

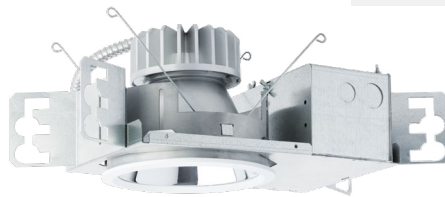
MEDMASTER DOWNLIGHT

Luminaires for Surgical Applications

M4DL SERIES using Indigo-Clean Technology

PRODUCT FEATURES:

- » 6" sealed, recessed downlight with regressed or flush lens trim
- » 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: 1,258 - 3,153 lm



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. Universal mounting brackets accept 3/4" and 1-1/2" lathers channel, 1/2" EMT conduit and hanger bars. Quick-access junction box accessible post-installation from above and below ceiling. Includes (4) 1/2" and (2) 3/4" knock-outs to allow straight conduit runs. Listed for (8) 12AWG, 90°C conductors and feed-thru branch wiring. Provided with FMC with electrical quick-connect to Trim Section.

TRIM/HOUSING SECTION: IP-rated housing section incorporates the heat sink, LED module, optics and lower trim. Configurable with an IP64-rated Regressed or Flush lens trim that is secured to the Rough-In frame with hidden torsion springs, and an IP65 Flush lens trim secured with four (4) Phillips-head, captive fasteners. Anti-microbial finish standard on all exposed painted surfaces. See trim ordering information for available options.

OPTICAL: High-efficiency mixing chamber design with regressed diffused tempered-glass lens produces uniform light output. Available with various reflector distribution patterns and finishes. Flush lens trim options include a clear lens. See distribution and 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.

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 and IP65 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 #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: M4DL6-NF-5BR-38C-37K8-W-CSS-T-RIS6-277-DALI)

TRIM								ROUGH-IN				
Model	Trim Style	Trim Finish	Lamp Power	Lamp Color	Distribution	Reflector Finish	Flush Lens Type	Rough-In	Input Voltage	Driver Type	Options	
M4DL6								RIS6				
Trim Style			Lamp Color					Rough-In				
R	Regressed Lens (IP64)		32K8 3200K / 80 CRI min.					RIS6 6" Surgical Rough-In				
NF	Flush Lens (Without Fasteners - IP64)		37K8 3700K / 80 CRI min.					Input Voltage				
FF	Flush Lens (With Fasteners - IP65)		43K8 4300K / 80 CRI min.					120 120VAC, 50/60Hz				
Trim Finish			Distribution					277 277VAC, 50/60Hz				
DCFW	Die-Cast Aluminum in Flat White (R and NF Trim Style)		M Medium					347* 347VAC, 60Hz				
2FW	Cold-Rolled Steel in Flat White		W Wide					Driver Type				
5BR	Type 304 Stainless Steel with 4B Brushed Finish		Reflector Finish					DIM1 0-10V Dimming to 1%				
5FW	Type 304 Stainless Steel in Flat White		FW Flat White					DALI DALI Dimming to 1%				
Lamp Power			CS Clear Specular					ECO1 Lutron Hi-Lume 1% EcoSystem®				
22C	22 Watt White & Indigo LED		CSS Clear Semi-Specular					Options				
38C*	38 Watt White & Indigo LED		Flush Lens Type (n/a Regressed Trim Style)					LEL Emergency Battery Backup with Remote Test Switch				
			T 1/8" Clear High-Impact Acrylic					FS Fuse & Holder				
								CCEA CCEA Approved (n/a 347V)				

- ▲ N/A with DALI or ECO1 Driver Type. N/A with LEL option
- * Must be installed with a minimum 24" on-center spacing, 12" from wall, and have 3" clearance above the Trim/Housing



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M4DL6-ICT-010521

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PERFORMANCE - REGRESSED LENS

Optic		Lamp Power	Initial Delivered Lumens, By Lamp Color			Input Power (W)	Estd. L70 LED Life (hrs)
Distribution	Reflector Finish		32K8	37K8	43K8		
M	CS	22C	1,737	1,737	1,850	24	75,000
		38C	2,780	2,780	2,960	45	60,000
	CSS	22C	1,456	1,456	1,551	24	75,000
		38C	2,331	2,331	2,482	45	60,000
	FW	22C	1,523	1,523	1,622	24	75,000
		38C	2,438	2,438	2,596	45	60,000
W	CS	22C	1,822	1,822	1,940	24	75,000
		38C	2,916	2,916	3,105	45	60,000
	CSS	22C	1,603	1,603	1,707	24	75,000
		38C	2,566	2,566	2,732	45	60,000
	FW	22C	1,850	1,850	1,970	24	75,000
		38C	2,961	2,961	3,153	45	60,000

Subject to change without notice. Visit www.kenall.com for ies files and additional information.

