

# MEDMASTER™

## Behavioral Healthcare Luminaires

### MMAC SERIES using Indigo-Clean Technology

#### PRODUCT FEATURES:

- » Provides on-demand environmental disinfection via LED light
- » Single, white disinfection mode
- » Independent laboratory tested to kill harmful bacteria, including Staph\*, such as MRSA\*\*
- » Surface, recessed grid or recessed flange mount – 1'x4', 2'x2', 2'x4'
- » Center diffuser provides direct/indirect ambient lighting
- » Doorframe with Polycarbonate lens secured with Torx® fasteners for security



#### PROJECT INFORMATION

Job Name \_\_\_\_\_

Fixture Type \_\_\_\_\_

Catalog Number \_\_\_\_\_

Approved by \_\_\_\_\_

#### SPECIFICATIONS

**HOUSING:** Die-formed prime grade material as specified – see Ordering Information. TIG and spot welded construction.

**DOOR:** One-piece die-formed prime grade material as specified – see Ordering Information. Doorframe supported to housing with two aircraft cables. Corners continuously seam welded and smooth with no post grinding (TIG). Closed cell silicone gasket seals door to housing.

**FINISH:** TGIC polyester powder coat – 5-stage pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%. Optional antimicrobial finish.

**OPTICS:** Extruded high-efficiency frosted DR acrylic inner diffuser. Clear impact-resistant polycarbonate outer lens as specified—see Ordering Information.

**FASTENERS:** Torx® head with center pin hardened security screws. Fully recessed.

**ELECTRICAL:** Serviceable mid-power white and 405nm Indigo LED array. Available 3200K, 3700K and 4300K color temperature with 3-step MacAdam variation allowance. Minimum 82 CRI standard. 120-277VAC and 347VAC, 50/60Hz electrical input with serviceable high power factor electronic, constant-current drivers (<10% THD, >0.90 PF). Minimum 85% driver efficiency. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities (non dim-to-dark with 347V). 330µA maximum source current. Single, white disinfection mode. Optional LVCD control provides low-voltage patient interface, controlling the primary light engine independently with dimming control, and if ordered DLN and DLNA option independently without dimming.

**INSTALLATION:** SURFACE MOUNT: Four .312" diameter holes. GRID MOUNT: Designed for 1" and 1.5" grid. (Housing includes hanging brackets to secure housing with wire to super structure). FLANGE MOUNT: Yoke mounting hardware & brackets included. Install Frame and Plaster Frames both positively locates yoke brackets within ceiling opening assures alignment of fixture. Install frame has no need for drywall backing; backing is supplied on the frame brackets.

**WARRANTY:** Limited five (5) year warranty.

**LISTINGS:** Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location and non-IC recessed installations. ETL certified IP65 per IEC 60598. NSF2 Splash/Non-Food Zone. Approved by the New York State - Office of Mental Health. EPA Est. No. 99283-WI-1.

\* Per independent lab report #5GS-09517036476. Contact Kenall for a copy of this report.

\*\*Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016.



