

SOLID STATE AREA LIGHTING

MRB SERIES - PLED

FEATURES

Luminaire

One piece unitized precise heavy wall cast aluminum construction comprised of low copper (A356 alloy; <0.2% Cu) aluminum. Hood is fastened to the Housing with a stainless steel hinge and secured with a tool-less stainless steel latch 180° opposite the hinge. Driver/wiring access through top of Mounting Hub. Hub accommodates a 2 7/8" x 3" tenon. All exposed hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments and meet an IP66 rating.

LED Emitters

High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field installation.)

Amber LED's

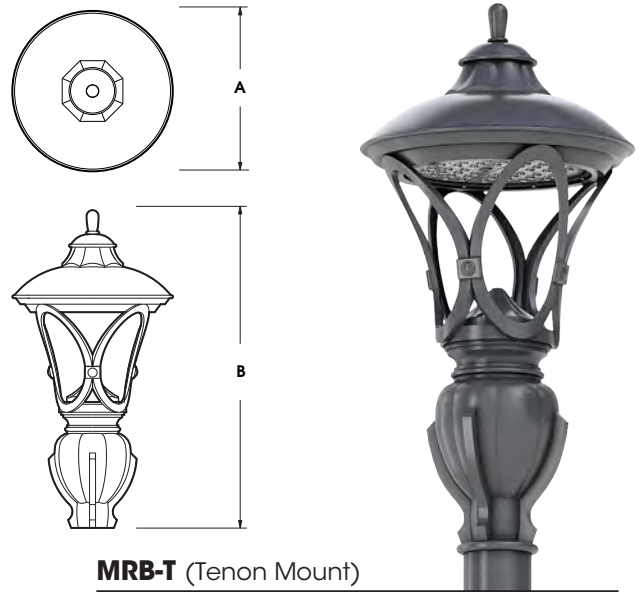
TRA (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

Finish

Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.

PROJECT NAME: _____

FIXTURE TYPE: _____

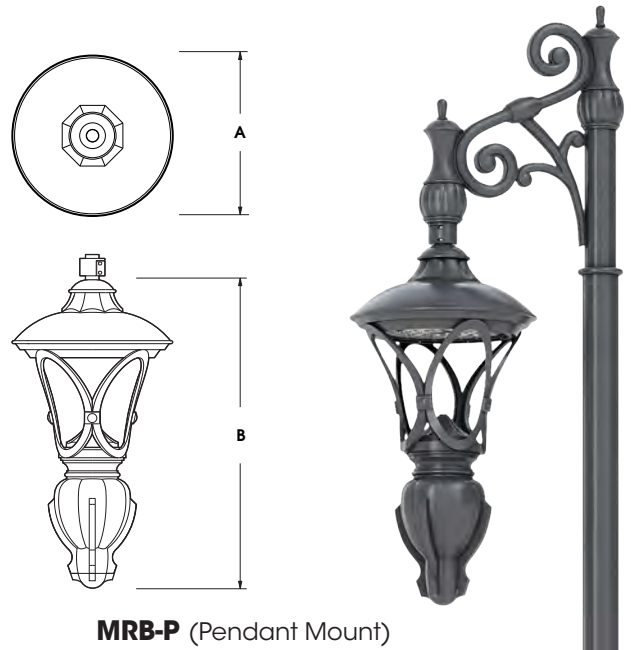


MRB-T (Tenon Mount)

(MRB21T shown)

Fitter supplied to fit over 2 7/8" X 3" (73mm X 76mm) tenon.

Fixture	A	B
MRB21T	21" (533mm)	40" (1016mm)
MRB18T	18" (457mm)	34" (864mm)
MRB12T	12" (305mm)	25" (635mm)



MRB-P (Pendant Mount)

(MRB21P shown)

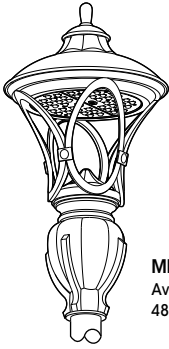
Fitter supplied to fit over 2 7/8" X 3" (73mm X 76mm) tenon.