Wide Distribution Candela Curve	M4DL6-R-22C-37K8-W-CS		Distance to illuminated plane (ft)	M4DL6-R-22C-37K8-M-CS		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	42.0	7.5	5'	134.6	3.3	
	33.7	7.8	6'	93.5	3.6	
	24.7	9.0	7'	68.7	4.2	
	18.9	10.5	8'	52.6	4.7	
	15.0	12.0	9'	41.6	5.4	
	12.1	13.0	10'	33.7	6.0	
Spacing Criteria: 1.42	foot-candle multipliers for 32K8(1.0), 43K8(1.1)				Spacing Criteria: 0.64	
Beam Angle: 60°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 31°	

Wide Distribution Candela Curve	M4DL6-R-38C-37K8-W-CS		Distance to illuminated plane (ft)	M4DL6-R-38C-37K8-M-CS		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	67.2	7.8	5'	215.5	3.3	
	53.9	8.0	6'	149.6	3.6	
	39.5	9.2	7'	109.9	4.2	
	30.3	10.7	8'	84.2	4.8	
	24.0	12.0	9'	66.5	5.4	
	19.4	13.0	10'	53.9	6.0	
Spacing Criteria: 1.42	foot-candle multipliers for 32K8(1.0), 43K8(1.1)				Spacing Criteria: 0.64	
Beam Angle: 60°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 31°	



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PERFORMANCE - FLUSH LENS

Optic		Lamp Power	Initial Delivered Lumens, By Lamp Color			Input Power (W)	Estd. L70 LED Life (hrs)
Distribution	Reflector Finish		32K8	37K8	43K8		
M	CS	22C	1,357	1,357	1,445	24	80,000
		38C	2,172	2,172	2,313	45	75,000
	CSS	22C	1,274	1,274	1,357	24	80,000
		38C	2,039	2,039	2,171	45	75,000
	FW	22C	1,258	1,258	1,340	24	80,000
		38C	2,014	2,014	2,145	45	75,000
W	CS	22C	1,528	1,528	1,627	24	80,000
		38C	2,445	2,445	2,604	45	75,000
	CSS	22C	1,297	1,297	1,381	24	80,000
		38C	2,075	2,075	2,210	45	75,000
	FW	22C	1,437	1,437	1,530	24	80,000
		38C	2,299	2,299	2,448	45	75,000

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Wide Distribution Candela Curve	M4DL6-FF-22C-37K8-W-CS-T		Distance to illuminated plane (ft)	M4DL6-FF-22C-37K8-M-CS-T		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	35.4	7.7	5'	107.5	3.2	
	28.0	7.8	6'	74.7	3.5	
	20.5	9.2	7'	54.9	4.0	
	15.7	10.5	8'	42.0	4.6	
	12.5	11.6	9'	33.2	5.2	
	10.1	13.0	10'	26.9	5.8	
Spacing Criteria: 1.4	foot-candle multipliers for 32K8(1.0), 43K8(1.1)				Spacing Criteria: 0.62	
Beam Angle: 59°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 34°	

Wide Distribution Candela Curve	M4DL6-FF-38C-37K8-W-CS-T		Distance to illuminated plane (ft)	M4DL6-FF-38C-37K8-M-CS-T		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	56.7	7.7	5'	172.1	3.2	
	44.8	7.8	6'	119.5	3.5	
	32.8	9.2	7'	87.8	4.0	
	25.1	10.5	8'	67.2	4.6	
	20.0	11.6	9'	53.1	5.2	
	16.2	13.0	10'	43.0	5.8	
Spacing Criteria: 1.4	foot-candle multipliers for 32K8(1.0), 43K8(1.1)				Spacing Criteria: 0.62	
Beam Angle: 59°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 34°	



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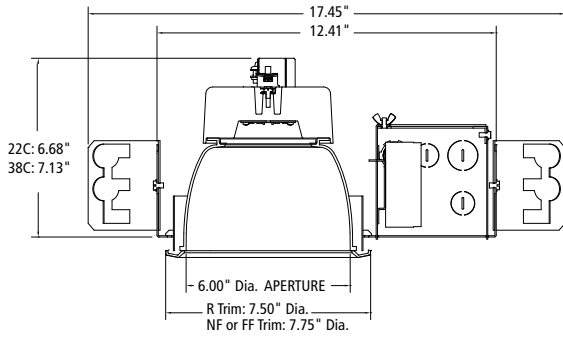
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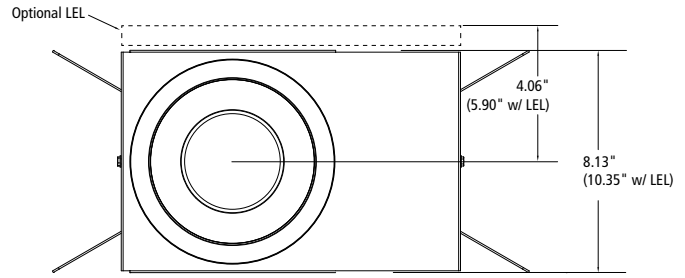
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DIMENSIONAL DATA

CROSS SECTION



BOTTOM VIEW



RECOMMENDED CEILING CUT-OUT

R and NF Trims: 7.13" Dia.

FF Trims: 7.38" Dia.



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