

MEDMASTER™

Behavioral Healthcare Luminaires

MMAC SERIES using Indigo-Clean Technology

PRODUCT FEATURES:

- » Provides environmental disinfection and effective, efficient lighting performance via visible LED light
- » Dual-Mode Indigo-Clean Technology is independently tested to kill 94% of SARS CoV-2 and Influenza-A***, in addition to MRSA
- » Single-Mode Indigo-Clean Technology is independently tested to kill harmful bacteria, such as Staph*, including MRSA** Surface, recessed grid or recessed flange mount – 1'x4', 2'x2', 2'x4'
- » Center diffuser provides direct/indirect ambient lighting
- » Anti-ligature construction



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. Door/frame 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: (Single- and Dual-Mode ICT) Serviceable mid-power white and 405nm Indigo LED array. Available 3200K, 3700K and 4300K color temperatures with 3-step MacAdam variation allowance. Minimum 82 CRI standard. 120-277VAC and 347VAC 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 on Dual-Mode ICT). 330µA maximum source current. **Single-Mode ICT** provides a single, white disinfection operational mode. **Dual-Mode ICT** provides two operational modes based on room occupancy. White Disinfection Mode is a white LED array for ambient lighting plus a simultaneous low-power 405nm LED array for low-level, continuous and safe environmental disinfection. Indigo Disinfection Mode is a higher-level 405nm array for continuous safe environmental disinfection during periods of room vacancy. The operational mode is determined via internal low-voltage device based upon the input signal provided by an external control device/system, such as the [IC150](#) product. Luminaire dimming is overridden in this operational state. Refer to the [Kenall Dual-Mode ICT Control Application Guide](#) for further description.

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. EPA Est. No. 99283-WI-1.

* Per independent lab report #SGS-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.
 ***Refer to www.indigo-clean.com for details.



PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

ORDERING INFORMATION (Ex: MMAC22-F-1/2-9-55C-37K8-DCC-DV-FS)

Model	Mounting	Door/Housing Material	Lens	Diffuser Type	Lamp Power	Lamp Color	Driver Type	Voltage	Options	Accessory
		I		FA		DCC				
Model				Diffuser Type				Voltage		
MMAC14 1'x4'				FA Frosted Acrylic				DV 120-277VAC, 50/60Hz		
MMAC22 2'x2'								347 347VAC, 50/60Hz		
MMAC24 2'x4'										
Mounting Options					Lamp Power				Options	
F Flange					1x4				LEL** LED Emergency Battery Pack	
S Surface					55C 55W Single-Mode ICT				AMF Antimicrobial Finish on exposed surfaces	
G Grid (1" and 1.5")					23I/55C 55W Dual-Mode ICT				NLW^ 2700K White LED Night Light	
					2x2				NLA^ Amber LED Night Light	
					55C 55W Single-Mode ICT				FS Fuse & Holder	
					23I/55C 55W Dual-Mode ICT				LVC* Low Voltage Controller (Click here for specifications)	
Door/Housing Material					2'x4'				LVCD* Low Voltage Controller with Dimming (Click here for specifications)	
0 14-Ga CRS (Painted)					55C 55W Single-Mode ICT				TC T-Bar Clips (Grid Mount only)	
1 16-Ga CRS (Painted)					82C 82W Single-Mode ICT					
2 18-Ga CRS (Painted) (n/a as Door Material)					110C 110W Single-Mode ICT					
A 18-Ga SS (Brushed) (n/a as Door Material)					23I/55C 55W Dual-Mode ICT					
B 18-Ga SS (Painted) (n/a as Door Material)					34I/82C 82W Dual-Mode ICT					
3 14-Ga SS (Painted)					46I/110C 110W Dual-Mode ICT					
4 16-Ga SS (Painted)										
6 14-Ga SS (Brushed)										
7 16-Ga SS (Brushed)										
Lens					Lamp Color					
7 .187" Clear Polycarbonate					32K8 3200K / 82 CRI min.					
9 .250" Clear Polycarbonate					37K8 3700K / 82 CRI min.					
B .375" Clear Polycarbonate					43K8 4300K / 82 CRI min.					
					Driver Type					
					DCC 0-10V Dimming Constant Current Driver					

ACCESSORIES ORDERED SEPARATELY
MPWS Low Voltage Wall Switch (Click [here](#) for Specifications)
IC150 External Room Control System for Dual-Mode ICT Products (click [here](#) for Specifications)



