

# MEDMASTER PILLOW™ MPCK-TW

PATIENT ROOM LUMINAIRE — TUNABLE WHITE LED

Luminaires for Healthcare Applications



## PRODUCT FEATURES

- Sealed 2'x2' or 2'x4' troffer for recessed grid and drywall ceilings
- Ambient, examination and reading multi-function lamping for over-bed applications
- Full backlit LED array with 2700K-5000K white tuning capability on all functions
- Concave thermoformed diffuser for an aesthetically differentiated appearance
- Standard IP64 and NSF2 rating with door construction providing unique room side access via quick-release pins
- Optional night light and low-voltage controller (LVC)

## SPECIFICATIONS

**HOUSING:** Sealed, precision-formed 24ga cold rolled steel. White TGIC polyester powder coat finish - 5-step pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%.

**DOOR ASSEMBLY:** One-piece fabricated 18ga CRS doorframe with TGIC polyester powder-coat finish in selected color, with five-stage pre-treatment. Curved-sided aperture. Doorframe secured to housing with internal torsion springs. Room side access to internal components via four (4) color-matched, self-retracting hand pull pins located in corners of doorframe. Closed-cell silicone gasketing seals doorframe to housing. Continuous outer lens retention with doorframe.

**OPTICS:** Vacuum-formed, impact-resistant and high-efficiency diffused acrylic lens.

**LED MODULE:** Serviceable multi-channel back-lit array with tunable-white, mid-power LEDs. 2700K through 5000K CCT adjustment range with a two-point path. Minimum 90 CRI standard (R9 >50). Optional nightlight in 590nm native amber or 2700K, 80CRI white.

**DRIVER:** 120-277VAC, 50/60Hz electrical input (PF ≥ 0.9, THD < 20%). Minimum 85% electrical efficiency. Ambient, Reading and Exam functions are separately circuited, except when ordered with the low-voltage controller options (LVC/LCVD). Full output mode is achieved by powering all lamping circuits simultaneously. Serviceable, constant current multi-channel programmable driver with dual analog (0-10V) control inputs for intensity and CCT. Optional DALI (Type 8) driver. Logarithmic intensity profile with 0.1-100% range, with dim-to-dark capabilities. Linear profile on CCT adjustment. Refer to charts on page 2 for further details.



**CONTROLS:** Optional LVC and LVCD provides a low-voltage patient interface, controlling the lamp source and optional night light with (LVCD) and without (LVC) dimming control. CCT control with analog (0-10V) control types, whether with or without the LVC/LVCD, is a separate control line that must be connected to a device supporting 0-10V adjustment. See chart on Page 2 for further details.

**INSTALLATION:** Suitable for recessed ceiling installation into 9/16" and 15/16" lay-in grid ceilings. Gasketed wire access panel on rear of housing allows electrical connections without door removal; includes one 7/8" hole and one 7/8" knockout. See Accessories for adapter kit for drywall ceiling installation. Suitable for -20°C to 40°C ambient environments, unless otherwise noted.

**PHOTOMETRICS:** Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For additional photometric data, please 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 Laboratories for recessed ceiling insulation contact (IC-rated) and Indoor Wet Location installations. IP64 rating per IEC60598. NSF2 Splash/Non-Food Zone rated. Standard CCEA compliance.

## ORDERING INFORMATION (EX: MPCK-24-G-MW-32LMT/52LMT/140LMT-27/50K9-ATW-DV-LVCD-F-10581-NLA)

Model	Size	Ceiling Type	Finish	Lumen Output (per Mode)	Lamp Color	Driver Type	Voltage	LV Controller	LV Configuration	Options	Accessories
<b>MPCK</b>		<b>G</b>			<b>27/50K9</b>		<b>DV</b>				

### Nominal Size

<b>22</b>	2' x 2' Nominal
<b>24</b>	2' x 4' Nominal

### Ceiling Configuration

<b>G</b>	9/16" and 15/16" Lay-In Grid
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### Finish - Room-Side

