

# MEDMASTER DOWNLIGHT

## Luminaires for Surgical Applications

### M4DL4 SERIES

#### PROJECT INFORMATION

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

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

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

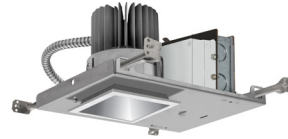
Approved by \_\_\_\_\_

#### PRODUCT FEATURES:

- » 4" sealed, recessed downlight with round or square aperture
- » Conducted emissions controlled as per MIL-STD-461G
- » Delivered lumens: 983 - 2,640 lm
- » 1% Dimming via 0-10V or DALI control



Round



Square

#### 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. Regressed lens trim 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 acrylic lens producing uniform light output. Round or square aperture. Available with various reflector finishes. See Reflector Finish Ordering Information for available options.

**ELECTRICAL:** LED array available in multiple CCT and CRI combinations with a maximum 3-step MacAdam variation allowance. See Trim Ordering Information for available options. 120-277VAC or 347VAC, 50/60Hz electrical input with serviceable constant current driver (<20% 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.

**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.



#### ORDERING INFORMATION (EX: M4DL4-DCFW-14L-35K8-FW-RIS4-277-DIM1)

TRIM					ROUGH-IN			
Model	Trim Finish	Lamp Power	Lamp Color	Reflector Finish	Rough-In	Input Voltage	Driver Type	Options
<b>DCFW</b>								
<b>Model</b>			<b>Lamp Color</b>		<b>Rough-In</b>			
<b>M4DL4</b>	4" Surgical - Round		<b>30K8</b>	3000K / 80 CRI min.	<b>RIS4</b>	4" Surgical Rough-In - Round		
<b>M4DL4S</b>	4" Surgical - Square		<b>30K9</b>	3000K / 90 CRI min.	<b>RIS4S</b>	4" Surgical Rough-In - Square		
			<b>35K8</b>	3500K / 80 CRI min.				
<b>Trim Finish</b>			<b>35K9</b>	3500K / 90 CRI min.	<b>Input Voltage</b>			
<b>DCFW</b>	Die-Cast Aluminum in Flat White		<b>40K8</b>	4000K / 80 CRI min.	<b>120</b>	120VAC, 50/60Hz		
			<b>40K9</b>	4000K / 90 CRI min.	<b>277</b>	277VAC, 50/60Hz		
<b>Lamp Power</b>			<b>50K8</b>	5000K / 80 CRI min.	<b>347†</b>	347VAC, 60Hz		
<b>14L</b>	14 Watt LED				<b>Driver Type</b>			
<b>28L*</b>	28 Watt LED		<b>Reflector Finish</b>		<b>DIM1</b>	0-10V Dimming to 1%		
			<b>FW</b>	Flat White	<b>DALI</b>	DALI Dimming to 1%		
			<b>CD</b>	Clear Diffuse				
			<b>CS</b>	Clear Specular (square only)	<b>Options</b>			
			<b>CSS</b>	Clear Semi-Specular (round only)	<b>F5</b>	Fuse & Holder		
					<b>CCEA</b>	CCEA Approved (n/a 347V)		

† N/A with DALI Driver Type

\* Must be installed with a minimum 24" on-center spacing, 12" from wall, and have 1/2" clearance above the Trim/Housing



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### M4DL4 SERIES

#### PERFORMANCE

Optic		Lamp Power	Initial Delivered Lumens, By Lamp Color							Efficacy (lm/W)	Input Power (W)	Estd. L70 LED Life (hrs)
Reflector	Reflector Finish		30K8	30K9	35K8	35K9	40K8	40K9	50K8			
Round	CD	14L	1,175	983	1,175	995	1,222	995	1,249	61 - 78	16	80,000
		28L	2,152	1,800	2,152	1,822	2,239	1,822	2,287	58 - 74	31	85,000
	CSS	14L	1,248	1,044	1,248	1,056	1,298	1,056	1,326	65 - 83	16	80,000
		28L	2,286	1,911	2,286	1,934	2,377	1,934	2,428	62 - 78	31	85,000
	FW	14L	1,303	1,090	1,303	1,103	1,355	1,103	1,385	68 - 87	16	80,000
		28L	2,387	1,996	2,387	2,020	2,482	2,020	2,536	64 - 82	31	85,000
Square	CD	14L	1,251	1,046	1,251	1,059	1,301	1,059	1,329	65 - 83	16	80,000
		28L	2,291	1,916	2,291	1,939	2,383	1,939	2,435	62 - 79	31	85,000
	CS	14L	1,357	1,134	1,357	1,148	1,411	1,148	1,442	71 - 90	16	80,000
		28L	2,485	2,078	2,485	2,103	2,584	2,103	2,640	67 - 85	31	85,000
	FW	14L	1,350	1,129	1,350	1,142	1,404	1,142	1,434	71 - 90	16	80,000
		28L	2,472	2,067	2,472	2,092	2,571	2,092	2,627	67 - 85	31	85,000

