFUSED        | 7           | 1.7                        | 2.3 | 6        | 45   | 5SRDL   |

| LED Assy. No.  | Peak Wave Length<br>$\lambda_p$ (nm) | Emitted Color | Lens Appearance | Electro-Optical Data |        |     |          | Viewing Angle<br>2 $\theta$ $\frac{1}{2}$<br>(Deg) | LED P/N |
|----------------|--------------------------------------|---------------|-----------------|----------------------|--------|-----|----------|--|---------|
|                |                                      |               |                 | If (mA)              | Vf (V) |     | Iv (mcd) |  |         |
|                |                                      |               |                 | MAX                  | TYP    | MAX | TYP      |  |         |
| <b>5 Volt</b>  |                                      |               |                 | <b>Data @ 5V</b>     |        |     |          |  |         |
| PM5BWD5VWX.X   | BLUE                                 | 430           | DIFFUSED        | -                    | -      | 5   | 15       | 40   | 5BWD5V  |
| PM5GC5VWX.X    | GREEN                                | 568           | WATER CLEAR     | -                    | -      | 5   | 40       | 40   | 5GC5V   |
| PM5GD5VWX.X    | GREEN                                | 568           | DIFFUSED        | -                    | -      | 5   | 25       | 40   | 5GD5V   |
| PM5GT5VWX.X    | GREEN                                | 568           | TINTED          | -                    | -      | 5   | 40       | 40   | 5GT5V   |
| PM5AD5VWX.X    | AMBER                                | 605           | DIFFUSED        | -                    | -      | 5   | 25       | 40   | 5AD5V   |
| PM5HD5VWX.X    | HE RED                               | 625           | DIFFUSED        | -                    | -      | 5   | 30       | 40   | 5HD5V   |
| PM5RD5VWX.X    | RED                                  | 700           | DIFFUSED        | -                    | -      | 5   | 1.5      | 40   | 5RD5V   |
| PM5YD5VWX.X    | YELLOW                               | 590           | DIFFUSED        | -                    | -      | 5   | 25       | 40   | 5YD5V   |
| <b>12 Volt</b> |                                      |               |                 | <b>Data @ 12V</b>    |        |     |          |  |         |
| PM5GC12VWX.X   | GREEN                                | 568           | WATER CLEAR     | -                    | -      | 12  | 40       | 35   | 5GC12V  |
| PM5GD12VWX.X   | GREEN                                | 568           | DIFFUSED        | -                    | -      | 12  | 25       | 40   | 5GD12V  |
| PM5HC12VWX.X   | HE RED                               | 625           | WATER CLEAR     | -                    | -      | 12  | 50       | 35   | 5HC12V  |
| PM5HD12VWX.X   | HE RED                               | 625           | DIFFUSED        | -                    | -      | 12  | 30       | 40   | 5HD12V  |
| PM5RC12VWX.X   | RED                                  | 700           | WATER CLEAR     | -                    | -      | 12  | 2        | 35   | 5RC12V  |
| PM5RD12VWX.X   | RED                                  | 700           | DIFFUSED        | -                    | -      | 12  | 1.5      | 40   | 5RD12V  |
| PM5YC12VWX.X   | YELLOW                               | 590           | WATER CLEAR     | -                    | -      | 12  | 25       | 35   | 5YC12V  |
| PM5YD12VWX.X   | YELLOW                               | 590           | DIFFUSED        | -                    | -      | 12  | 20       | 40   | 5YD12V  |

|   |                          |  |                       |
|---|--------------------------|--|-----------------------|
| 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° $\pm$ 1°  |                          |  |                       |
|  |                          | TITLE: STD PANEL MOUNT INDICATORS W/ WIRES   |                       |
| DESIGNED:<br><b>David Green</b>   | DATE:<br><b>10/06/04</b> | PART NO:<br><b>PM5XXWX.X</b>   | REVISION:<br><b>L</b> |
| CHECKED:<br><b>T. Yin</b>   | DATE:<br><b>10/06/04</b> | CAGE CODE : <b>32559</b>   | SHEET # <b>4 OF 4</b> |
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