

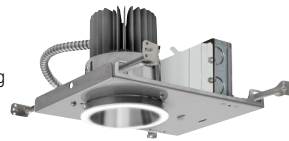
# MEDMASTER DOWNLIGHT

## Luminaires for Surgical Applications

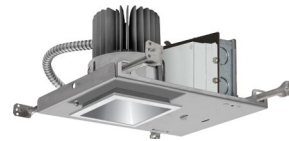
### M4DL4 SERIES using Indigo-Clean Technology

#### PRODUCT FEATURES:

- » 4" sealed, recessed downlight with round or square aperture
- » Provides on-demand environmental disinfection via LED light
- » Single, white disinfection mode
- » Independent laboratory tested to kill harmful bacteria, including Staph\*, such as MRSA\*\*
- » Conducted emissions controlled as per MIL-STD-461G
- » Delivered lumens: 1,592 - 1,946 lm



Round



Square

#### PROJECT INFORMATION

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

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

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

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

#### SPECIFICATIONS

**HEAT SINK:** Die-cast aluminum with external radial fins for natural convection.

**ROUGH-IN FRAME:** 18-gauge die-formed, corrosion-resistant steel. Vertically adjustable collar accommodates ceiling thicknesses up to 2", adjustable post-installation. Adjustable mounting bars for installation with wood and steel frame joists and T-grid ceiling systems spaced up to 24" on center. Quick-access junction box accessible post-installation from above and below ceiling. Includes (5) 1/2" knock-outs to allow straight conduit runs.

**TRIM/HOUSING SECTION:** IP-rated housing section incorporates the heat sink, LED module, optics and lower trim. Trim that is secured to the Rough-In frame with hidden torsion springs. Anti-microbial finish standard on all exposed painted surfaces.

**OPTICAL:** High-efficiency mixing chamber design with regressed diffused tempered-glass lens produces uniform light output. Round or square aperture. Available with various reflector finishes. See Reflector Finish Ordering Information for available options.

**ELECTRICAL:** Single, white disinfection mode. Serviceable white and 405nm Indigo LED array. Available 3200K, 3700K and 4300K color temperature with 3-step MacAdam variation allowance. Minimum 82 CRI standard. 120, 277 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); 165µA maximum source current. Optional eldoLED ECOdrive DALI driver with 1-100% range and Lutron Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology.

**PHOTOMETRICS:** Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric information, go to [www.kenall.com](http://www.kenall.com).

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

**LISTINGS:** Luminaire is certified to UL standards by Intertek Testing Laboratory for non-IC and Wet Location installations. IP64 rating per IEC60598. NSF2 Splash/Non-Food Zone. Conducted emissions controlled as per MIL-STD-461G. Optional CCEA compliant. EPA Est. No. 99283-WI-1.

\* Per independent lab report #SGS-09S17036476. 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: M4DL4-DCFW-22C-37K8-FW-RIS4-120-DIM1)

TRIM					ROUGH-IN			
Model	Trim Finish	Lamp Power	Lamp Color	Reflector Finish	Rough-In	Input Voltage	Driver Type	Options
	<b>DCFW</b>	<b>22C</b>						
<b>Model</b>			<b>Lamp Color</b>		<b>Rough-In</b>			
<b>M4DL4</b>	4" Surgical - Round		<b>32K8</b> 3200K / 80 CRI min.		<b>RIS4</b> 4" Surgical Rough-In - Round			
<b>M4DL4S</b>	4" Surgical - Square		<b>37K8</b> 3700K / 80 CRI min.		<b>RIS4S</b> 4" Surgical Rough-In - Square			
			<b>43K8</b> 4300K / 80 CRI min.					
<b>Trim Finish</b>			<b>Reflector Finish</b>		<b>Input Voltage</b>			
<b>DCFW</b>	Die-Cast Aluminum in Flat White		<b>FW</b> Flat White		<b>120</b> 120VAC, 50/60Hz			
			<b>CD</b> Clear Diffuse		<b>277</b> 277VAC, 50/60Hz			
<b>Lamp Power</b>			<b>CSS</b> Clear Semi-Specular (round only)		<b>347▲</b> 347VAC, 60Hz			
<b>22C</b>	22 Watt White & Indigo LED							
					<b>Driver Type</b>			
					<b>DIM1</b> 0-10V Dimming to 1%			
					<b>DALI</b> DALI Dimming to 1%			
					<b>ECO1</b> Lutron Hi-Lume 1% EcoSystem®			
					<b>Options</b>			
					<b>FS</b> Fuse & Holder			
					<b>CCEA</b> CCEA Approved			