Fixture	A	B
MRB21P	21" (533mm)	38" (965mm)
MRB18P	18" (457mm)	33" (838mm)
MRB12P	12" (305mm)	24" (610mm)

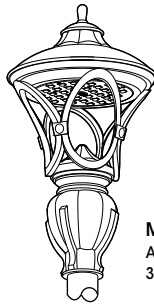
MRB Series - PLED

SPECIFICATIONS

PLED™ Modules



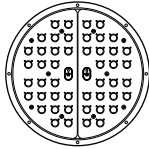
MRB21T E.P.A.= 1.54
Available in:
48 LED Module Max



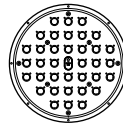
MRB18T E.P.A.= 1.24
Available in:
36 LED Module Max



MRB12T E.P.A.= 0.65
Available in:
20 LED Module Max



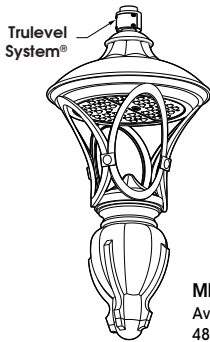
48 LED Module



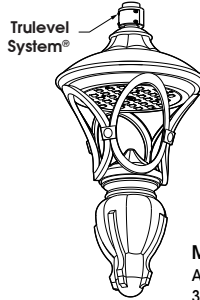
36 LED Module



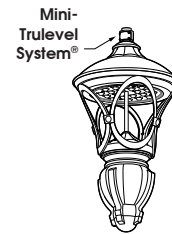
20 LED Module
Note: MRB12 LED Array has a center feed



MRB21P E.P.A.= 1.55
Available in:
48 LED Module Max

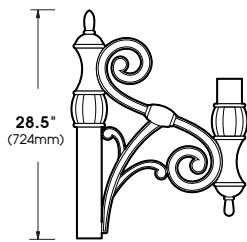


MRB18P E.P.A.= 1.25
Available in:
36 LED Module Max



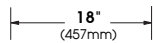
MRB12P E.P.A.= 0.66
Available in:
20 LED Module Max

Pole/Arm Mount



28.5"
(724mm)

XMB-T



28.5"
(724mm)

XMB-P

Trulevel System®

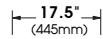
Wall Mount



WM-XMB1-UT¹



WM-XMB1-UP¹



WM-XMB1-DT¹



WM-XMB1-DP¹



WM-XMB2-UT²



WM-XMB2-UP²



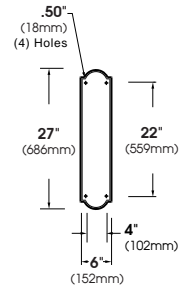
WM-XMB2-DT²



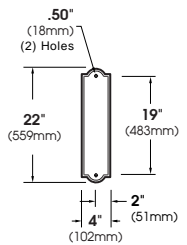
WM-XMB2-DP²

NOTES:
1 - XMB1 arms used with MRB21 and MRB18 models
2 - XMB2 arms used with MRB12 models

Wall Plate



MRB21 & MRB18

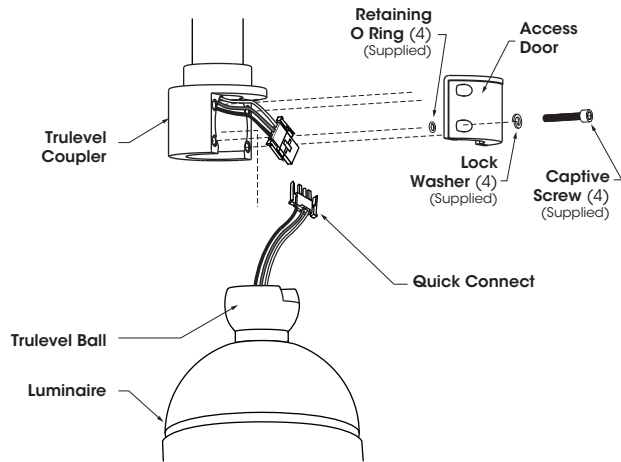


MRB12

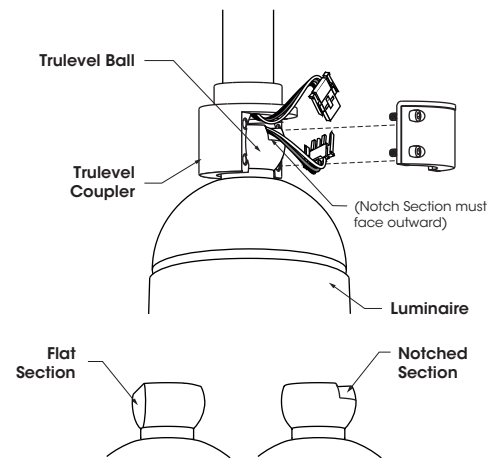
Extruded aluminum arm and cast aluminum wall bracket assembly provided with built in gasketed wire access for fixture/supply wire connection.

MRB Series - PLED

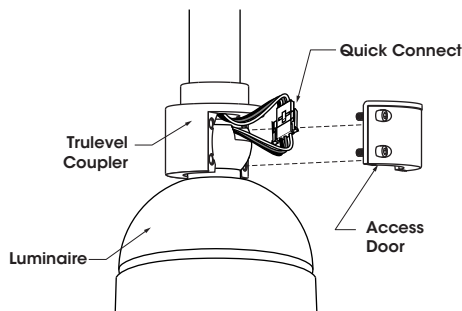
Trulevel System® Assembly for Installation of Pendant Mount Luminaires



1. Loosen (4) Captive Screws and remove Access Door from Trulevel Coupler, pull out Quick Connect from Trulevel Coupler and Trulevel Ball.

