

Project:	Catalog:	Type:
Notes:		

Product Description

The MD3-ALTO is a patient room fixture with a unique diffuse regressed lens that adds a level of visual interest while providing gentle and comfortable ambient illumination. It also provides a separately controlled, high-performance exam illumination. The color temperature and color rendering options are separately selectable. It is available with a one-piece smooth lens that is sealed and easily wiped. Also, an optional low voltage controller is available with dimming or non-dimming functions. The reading source uses two obscured reflectors to provide shadow free localized lighting. Also available with a separate Chart/Night observation light option.

Features

- Fully diffused regressed lens
- Easy to clean surfaces
- Illumination creates visual depth
- Overlapping sealed germ-shield lens

Options

- Low Voltage Controllers with Dimming
- Night Observation Light in White or Amber
- Tunable White
- BIOS SkyBlue™

Housing

Die-formed, cold rolled steel housing assembly. Designed for 9/16" and 15/16" Grid Ceilings. Integral Earthquake clips. Wiring access cover plate and knockouts are provided on back of housing. Antimicrobial polyester powder coated after fabrication.

Lens & Lens Retention

Frosted single-piece diffuser regressed 1.25" into fixture housing. Standard Germ Shield add 0.125" thick clear polycarbonate lens sealed to the fixture aperture with hidden closed cell gasketing.

Gasket Systems

Pressure sensitive acrylic gasket seals trim to lens and to ceiling.

LED - Ambient & Exam

LED board modules are high efficiency and closely regulated to maintain CRI, color consistency, lumen performance, and efficacy. Separately specify CCT, CRI and Lumen choices for ambient and exam modes. Choose from 3000K, 3500K, and 4000K color temperatures with a color consistency of 3 SDCM, standard 80 CRI, optional 90 CRI. Lifetime L70 is greater than 60,000 hrs. Modules are field replaceable and commercially available. Tunable White and BIOS SkyBlue™ options are also available.

LED - Reading

A pair of COB LED arrays and 50mm elliptical reflectors and a shielded diffuser located at the end of the fixture. Standard output is 1670 lumen at 4000K CCT. CCT matches ambient selection. Controlled by an independent dimmable drivers. Reading CCT and CRI match the Ambient source selection. Standard output is 2012 lumens when 4000K CCT is selected for the ambient source.

Electrical

The standard electronic driver is constant current, programmable and dimmable to 1% using a 0-10V protocol. High efficiency (>85%) and low THD (<10%). Certified to FCC Part 15, Class A. 120-277Vac or 347Vac, 50/60hz. Optional low voltage controller provides interface to pillow speakers and bed controls. See "Options" for DALI driver choices.

Finish

Trim is finished with a 5 Stage pretreatment and antimicrobial matte white polyester powder coated after fabrication. Antimicrobial matte white as standard. Gloss Antimicrobial white is optional. See "Finish Options".

Installation

Recessed type IC for T-bar Grid ceilings. Compatible with 9/16" (NFG), 15/16" & 1" standard grid. Use under a covered structural ceiling as a damp or dry location.

Listings, Certifications and Ratings

ETL listed for recessed type IC damp locations. IP64 rated.

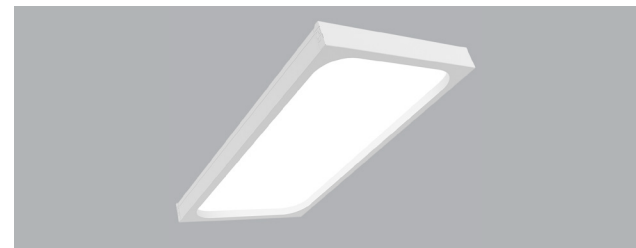
Warranty

5 year limited warranty. For complete warranty, click here:

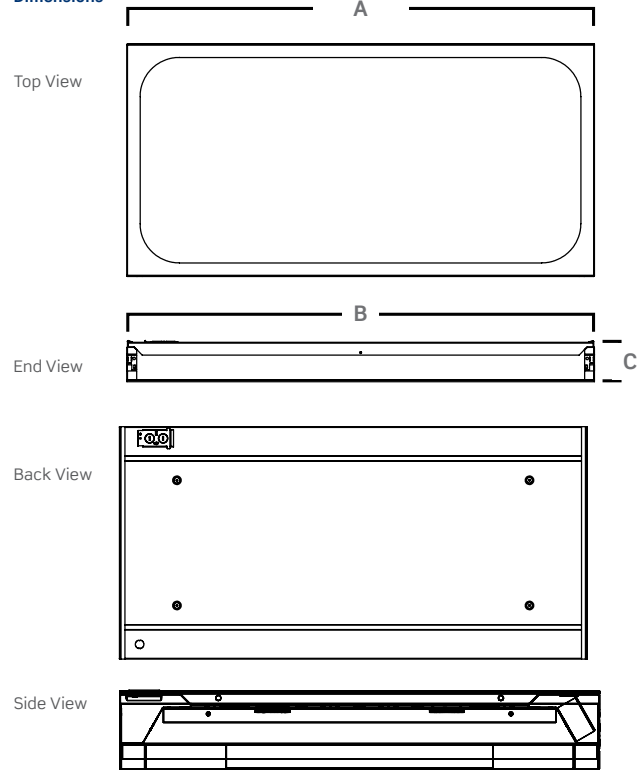


Approvals

- ETL Listed Damp Locations UL1598.



Dimensions



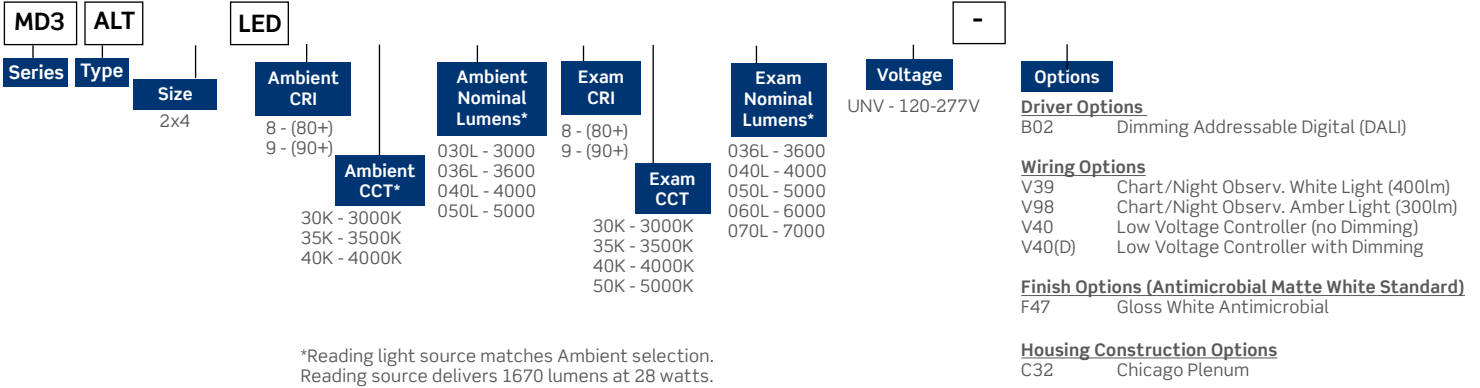
Size	Dimensions (inch) & Weights		
	A	B	C
2x4	47.75"	23.75"	3.25"

Consult installation guide for exact dimensions.

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Order Key

EXAMPLE: MD3-ALT2x4-LED835K36L840K060LUNV-V40(D)

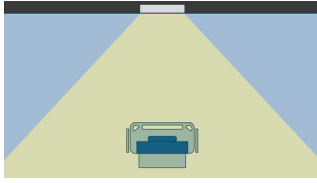


*Reading light source matches Ambient selection.
Reading source delivers 1670 lumens at 28 watts.