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PERFORMANCE

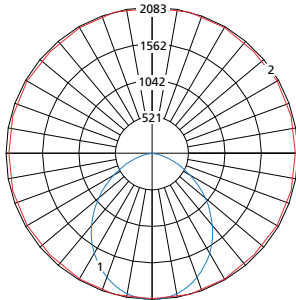
Technology	Length	Lamp Code	Lumen Output by Color (lm) ¹			Efficacy (lm/W)	Power Consumption ²			Estd L70 LED Life (Hrs)
			32K8	37K8	43K8		Occupied (W)	LPD (W)	Unoccupied (W)	
Single-Mode ICT	1 x 4	55C	4,077	4,183	4,226	67 - 69	61	51	n/a	80,000
	2 x 2	55C	4,131	4,238	4,281	68 - 70	61	51		
	2 x 4	55C	5,071	5,203	5,256	83 - 86	61	51		
		82C	7,659	7,858	7,938	82 - 85	93	77		
		110C	9,438	9,683	9,782	77 - 80	122	101		
Dual-Mode ICT	1 x 4	23I/55C	4,077	4,183	4,226	67 - 69	61	51	29	80,000
	2 x 2	23I/55C	4,131	4,238	4,281	68 - 70	61	51	29	
	2 x 4	23I/55C	5,071	5,203	5,256	83 - 86	61	51	29	
		34I/82C	7,659	7,858	7,938	82 - 85	93	77	44	
		46I/110C	9,438	9,683	9,782	77 - 80	122	101	58	

¹Lumen output is with the FA lens type. Information subject to change without notice. Visit www.kenall.com for IES files and additional information.

²Lighting Power and Energy Calculations:

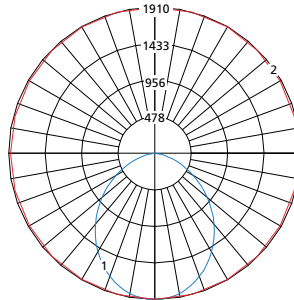
- Use **Occupied Power** for total electrical load calculations. Use this value to estimate branch circuit lighting loads.
- Use **LPD Power** for lighting power density calculations. Only the power attributed to white light is required per NEMA LSD EB 84-202X. Power used toward germicidal disinfection has been removed for this calculation.
- Use **Unoccupied** and **Occupied Power** for Energy calculations to determine the power consumed over time based on the use of the space.

Model: MMAC-14-x-1-2-B-55C-37K8-DCC-DV and MMAC-14-x-1-2-B-23I/55C-37K8-DCC-DV



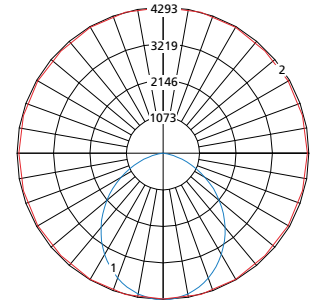
Max Candela = 1988 Located At Horizontal Angle = 75, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (75 - 255) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MMAC-22-x-1-2-B-55C-37K8-DCC-DV and MMAC-22-x-1-2-B-23I/55C-37K8-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-110C-37K8-DCC-DV and MMAC-24-x-1-2-B-46I/110C-37K8-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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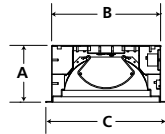
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DIMENSIONAL DATA

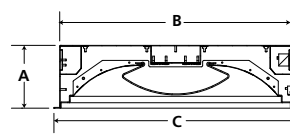
GRID DIMENSIONAL DATA (IN INCHES)

	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

CROSS SECTION



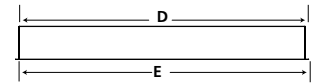
MAC14



MAC22 & MAC24

GRID MOUNT

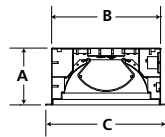
SIDE VIEW



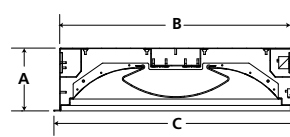
FLANGE DIMENSIONAL DATA (IN INCHES)

	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"							

CROSS SECTION



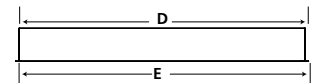
MAC14



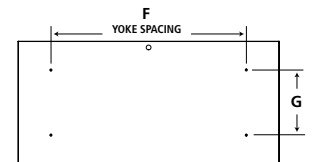
MAC22 & MAC24

FLANGE MOUNT

SIDE VIEW



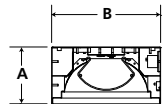
TOP VIEW



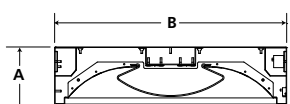
SURFACE DIMENSIONAL DATA (IN INCHES)

	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

CROSS SECTION



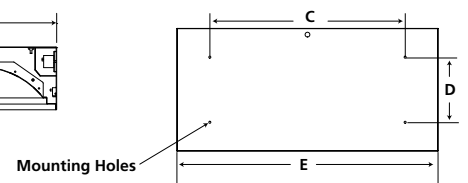
MAC14



MAC22 & MAC24

SURFACE MOUNT

TOP VIEW



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