<b>GW</b>	Anti-Microbial Gloss White
<b>MW</b>	Anti-Microbial Matte White
<b>CS</b>	Cool Satin Painted Anodized
<b>WS</b>	Warm Satin Painted Anodized
<b>CC</b>	Custom Color

### Lumen Output, by Mode†

<b>2'x2'</b>	
<b>16LMT</b>	1,625 lm Tunable (TW) Ambient
<b>16LMT/50LMT</b>	1,625 lm TW Ambient / 5,000 lm TW Reading

<b>2'x4'</b>	
<b>32LMT</b>	3,250 lm TW Ambient
<b>32LMT/140LMT</b>	3,250 lm TW Ambient / 14,000 lm TW Exam
<b>32LMT/52LMT/140LMT</b>	3,250 lm TW Ambient / 5,200 lm TW Reading / 14,000 lm TW Exam

### Lamp Color

<b>27/50K9</b>	2700K-5000K / 90CRI min.
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### Driver Type

<b>ATW</b>	Analog (0-10V) Dimming Tunable White Driver to 0.1%
<b>DTW</b>	DALI DT8 Tunable White Driver Dimmable to 0.1%

### Input Voltage

<b>DV</b>	120-277VAC, 50/60Hz
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### Optional Low Voltage (LV) Controller

<b>LVC*</b>	Low Voltage Controller
<b>LVCD*</b>	Low Voltage Controller with Dimming

### Optional LV Controller Configuration‡

<b>LVC</b>	
<b>F-10563</b>	Ambient, Night Light (MPCK22 only)
<b>F-10565</b>	Ambient, Reading, Night Light (MPCK22 only)
<b>F-10571</b>	Ambient, Night Light (MPCK24 only)
<b>F-10574</b>	Ambient, Exam, Reading (MPCK24 only)
	(click <a href="#">here</a> for additional configurations & specifications)

### LVCD

<b>F-10568</b>	Ambient, Reading (MPCK22 only)
<b>F-10569</b>	Ambient, Reading, Night Light (MPCK22 only)
<b>F-10577</b>	Ambient, Night Light (MPCK24 only)
<b>F-10580</b>	Ambient, Exam, Reading (MPCK24 only)
	(click <a href="#">here</a> for additional configurations & specifications)

### Options

<b>LEL</b>	Integral 10W Emergency Battery Backup (n/a with 16LMT/50LMT)
<b>FS</b>	Fuse & Holder
<b>NLW</b>	2700K White LED Night Light
<b>NLA</b>	Amber LED Night Light

### Accessories

<b>FA</b>	Flange Adapter Kit
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▼ This selection also determines the desired configuration of operational modes. Output referenced at 4000K selection.

\* n/a with DTW Driver Type

‡ Must be ordered in conjunction with corresponding Controller. All configurations including night light must be ordered in conjunction with NLW or NLA option.

### ACCESSORIES ORDERED SEPARATELY

<b>MPWS</b>	Low Voltage Wall Switch (Click <a href="#">here</a> for Specifications)
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PERFORMANCE

Model	Operational Mode^	Lumen Output, by Mode	Performance at 4000K Tuning			TM-21 Reported L70 (hrs)
			Lumen Output (lm)	Efficacy (lm/W)	Input Power (W)	
MPCK-22	Ambient	16LMT	1,628	88	18	>102,000
	Reading / All ON	50LMT	5,012	105	48	
MPCK-24	Ambient	32LMT	3,258	105	31	>102,000
	Reading	52LMT	5,279	122	43	
	Exam / All ON	140LMT	14,021	119	118	

Model	Operational Mode*	Initial Delivered Lumens (lm)		Input Power (W)	TM-21 Reported L70 (hrs)
		NLW	NLA		
MPCK-22	Nightlight (optional)	48	44	1.5	>60,000
MPCK-24	Nightlight (optional)	51	47		

**NOTE:** Nominal Lumen Output values based on 4000K tuning level. See Performance Scaling table for characteristics at alternate CCTs. Information subject to change without notice. Visit [www.kenall.com](http://www.kenall.com) for IES files and additional information.