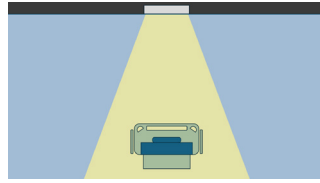
LED Performance Data													
Size	Function	Lumen Order Code	Delivered Lumens (827K)	Delivered Lumens (830K)	Delivered Lumens (930K)	Delivered Lumens (835K)	Delivered Lumens (935K)	Delivered Lumens (840K)	Delivered Lumens (940K)	Delivered Lumens (850K)	Estimated L80 LED Life (hrs)	Supply Watts	Efficacy (@4000K)
			80 CRI	80 CRI	90 CRI	80 CRI	90 CRI	80 CRI	90 CRI	80 CRI			
MD3-ALT-2x4	Ambient	030L	2769	2829	2438	2890	2498	3010	2619	3130	>90Khrs	24	125
		036L	3323	3395	2926	3468	2998	3612	3142	3756	>90Khrs	29	125
		040L	3868	3952	3405	4036	3489	4204	3657	4372	>90Khrs	34	124
		050L	4641	4742	4086	4843	4187	5045	4389	5247	>80Khrs	41	123
	Exam	036L	3319	3392	2922	3464	2995	3608	3139	3752	>90Khrs	24	150
		040L	3843	3926	3383	4010	3467	4177	3634	4344	>90Khrs	28	149
		050L	4611	4711	4060	4812	4160	5012	4360	5212	>90Khrs	34	147
		060L	5573	5695	4907	5816	5028	6058	5270	6300	>80Khrs	41	148
		070L	6468	6608	5694	6749	5835	7030	6116	7311	>80Khrs	48	146
	Ambient + Exam	030L+036L	6089	6221	5361	6353	5493	6618	5758	6883	>90Khrs	48	138
		036L+036L	6642	6787	5848	6931	5993	7220	6281	7509	>90Khrs	53	136
		040L+040L	7711	7878	6789	8046	6956	8381	7291	8716	>90Khrs	62	135
		040L+050L	8479	8663	7465	8847	7649	9216	8018	9585	>90Khrs	68	136
		040L+060L	9441	9646	8312	9852	8517	10262	8928	10672	>80Khrs	75	137
050L+060L		10215	10437	8993	10659	9215	11103	9660	11547	>80Khrs	82	135	
050L+070L	11109	11351	9781	11592	10022	12075	10505	12558	>80Khrs	89	136		
Reading	-	-	1851	1891	1630	1932	1670	2012	1750	2092	>60Khrs	22	93

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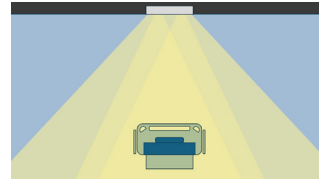
Optical Performance*