#### ORDERING INFORMATION (Ex: MMAC22-F-1/2-9-55C35K-DCC-DV-FS)

| Model   | Mounting | Door/Housing Material | Lens | Diffuser Type   | Lamp Type | Driver Type | Voltage                       | Options  | Accessory |
|---|----------|-----------------------|------|---|-----------|-------------|-------------------------------|--|-----------|
|   |          | <b>I</b>              |      | <b>FA</b>   |           | <b>DCC</b>  |                               |  |           |
| <b>Model</b>  |          |                       |      | <b>Diffuser Type</b>                                      |           |             | <b>Voltage</b>                |  |           |
| <b>MMAC14</b> 1'x4'                                 |          |                       |      | <b>FA</b> Frosted Acrylic                                 |           |             | <b>DV</b> 120-277VAC, 50/60Hz |  |           |
| <b>MMAC22</b> 2'x2'                                 |          |                       |      |   |           |             | <b>120</b> 120VAC, 50/60Hz    |  |           |
| <b>MMAC24</b> 2'x4'                                 |          |                       |      |   |           |             | <b>277</b> 277VAC, 50/60Hz    |  |           |
|   |          |                       |      |   |           |             | <b>347</b> 347VAC, 50/60Hz    |  |           |
| <b>Mounting Options</b>                             |          |                       |      | <b>Lamp Type</b>  |           |             |                               | <b>Options</b>   |           |
| <b>F</b> Flange                                     |          |                       |      | <b>1x4</b>  |           |             |                               | <b>LEL*</b> LED Emergency Battery Pack (n/a with 1'x4' fixture; n/a in combination with LVC or LVCD on 2x2 fixture)      |           |
| <b>S</b> Surface                                    |          |                       |      | <b>55C32K</b> 55 Watt 3200K White & Indigo LED (82 CRI)   |           |             |                               | <b>AMF</b> Antimicrobial Finish on exposed surfaces  |           |
| <b>G</b> Grid (1" and 1.5")                         |          |                       |      | <b>55C37K</b> 55 Watt 3700K White & Indigo LED (82 CRI)   |           |             |                               | <b>DLN</b> LED Night Light w/Light Level Control (100% - 20%) (Voltage specific selection required; n/a 1x4 size)        |           |
|   |          |                       |      | <b>55C43K</b> 55 Watt 4300K White & Indigo LED (82 CRI)   |           |             |                               | <b>DLNA</b> Amber LED Night Light w/Light Level Control (100% - 20%) (voltage specific selection required; n/a 1x4 size) |           |
| <b>Door/Housing Material</b>                        |          |                       |      | <b>2x2</b>  |           |             |                               | <b>FS</b> Fuse & Holder  |           |
| <b>0</b> 14-Ga CRS (Painted)                        |          |                       |      | <b>55C32K</b> 55 Watt 3200K White & Indigo LED (82 CRI)   |           |             |                               | <b>LVC*</b> Low Voltage Controller (Click <a href="#">here</a> for specifications)                                       |           |
| <b>1</b> 16-Ga CRS (Painted)                        |          |                       |      | <b>55C37K</b> 55 Watt 3700K White & Indigo LED (82 CRI)   |           |             |                               | <b>LVCD*</b> Low Voltage Controller with Dimming (Click <a href="#">here</a> for specifications)                         |           |
| <b>2</b> 18-Ga CRS (Painted) (n/a as Door Material) |          |                       |      | <b>55C43K</b> 55 Watt 4300K White & Indigo LED (82 CRI)   |           |             |                               | <b>TC</b> T-Bar Clips (Grid Mount only)  |           |
| <b>A</b> 18-Ga SS (Brushed) (n/a as Door Material)  |          |                       |      | <b>2'x4'</b>  |           |             |                               |  |           |
| <b>B</b> 18-Ga SS (Painted) (n/a as Door Material)  |          |                       |      | <b>55C32K</b> 55 Watt 3200K White & Indigo LED (82 CRI)   |           |             |                               |  |           |
| <b>3</b> 14-Ga SS (Painted)                         |          |                       |      | <b>55C37K</b> 55 Watt 3700K White & Indigo LED (82 CRI)   |           |             |                               |  |           |
| <b>4</b> 16-Ga SS (Painted)                         |          |                       |      | <b>55C43K</b> 55 Watt 4300K White & Indigo LED (82 CRI)   |           |             |                               |  |           |
| <b>6</b> 14-Ga SS (Brushed)                         |          |                       |      | <b>82C32K</b> 82 Watt 3200K White & Indigo LED (82 CRI)   |           |             |                               |  |           |
| <b>7</b> 16-Ga SS (Brushed)                         |          |                       |      | <b>82C37K</b> 82 Watt 3700K White & Indigo LED (82 CRI)   |           |             |                               |  |           |
|   |          |                       |      | <b>82C43K</b> 82 Watt 4300K White & Indigo LED (82 CRI)   |           |             |                               |  |           |
| <b>Lens</b>   |          |                       |      | <b>110C32K</b> 110 Watt 3200K White & Indigo LED (82 CRI) |           |             |                               |  |           |
| <b>7</b> .187" Clear Polycarbonate                  |          |                       |      | <b>110C37K</b> 110 Watt 3700K White & Indigo LED (82 CRI) |           |             |                               |  |           |
| <b>9</b> .250" Clear Polycarbonate                  |          |                       |      | <b>110C43K</b> 110 Watt 4300K White & Indigo LED (82 CRI) |           |             |                               |  |           |
| <b>B</b> .375" Clear Polycarbonate                  |          |                       |      |   |           |             |                               |  |           |
|   |          |                       |      | <b>Driver Type</b>  |           |             |                               |  |           |
|   |          |                       |      | <b>DCC</b> 0-10V Dimming Constant Current Driver          |           |             |                               |  |           |