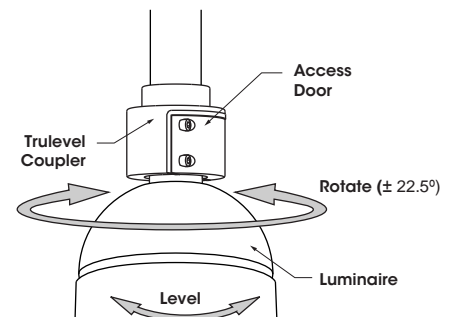


2. Place Trulevel Ball inside of Trulevel Coupler as illustrated.
 - A - Notched Section of Trulevel Ball must face outward as illustrated.
 - B - Flat Section of Trulevel Ball must face inward.



3. Connect Quick Connect components, push components inside of Trulevel Coupler cavity, replace Access Door and loosely secure, do not tighten.

Fixture will suspend without Access Door during installation.



4. Rotate (left to right $\pm 22.5^\circ$) and level Luminaire to desired position. Tighten Access Door.














(Tighten each bolt to recommended torque: **10 ft-lb, foot-pound**)

Trulevel Pendant Mount is intended to allow for fixture leveling, but is not intended to be "free-swinging" upon proper installation.

MRB Series - PLED

SPEC/ORDERING INFORMATION

Spec/Order Example: MRB18T/PLED-III-W/36LED-875mA/WW/FM/RAL-7004-T

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options	
Luminaire	Optics	LED	Voltage	Mounting	Finish	Options	
<input type="checkbox"/> MRB21T <input type="checkbox"/> MRB21P	PLED™ Distribution Type <input type="checkbox"/> Type II PLED-II  <input type="checkbox"/> Type II Front Row PLED-II-FR  <input type="checkbox"/> Type III Med. PLED-III-M  <input type="checkbox"/> Type III Wide PLED-III-W  <input type="checkbox"/> Type IV PLED-IV  <input type="checkbox"/> Type IV PLED-IV-FT  <input type="checkbox"/> Type V Narrow PLED-VSQ-N  <input type="checkbox"/> Type V Med. PLED-V-SQ-M  <input type="checkbox"/> Type V Wide PLED-V-SQ-W 	# of LEDs MRB21 <input type="checkbox"/> 48LED ¹ <input type="checkbox"/> 36LED <input type="checkbox"/> 20LED MRB18 <input type="checkbox"/> 36LED ¹ <input type="checkbox"/> 20LED MRB12 <input type="checkbox"/> 20LED ¹ NOTES: 1 - 875mA maximum 2 - 700mA, 875mA and 1050mA not for use with TRA LED's 3 - Narrow band Ambers have no Definable CCT equivalent 4 - Available in 350mA & 525mA drive currents only	Drive Current <input type="checkbox"/> 1050mA ² <input type="checkbox"/> 875mA ² <input type="checkbox"/> 700mA ² <input type="checkbox"/> 525mA <input type="checkbox"/> 350mA Color Temp - CCT <input type="checkbox"/> NW (4000K)* *Standard <input type="checkbox"/> CW (5000K) <input type="checkbox"/> WW (3000K) Other LED Colors Available Consult Factory Amber ³ <input type="checkbox"/> True Amber ⁴ TRA	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480	Post Top <input type="checkbox"/> FM Expansion Filter Flush Mount <input type="checkbox"/> PT Pole Tenon Arm Mount <input type="checkbox"/> 1 <input type="checkbox"/> 2-180 <input type="checkbox"/> 2-90 <input type="checkbox"/> 3-90 <input type="checkbox"/> 3-120 <input type="checkbox"/> 4-90 Wallmount <input type="checkbox"/> XMB1-U (MBR21 & MBR18)  <input type="checkbox"/> XMB1-D (MBR21 & MBR18)  <input type="checkbox"/> XMB2-U (MBR12)  <input type="checkbox"/> XMB2-D (MBR12) 	Standard Textured Finish <input type="checkbox"/> Black RAL-9005-T <input type="checkbox"/> White RAL-9003-T <input type="checkbox"/> Grey RAL-7004-T <input type="checkbox"/> Dark Bronze RAL-8019-T <input type="checkbox"/> Green RAL-6005-T For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S) Consult factor for custom colors	<input type="checkbox"/> Internal House Side Shield inc. LED Count (Example: HS-PLED/48) HS-PLED <input type="checkbox"/> Twist Lock Receptable Only TPR <input type="checkbox"/> 7-Pin Twist Lock Receptable Only TPR7 <input type="checkbox"/> High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) HLSW <input type="checkbox"/> Photo Cell + Voltage (Example: PC120V) PC+V <input type="checkbox"/> Single Fuse (120V, 277V) SF <input type="checkbox"/> Double Fuse (208V, 240V) DF <input type="checkbox"/> Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75ic) MS-F311