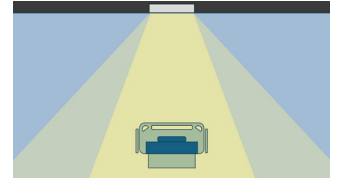
Ambient



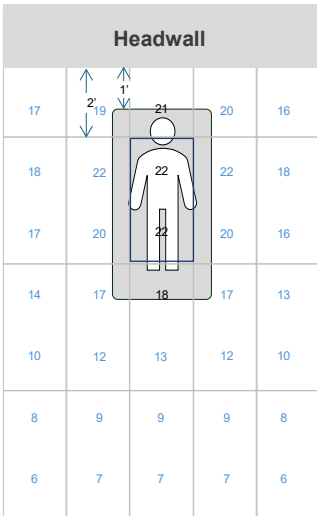
Exam



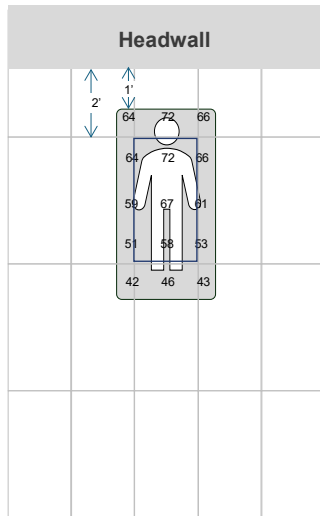
Reading + Ambient



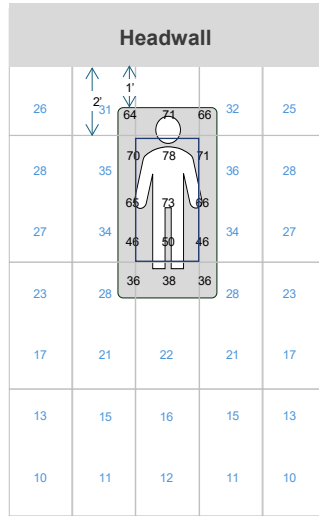
Exam + Ambient



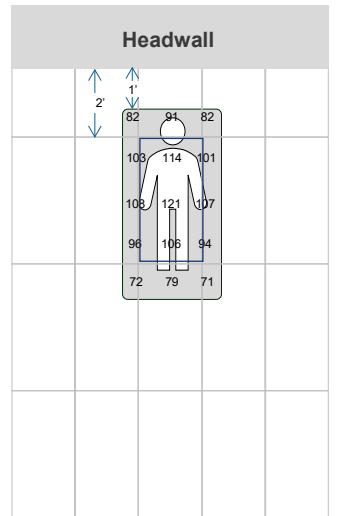
Ambient Illuminance (Fc)
 Avg =14 Max.=22, Min.=6 Avg/Min=2.4
 (Recommended 20fc @ 0'AFF, 4:1 avg/min ratio)



Exam Illuminance (fc)
 Avg =60 Max.=72, Min.=42 Avg/Min=1.4
 (Recommended 75fc @ 3'AFF, 2:1 avg/min ratio)



Ambient Illuminance (fc)
 Avg =28.96 Max.=38, Min.=10 Avg/Min=3.33
 Reading Illuminance (fc)



Exam + Ambient Illuminance (fc)
 Avg =95 Max.=121, Min.=71 Avg/Min=1.34:1
 (Recommended 75fc @ 3'AFF, 2:1 avg/min ratio)

*Results based on MD3-ALT2x4LED835K50L-840K70L



Ambient

Exam Only

Reading Only

Reading + Ambient

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**Integrated Controls Options for Nurse Call Compatibility
Three Function with Dimming - V40(D)**

MD3-ALT - Three Function Patient Room Luminaire with Ambient, Reading and Exam Functions						
Function/Action	First Press (< 0.5 seconds)	Second Subsequent sustained press (> 0.5 seconds)	Third subsequent sustained press (> 0.5 seconds)	Each successive sustained press (> 0.5 seconds)	Subsequent quick press (< 0.5 seconds)	LVC Load Number
Ambient	On at 25%	Smooth increasing brightness up to 100% over 4 seconds. Release at any point latches at that intensity level.	Smooth decreasing brightness down to 10% over 5 seconds. Release at any point latches at that intensity level.	Reverses direction of dimming between 10% and 100% over 5 seconds. Release at any point latches at that intensity level.	Off	1
Reading	On at 25%	Smooth increasing brightness up to 100% over 4 seconds. Release at any point latches at that intensity level.	Smooth decreasing brightness down to 10% over 5 seconds. Release at any point latches at that intensity level.	Reverses direction of dimming between 10% and 100% over 5 seconds. Release at any point latches at that intensity level.	Off	2
Exam	On at 100%	Off	Toggle, on at 100% and off			3

* Night observation light is separately wired and controlled by line voltage switch typically installed along the path of egress