▲ N/A with DALI or ECO1 Driver Type



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Luminaires for Surgical Applications

## M4DL4 SERIES using Indigo-Clean Technology

### PERFORMANCE

Optic		Lamp Power	Initial Delivered Lumens, By Lamp Color			Input Power (W)	Estd. L70 LED Life (hrs)
Reflector	Reflector Finish		32K8	37K8	43K8		
Round	CD	22C	1,592	1,592	1,695	24	75,000
	CSS	22C	1,690	1,690	1,800	24	75,000
	FW	22C	1,765	1,765	1,879	24	75,000
Square	CD	22C	1,694	1,694	1,804	24	75,000
	FW	22C	1,828	1,828	1,946	24	75,000

Subject to change without notice. Visit [www.kenall.com](http://www.kenall.com) for ies files and additional information.

Round Aperture Candela Curve	M4DL4-DCFW-22C-37K8-FW		Distance to illuminated plane (ft)	M4DL4S-DCFW-22C-37K8-FW		Square Aperture Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	31.0	4.2	5'	29.9	4.3	
	21.5	5.3	6'	20.7	5.5	
	15.8	6.2	7'	15.2	6.8	
	12.1	7.0	8'	11.7	7.7	
	9.6	8.0	9'	9.2	8.6	
	7.7	8.9	10'	7.5	9.6	
Spacing Criteria: 0.88	foot-candle multipliers for 30K8(.96), 30K9(.80), 35K8(.96), 35K9(.81), 40K9(.81), 50K8(1.0)					Spacing Criteria: 0.92
Beam Angle: 57.1	Beam diameter is where foot-candles drop to 50% of maximum					Beam Angle: 58.6

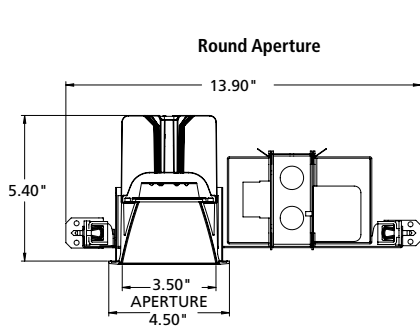


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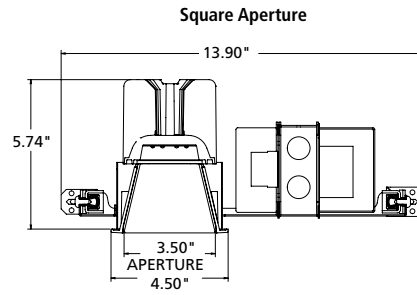
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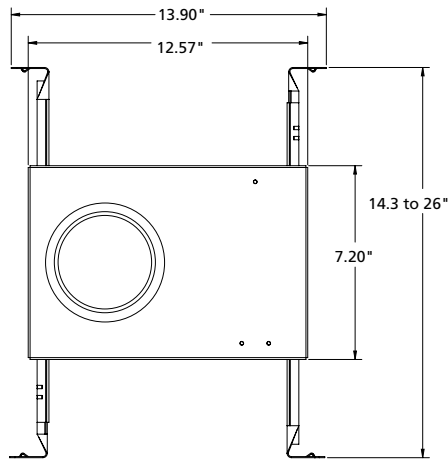
### DIMENSIONAL DATA



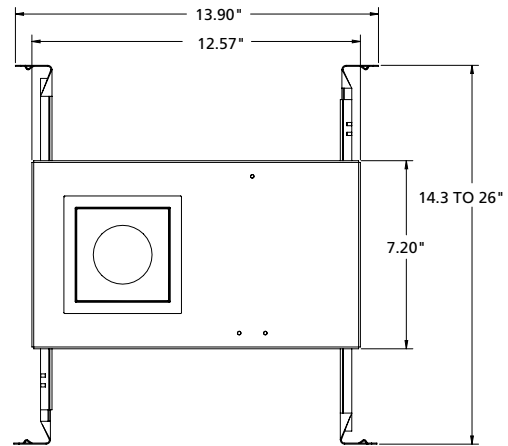
### CROSS SECTION



### BOTTOM VIEW



RECOMMENDED CEILING CUTOUT: 4.125" DIA.



RECOMMENDED CEILING CUTOUT: 4.125" x 4.125"



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