See USALTG.COM for additional arm styles

MRB Series - PLED

LED/ Electrical Guide

LED Count	Applied B-U-G Rating	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (HR)	Starting Temp.	System Watts	Volts	Max Input Amps
20	III B1-U0-G1 VSQ B2-U0-G0	20 PLED® Optical Module - 350mA	2023 - 2376	1922 - 2258	2124 - 2494	90,000+	-40°C	22	120 277 347	.18 .08 .06
20	III B1-U0-G1 VSQ B2-U0-G1	20 PLED® Optical Module - 525mA	2871 - 3373	2728 - 3204	3014 - A3541	90,000+	-40°C	33	120 277 347	.28 .12 .10
20	III B1-U0-G1 VSQ B3-U0-G1	20 PLED® Optical Module - 700mA	3602 - 4231	3422 - 4020	3781 - 4442	90,000+	-40°C	44	120 277 347	.37 .16 .13
20	III B1-U0-G1 VSQ B3-U0-G1	20 PLED® Optical Module - 875mA	4328 - 5084	4112 - 4830	4544 - 5338	90,000+	-40°C	55	120 277 347	.46 .20 .16
20	III B1-U0-G2 VSQ B3-U0-G1	20 PLED® Optical Module - 1050mA	5035 - 5915	4784 - 5619	5286 - 6210	90,000+	-40°C	66	120 277 347	.55 .24 .19
36	III B1-U0-G1 VSQ B3-U0-G1	36 PLED® Optical Module - 350mA	3642 - 4278	3641 - 4065	3824 - 4491	90,000+	-40°C	39.6	120 277 347	.33 .14 .11
36	III B2-U0-G2 VSQ B3-U0-G1	36 PLED® Optical Module - 525mA	5172 - 6075	4914 - 5772	5430 - 6377	90,000+	-40°C	59.4	120 277 347	.50 .21 .17
36	III B2-U0-G2 VSQ B3-U0-G2	36 PLED® Optical Module - 700mA	6485 - 7616	6161 - 7236	6808 - 7995	90,000+	-40°C	79.2	120 277 347	.66 .29 .23
36	III B2-U0-G2 VSQ B3-U0-G2	36 PLED® Optical Module - 875mA	7794 - 9154	7405 - 8697	8182 - 9610	90,000+	-40°C	99	120 277 347	.83 .36 .29
36	III B2-U0-G2 VSQ B4-U0-G2	36 PLED® Optical Module - 1050mA	9069 - 10651	8616 - 10119	9521 - 11183	90,000+	-40°C	118.8	120 277 347	.99 .43 .34
48	III B1-U0-G1 VSQ B3-U0-G1	48 PLED® Optical Module - 350mA	4857 - 5704	4614 - 5419	5099 - 5990	90,000+	-40°C	52.8	120 277 347	.44 .19 .15
48	III B2-U0-G2 VSQ B3-U0-G2	48 PLED® Optical Module - 525mA	6896 - 8100	6552 - 7696	7239 - 8504	90,000+	-40°C	79.2	120 277 347	.66 .29 .23
48	III B2-U0-G2 VSQ B3-U0-G2	48 PLED® Optical Module - 700mA	8645 - 10153	8214 - 9647	9075 - 10660	90,000+	-40°C	105.6	120 277 347	.88 .38 .30
48	III B2-U0-G2 VSQ B4-U0-G2	48 PLED® Optical Module - 875mA	10393 - 12207	9874 - 11597	10911 - 12816	90,000+	-40°C	132	120 277 347	1.10 .48 .38
True Amber LED - 590nm										
20	III B0-U0-G0 VSQ B1-U0-G0	20 PLED® Optical Module - 350mA	606 - 712			90,000+	-40°C	17	120 277 347	.14 .06 .05
20	III B0-U0-G0 VSQ B1-U0-G0	20 PLED® Optical Module - 525mA	861 - 1011			90,000+	-40°C	25.4	120 277 347	.21 .09 .07
36	III B0-U0-G0 VSQ B1-U0-G0	36 PLED® Optical Module - 350mA	1094 - 1284			90,000+	-40°C	30.5	120 277 347	.25 .11 .09
36	III B1-U0-G1 VSQ B1-U0-G0	36 PLED® Optical Module - 525mA	1552 - 1823			90,000+	-40°C	45.7	120 277 347	.38 .16 .13
48	III B1-U0-G0 VSQ B1-U0-G0	48 PLED® Optical Module - 350mA	1457 - 1711			90,000+	-40°C	40.7	120 277 347	.34 .15 .12
48	III B1-U0-G1 VSQ B2-U0-G0	48 PLED® Optical Module - 525mA	2069 - 2431			90,000+	-40°C	61	120 277 347	.51 .22 .18