^ Lumen output listed for the MPCK-22 Reading is the cumulative output of both the Ambient and Reading circuits ON at full output.

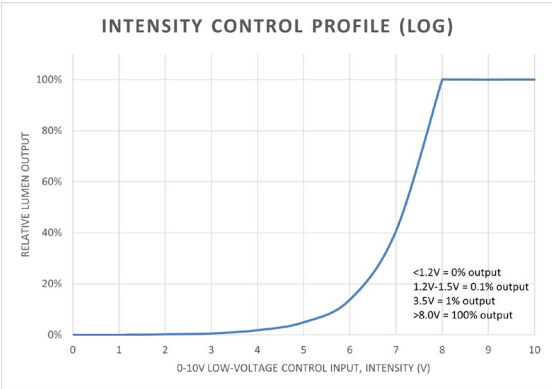
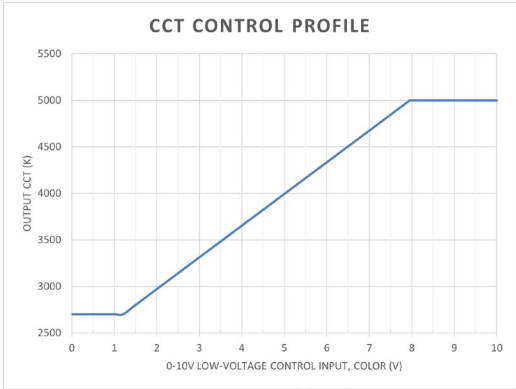
Lumen output listed for the MPCK-24 Exam is the cumulative output of the Ambient, Reading and Exam circuits ON at full output.

All other Operational Modes are individual circuits.

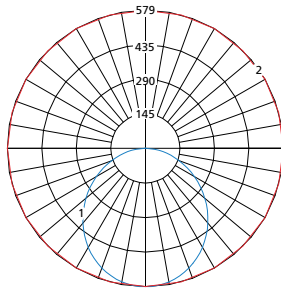
\* Nightlight function is an optional construction feature when ordered with option code NLW (2700K white) or NLA (amber).

PERFORMANCE SCALING, BY LAMP COLOR TUNING

CCT	Lamp Power				
	Lumen Scale Factor	Ra	R9	Rf	Rg
2700K	0.92	91	55	88	102
3000K	0.96	93	65	90	102
3500K	1.00	95	77	92	102
4000K	1.00	95	83	92	102
5000K	0.96	93	80	91	102



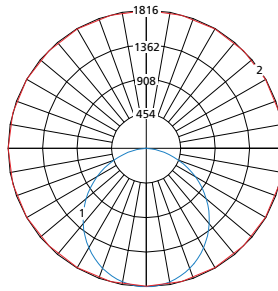
Model: MPCK-22-t-u-16LMT-27\_50K9-x-y-z Ambient On



Max Candela = 579 Located At Horizontal Angle = 0, Vertical Angle = 0

— 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
— 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

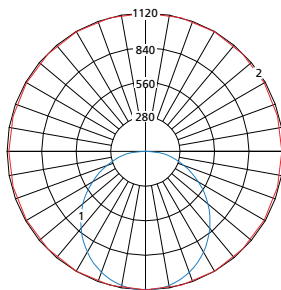
Model: MPCK-22-t-u-16LMT\_50LMT-27\_50K9-x-y-z All On



Max Candela = 1816 Located At Horizontal Angle = 0, Vertical Angle = 2.5

— 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
— 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

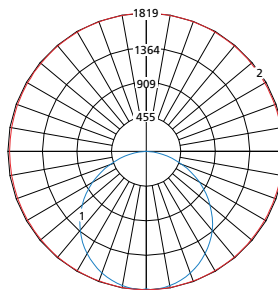
Model: MPCK-24-t-u-32LMT-27-50K9-x-y-z Ambient On



Max Candela = 1120 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.)