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-14L-40K8-FW		Distance to illuminated plane (ft)	M4DL4S-DCFW-14L-40K8-FW		Square Aperture Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	23.8	4.2	5'	22.9	4.3	
	16.5	5.3	6'	15.9	5.6	
	12.2	6.2	7'	11.7	6.8	
	9.3	7.1	8'	9.0	7.7	
	7.4	8.0	9'	7.1	8.7	
	5.9	9.0	10'	5.7	9.7	
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

Round Aperture Candela Curve	M4DL4-DCFW-28L-40K8-FW		Distance to illuminated plane (ft)	M4DL4S-DCFW-28L-40K8-FW		Square Aperture Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	43.6	4.2	5'	42.0	4.3	
	30.3	5.4	6'	29.2	5.6	
	22.3	6.3	7'	21.4	6.8	
	17.0	7.1	8'	16.4	7.7	
	13.5	8.0	9'	13.0	8.6	
	10.9	8.9	10'	10.5	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
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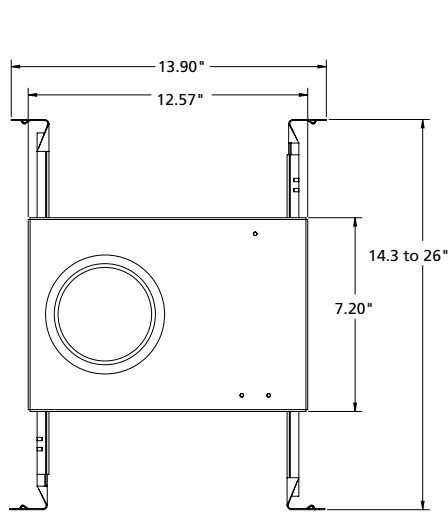
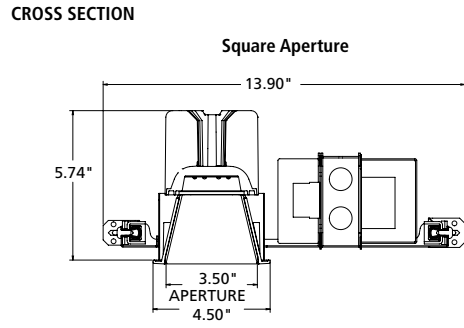
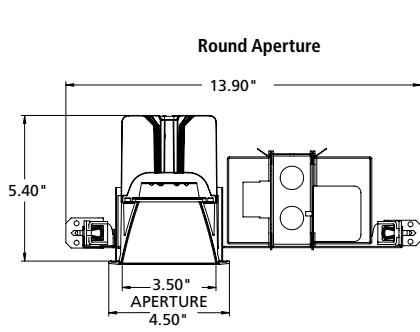
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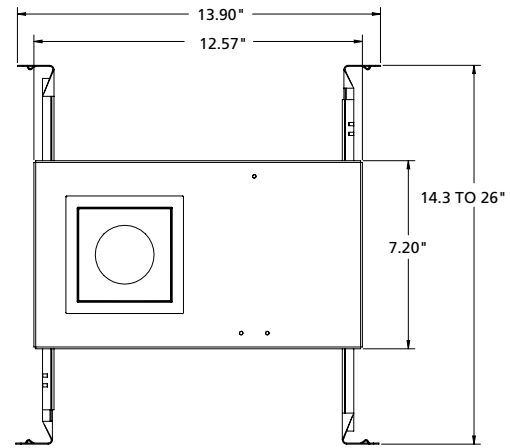
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## M4DL4 SERIES

### DIMENSIONAL DATA



RECOMMENDED CEILING CUTOUT: 4.125" DIA.



RECOMMENDED CEILING CUTOUT: 4.125" x 4.125"



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