- 1) Max Input Amps is the highest of starting, operating, or open circuit currents
- 2) System Watts includes the source watts and all driver components.
- 3) Lumen values for LED Modules vary according to the distribution type
- 4) Fuse value should be sufficient to protect all wiring components. For electronic driver and LED component protection, use 20KV surge suppressors.
- 5) L70(10K) – TM-21 6x rule applied

WARNING: All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

SOLID STATE AREA LIGHTING

MRB-CPA SERIES - PLED

PROJECT NAME: _____

FIXTURE TYPE: _____

FEATURES

Luminaire

One piece unitized precise heavy wall cast aluminum construction comprised of low copper (A356 alloy; <0.2% Cu) aluminum. Hood is fastened to the Housing with a stainless steel hinge and secured with a tool-less stainless steel latch 180° opposite the hinge. Clear Patterned Acrylic enclosure is gasketed at the fixture Mounting Hub and crown with an extruded closed cell silicone gasket. Driver/wiring access is inside the enclosure and accesses through the top of the Mounting Hub. Hub accommodates a 2 7/8" x 3" tenon. All exposed hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments and meet an IP66 rating.

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Amber LED's

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Finish

Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.



MRBT-CPA (Tenon Mount)

(MRB21T-CPA shown)

Patent pending

Fitter supplied to fit over 2 7/8" X 3" (73mm X 76mm) tennon.

Fixture	A	B
MRB21T-CPA	21" (533mm)	40" (1016mm)
MRB18T-CPA	18" (457mm)	34" (864mm)



MRBP-CPA (Pendant Mount)

(MRB21P-CPA shown)

Patent pending

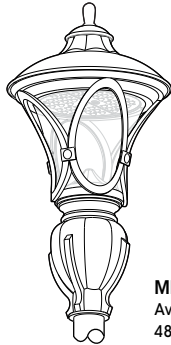
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MRB18P-CPA	18" (457mm)	33" (838mm)

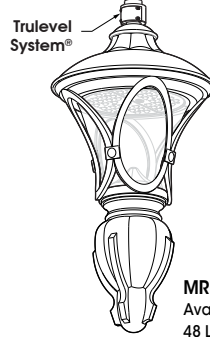
MRB-CPA Series - PLED

SPECIFICATIONS

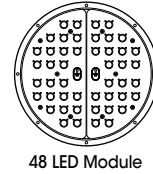
PLED™ Modules



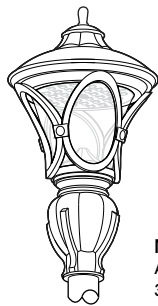
MRB21T-CPA E.P.A.= 1.94
Available in:
48 LED Module Max



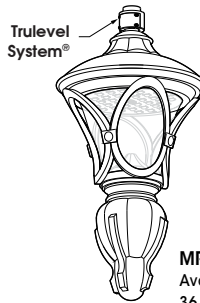
MRB21P-CPA E.P.A.= 1.95
Available in:
48 LED Module Max