\* n/a with 347V

#### ACCESSORIES ORDERED SEPERATELY

**MPWS** Low Voltage Wall Switch (Click [here](#) for Specifications)



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# MEDMASTER™

## Behavioral Healthcare Luminaires

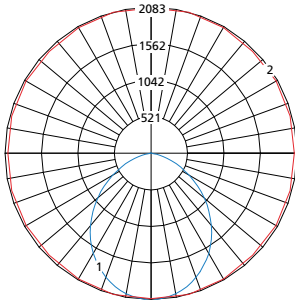
### MMAC SERIES using Indigo-Clean Technology

#### PERFORMANCE

| Model   | Lamp Type | Initial Delivered Lumens |                 | Input Power (W) | Estd. L70 LED Life (Hrs) |
|---------|-----------|--------------------------|-----------------|-----------------|--------------------------|
|         |           | @ 25°C (lm)              | Efficacy (lm/W) |                 |                          |
| MMAC14  | 55C32K    | 4,077                    | 66              | 62              | 80,000                   |
|         | 55C37K    | 4,183                    | 67              | 62              | 80,000                   |
|         | 55C43K    | 4,226                    | 68              | 62              | 80,000                   |
| MMAC22  | 55C32K    | 4,131                    | 64              | 65              | 80,000                   |
|         | 55C37K    | 4,238                    | 65              | 65              | 80,000                   |
|         | 55C43K    | 4,281                    | 66              | 65              | 80,000                   |
| MMAC24  | 55C32K    | 5,072                    | 82              | 62              | 80,000                   |
|         | 55C37K    | 5,203                    | 84              | 62              | 80,000                   |
|         | 55C43K    | 5,256                    | 85              | 62              | 80,000                   |
|         | 82C32K    | 7,659                    | 82              | 93              | 80,000                   |
|         | 82C37K    | 7,858                    | 84              | 93              | 80,000                   |
|         | 82C43K    | 7,938                    | 85              | 93              | 80,000                   |
|         | 110C32K   | 9,439                    | 74              | 128             | 80,000                   |
|         | 110C37K   | 9,683                    | 76              | 128             | 80,000                   |
| 110C43K | 9,782     | 76                       | 128             | 80,000          |                          |

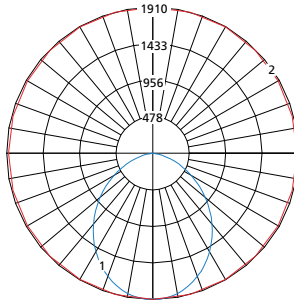
Displayed information is for type 'FA' diffuser. Apply lumen output factor of 1.05 for Type 7 and Type 9 lens. Information subject to change without notice. Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to [www.kenall.com](http://www.kenall.com)

Model: MMAC-14-x-1-2-B-55C37K-DCC-DV



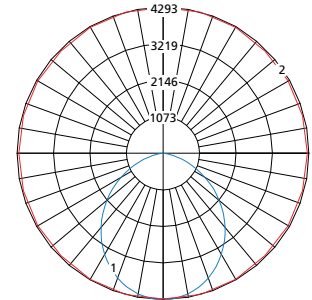
Max Candela = 1988 Located At Horizontal Angle = 75, Vertical Angle = 2.5  
 1 - Vertical Plane Through Horizontal Angles (75 - 255) (Through Max. Cd.)  
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MMAC-22-x-1-2-B-55C37K-DCC-DV