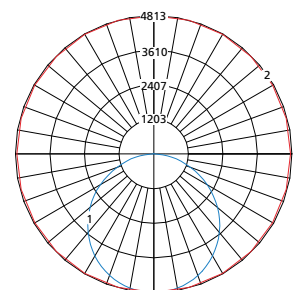
Model: MPCK-24-t-u-52LMT-27-50K9-x-y-z Reading On



Max Candela = 1819 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.)

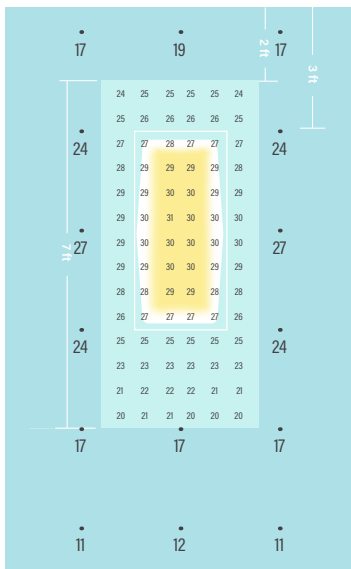
Model: MPCK-24-t-u-32LMT\_52LMT\_140LMT-27\_50K9-x-y-z All On



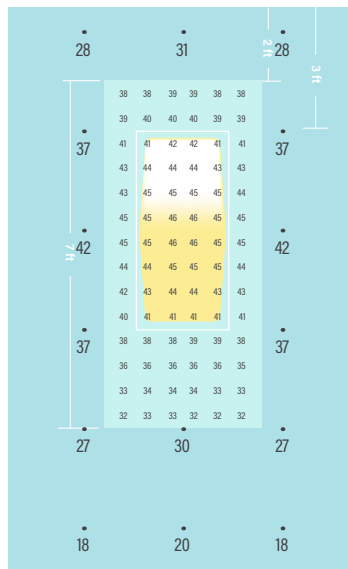
Max Candela = 4813 Located At Horizontal Angle = 90, Vertical Angle = 2.5

— 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
— 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

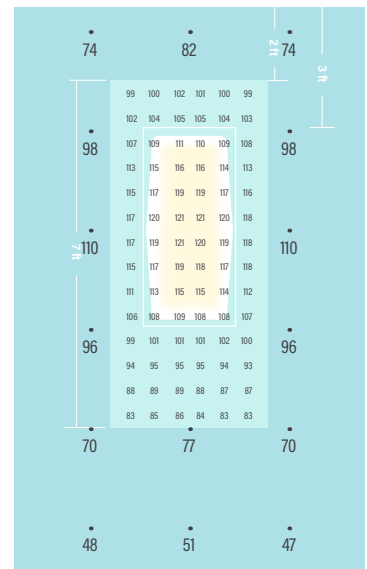
### Patient Room Example - MPCK-24 - Ambient - Tunable



### Patient Room Example - MPCK-24 - Reading - Tunable



### Patient Room Example - MPCK-24 - Exam- Tunable



The above illustrations depict calculations performed at 9'-0" ceiling height, center of luminaire 3'-0" from head of bed, and meet recommended industry standards for illuminance and uniformity.

Tunable White Calculated at 4000K, 90 CRI

	Ambient		Reading		Exam	
	Avg (fc)	Avg:Min	Avg (fc)	Avg:Min	Avg (fc)	Avg:Min
Bed	26.0	1.3	40.0	1.3	105.9	1.3
Floor	16.7	2.0	26.9	1.9	71.1	1.9

## DIMENSIONAL DATA