48 LED Module



MRB18T-CPA E.P.A.= 1.52
Available in:
36 LED Module Max

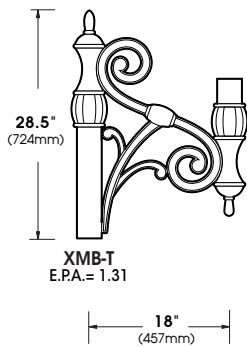


MRB18P-CPA E.P.A.= 1.53
Available in:
36 LED Module Max

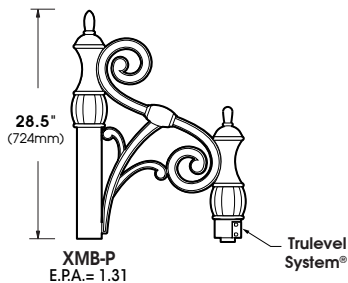


36 LED Module

Pole/Arm Mount



XMB-T
E.P.A.= 1.31



XMB-P
E.P.A.= 1.31

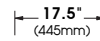
Wall Mount



WM-XMB1-UT
E.P.A.= 1.03



WM-MB1-UP
E.P.A.= 1.03

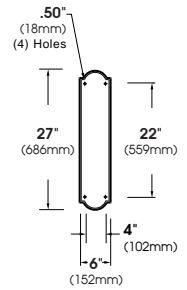


WM-XMB1-DT
E.P.A.= 1.03



WM-XMB1-DP
E.P.A.= 1.03

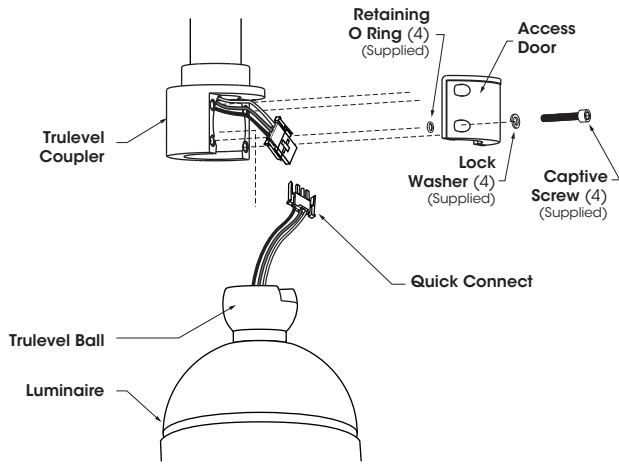
Wall Plate



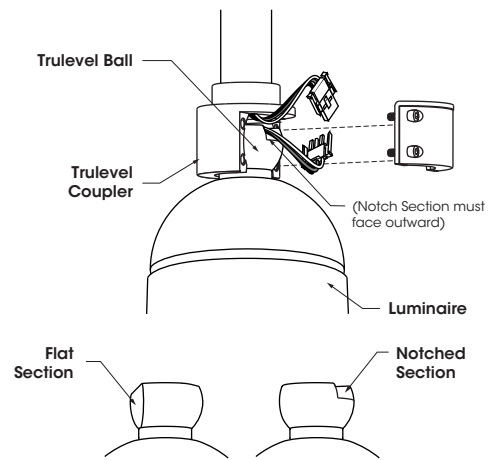
Extruded aluminum arm and cast aluminum wall bracket assembly provided with built in gasketed wire access for fixture/supply wire connection.

MRB-CPA Series - PLED

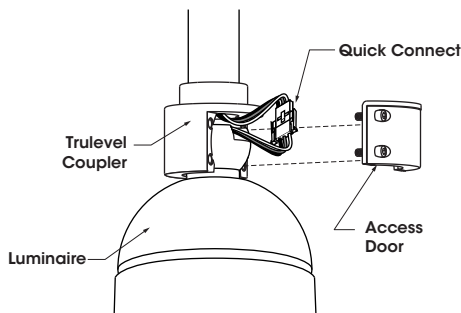
Trulevel System® Assembly for Installation of Pendant Mount Luminaires



1. Loosen (4) Captive Screws and remove Access Door from Trulevel Coupler, pull out Quick Connect from Trulevel Coupler and Trulevel Ball.

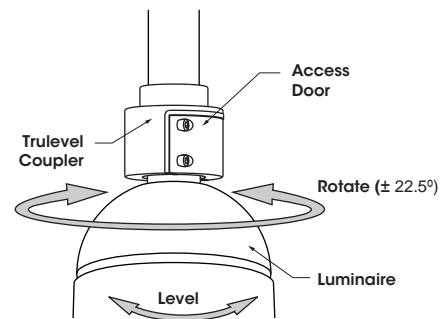


2. Place Trulevel Ball inside of Trulevel Coupler as illustrated.
 - A - Notched Section of Trulevel Ball must face outward as illustrated.
 - B - Flat Section of Trulevel Ball must face inward.



3. Connect Quick Connect components, push components inside of Trulevel Coupler cavity, replace Access Door and loosely secure, do not tighten.

Fixture will suspend without Access Door during installation.



4. Rotate (left to right $\pm 22.5^\circ$) and level Luminaire to desired position. Tighten Access Door.


















(Tighten each bolt to recommended torque: **10 ft-lb, foot-pound**)

Trulevel Pendant Mount is intended to allow for fixture leveling, but is not intended to be "free-swinging" upon proper installation.