Max Candela = 1717 Located At Horizontal Angle = 90, Vertical Angle = 2.5  
 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MMAC-24-x-1-2-B-110C37K-DCC-DV



Max Candela = 3811 Located At Horizontal Angle = 75, Vertical Angle = 2.5  
 1 - Vertical Plane Through Horizontal Angles (75 - 255) (Through Max. Cd.)  
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)



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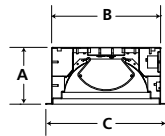
Behavioral Healthcare Luminaires

## MMAC SERIES using Indigo-Clean Technology

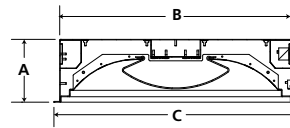
### DIMENSIONAL DATA

#### GRID DIMENSIONAL DATA (IN INCHES)

|     | A    | B     | C     | D     | E     |
|-----|------|-------|-------|-------|-------|
| 1x4 | 5.56 | 10.60 | 11.75 | 46.60 | 47.75 |
| 2x2 | 6.10 | 22.60 | 23.75 | 22.60 | 23.75 |
| 2x4 | 6.10 | 22.60 | 23.75 | 46.60 | 47.75 |



MAC14

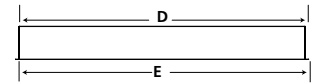


MAC22 & MAC24

#### GRID MOUNT

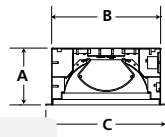
CROSS SECTION

SIDE VIEW

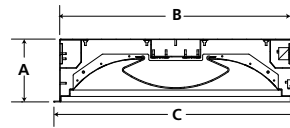


#### FLANGE DIMENSIONAL DATA (IN INCHES)

|   | A    | B     | C     | D     | E     | F     | G     |
|---|------|-------|-------|-------|-------|-------|-------|
| 1x4   | 5.56 | 10.60 | 11.75 | 46.60 | 47.75 | 30.00 | 5.25  |
| Recommended Ceiling Cutout: 10.88" x 46.88" |      |       |       |       |       |       |       |
| 2x2   | 6.10 | 22.60 | 23.75 | 22.60 | 23.75 | 12.00 | 12.00 |
| Recommended Ceiling Cutout: 22.88" x 22.88" |      |       |       |       |       |       |       |
| 2x4   | 6.10 | 22.60 | 23.75 | 46.60 | 47.75 | 30.00 | 12.00 |
| Recommended Ceiling Cutout: 22.88" x 46.88" |      |       |       |       |       |       |       |



MAC14

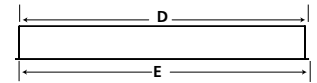


MAC22 & MAC24

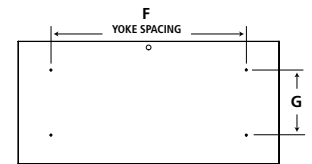
#### FLANGE MOUNT

CROSS SECTION

SIDE VIEW

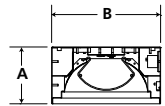


TOP VIEW

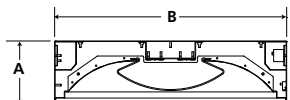


#### SURFACE DIMENSIONAL DATA (IN INCHES)

|     | A    | B     | C     | D     | E     |
|-----|------|-------|-------|-------|-------|
| 1x4 | 5.56 | 10.60 | 30.00 | 5.25  | 46.60 |
| 2x2 | 6.13 | 22.60 | 12.00 | 12.00 | 22.60 |
| 2x4 | 6.13 | 22.60 | 30.00 | 12.00 | 46.60 |



MAC14

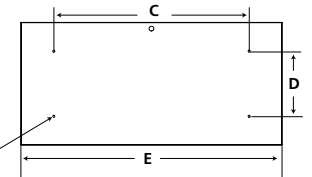


MAC22 & MAC24

#### SURFACE MOUNT

CROSS SECTION

TOP VIEW



Mounting Holes



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