MRB-CPA Series - PLED

SPEC/ORDERING INFORMATION

Spec/Order Example: MRB18T-CPA/PLED-II/36LED-700mA/NW/277/PT/RAL-9005-T

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	Optics	LED	Voltage	Mounting	Finish	Options
<input type="checkbox"/> MRB21T-CPA <input type="checkbox"/> MRB21P-CPA <input type="checkbox"/> MRB18T-CPA <input type="checkbox"/> MRB18P-CPA	<p>PLED* Distribution Type</p> <p><input type="checkbox"/> Type II PLED-II </p> <p><input type="checkbox"/> Type II Front Row PLED-II-FR </p> <p><input type="checkbox"/> Type III Med. PLED-III-M </p> <p><input type="checkbox"/> Type III Wide PLED-III-W </p> <p><input type="checkbox"/> Type IV PLED-IV </p> <p><input type="checkbox"/> Type IV PLED-IV-FT </p> <p><input type="checkbox"/> Type V Narrow PLED-VSQ-N </p> <p><input type="checkbox"/> Type V Med. PLED-VSQ-M </p> <p><input type="checkbox"/> Type V Wide PLED-VSQ-W </p>	<p># of LEDs</p> <p>MRB21-CPA</p> <p><input type="checkbox"/> 48LED¹</p> <p><input type="checkbox"/> 36LED</p> <p><input type="checkbox"/> 20LED</p> <p>MRB18-CPA</p> <p><input type="checkbox"/> 36LED¹</p> <p><input type="checkbox"/> 20LED</p> <p>Drive Current</p> <p><input type="checkbox"/> 1050mA²</p> <p><input type="checkbox"/> 875mA²</p> <p><input type="checkbox"/> 700mA²</p> <p><input type="checkbox"/> 525mA</p> <p><input type="checkbox"/> 350mA</p> <p>Color Temp - CCT</p> <p><input type="checkbox"/> NW (4000K)* * Standard</p> <p><input type="checkbox"/> CW (5000K)</p> <p><input type="checkbox"/> WW (3000K)</p> <p>Other LED Colors Available Consult Factory</p> <p><input type="checkbox"/> Amber³</p> <p><input type="checkbox"/> True Amber⁴ TRA</p> <p>NOTES:</p> <p>1 - 875mA maximum</p> <p>2 - 700mA, 875mA and 1050mA not for use with TRA LED's</p> <p>3 - Narrow band Ambers have no Definable CCT equivalent</p> <p>4 - Available in 350mA & 525mA drive currents only</p>	<p><input type="checkbox"/> 120</p> <p><input type="checkbox"/> 208</p> <p><input type="checkbox"/> 240</p> <p><input type="checkbox"/> 277</p> <p><input type="checkbox"/> 347</p> <p><input type="checkbox"/> 480</p>	<p>Post Top</p> <p><input type="checkbox"/> FM Expansion Fitter Flush Mount</p> <p><input type="checkbox"/> PT Pole Tenon</p> <p>Arm Mount</p> <p><input type="checkbox"/> 1 </p> <p><input type="checkbox"/> 2-180 </p> <p><input type="checkbox"/> 2-90 </p> <p><input type="checkbox"/> 3-90 </p> <p><input type="checkbox"/> 3-120 </p> <p><input type="checkbox"/> 4-90 </p> <p>Wallmount</p> <p><input type="checkbox"/> XMB1-U </p> <p><input type="checkbox"/> XMB1-D </p> <p>See USALTG.COM for additional arm styles</p>	<p>Standard Textured Finish</p> <p><input type="checkbox"/> Black RAL-9005-T</p> <p><input type="checkbox"/> White RAL-9003-T</p> <p><input type="checkbox"/> Grey RAL-7004-T</p> <p><input type="checkbox"/> Dark Bronze RAL-8019-T</p> <p><input type="checkbox"/> Green RAL-6005-T</p> <p>For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S)</p> <p>Consult factor for custom colors</p>	<p><input type="checkbox"/> Internal House Side Shield inc. LED Count (Example: HS-PLED/48) HS-PLED</p> <p><input type="checkbox"/> Twist Lock Receptable Only TPR</p> <p><input type="checkbox"/> 7-Pin Twist Lock Receptable Only TPR7</p> <p><input type="checkbox"/> High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) HLSW</p> <p><input type="checkbox"/> Photo Cell + Voltage (Example: PC120V) PC+V</p> <p><input type="checkbox"/> Single Fuse (120V, 277V) SF</p> <p><input type="checkbox"/> Double Fuse (208V, 240V) DF</p> <p><input type="checkbox"/> Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) MS-F311</p>

MRB-CPA Series - PLED

LED/ Electrical Guide

LED/ELECTRICAL GUIDE

LED Count	Applied B-U-G Rating	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (HR)	Starting Temp.	System Watts	Volts	Max Input Amps
20	III B1-U1-G1 VSQ B2-U1-G0	20 PLED® Optical Module - 350mA	1909 -	1813 -	2004 -	90,000+	-40°C	22	120	0.18
			2256	2143	2368				277	0.08
									347	0.06
20	III B1-U1-G1 VSQ B2-U1-G1	20 PLED® Optical Module - 525mA	2710 -	2574 -	2846 -	90,000+	-40°C	33	120	0.28
			3203	3043	3363				277	0.12
									347	0.10
20	III B1-U1-G1 VSQ B3-U1-G1	20 PLED® Optical Module - 700mA	3398 -	3228 -	3567 -	90,000+	-40°C	44	120	0.37
			4015	3814	4216				277	0.16
									347	0.13
20	III B1-U1-G1 VSQ B3-U1-G1	20 PLED® Optical Module - 875mA	4085 -	3881 -	4289 -	90,000+	-40°C	55	120	0.46
			4827	4586	5068				277	0.20
									347	0.16
20	III B1-U2-G2 VSQ B3-U1-G1	20 PLED® Optical Module - 1050mA	4752 -	4514 -	4989 -	90,000+	-40°C	66	120	0.55
			5617	5336	5897				277	0.24
									347	0.19
36	III B1-U3-G1 VSQ B2-U3-G1	36 PLED® Optical Module - 350mA	3436 -	3264 -	3607 -	90,000+	-40°C	39.6	120	0.33
			4061	3857	4263				277	0.14
									347	0.11
36	III B1-U3-G2 VSQ B3-U3-G1	36 PLED® Optical Module - 525mA	4879 -	4634 -	5122 -	90,000+	-40°C	59.4	120	0.50
			5766	5478	6054				277	0.21
									347	0.17
36	III B2-U3-G2 VSQ B3-U3-G2	36 PLED® Optical Module - 700mA	6116 -	5810 -	6421 -	90,000+	-40°C	79.2	120	0.66
			7228	6866	7591				277	0.29
									347	0.23
36	III B2-U3-G2 VSQ B3-U3-G2	36 PLED® Optical Module - 875mA	7353 -	6985 -	7721 -	90,000+	-40°C	99	120	0.83
			8690	8256	9124				277	0.36
									347	0.29
36	III B2-U3-G2 VSQ B3-U3-G2	36 PLED® Optical Module - 1050mA	8555 -	8127 -	8983 -	90,000+	-40°C	118.8	120	0.99
			10110	9604	10616				277	0.43
									347	0.34
48	III B1-U3-G2 VSQ B2-U3-G2	48 PLED® Optical Module - 350mA	4581 -	4352 -	4810 -	90,000+	-40°C	52.8	120	0.44
			5414	5144	5685				277	0.19
									347	0.15
48	III B2-U3-G2 VSQ B2-U4-G3	48 PLED® Optical Module - 525mA	6505 -	6180 -	6830 -	90,000+	-40°C	79.2	120	0.66
			7688	7303	8073				277	0.29
									347	0.23
48	III B2-U3-G2 VSQ B3-U4-G3	48 PLED® Optical Module - 700mA	8155 -	7747 -	8562 -	90,000+	-40°C	105.6	120	0.88
			9638	9156	10118				277	0.38
									347	0.30
48	III B2-U3-G3 VSQ B3-U4-G3	48 PLED® Optical Module - 875mA	9804 -	9313 -	10294 -	90,000+	-40°C	132	120	
			11586	11007	12166				277	
									347	
True Amber LED - 590nm										
20	III B0-U2-G1 VSQ B1-U2-G1	20 PLED® Optical Module - 350mA	573 -			90,000+	-40°C	17	120	0.14
			677						277	0.06
									347	0.05
20	III B0-U2-G1 VSQ B1-U2-G1	20 PLED® Optical Module - 525mA	813 -			90,000+	-40°C	25.4	120	0.21
			961						277	0.09
									347	0.07
36	III B0-U2-G1 VSQ B1-U2-G1	36 PLED® Optical Module - 350mA	1032 -			90,000+	-40°C	30.5	120	0.25
			1219						277	0.11
									347	0.09
36	III B1-U2-G1 VSQ B1-U2-G1	36 PLED® Optical Module - 525mA	1464 -			90,000+	-40°C	45.7	120	0.38
			1730						277	0.16
									347	0.13
48	III B1-U2-G1 VSQ B1-U2-G1	48 PLED® Optical Module - 350mA	1375 -			90,000+	-40°C	40.7	120	0.34
			1625						277	0.15
									347	0.12
48	III B1-U2-G1 VSQ B2-U2-G1	48 PLED® Optical Module - 525mA	1952 -			90,000+	-40°C	61	120	0.51
			2307						277	0.22
									347	0.18

- 1) Max Input Amps is the highest of starting, operating, or open circuit currents
- 2) System Watts includes the source watts and all driver components.
- 3) Lumen values for LED Modules vary according to the distribution type
- 4) Fuse value should be sufficient to protect all wiring components. For electronic driver and LED component protection, use 20KV surge suppressors.
- 5) L70(10K) – TM-21 6x rule applied

WARNING: All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

SOLID STATE AREA LIGHTING

MRB-WA SERIES - PLED

PROJECT NAME: _____

FIXTURE TYPE: _____

FEATURES

Luminaire and Enclosure

One piece unitized precise heavy wall cast aluminum construction comprised of low copper (A356 alloy; <0.2% Cu) aluminum. Hood is fastened to the Housing with a stainless steel hinge and secured with a tool-less stainless steel latch 180° opposite the hinge. White Acrylic enclosure is gasketed at the fixture Mounting Hub and crown with an extruded closed cell silicone gasket. Driver/wiring access is inside the enclosure and accesses through the top of the Mounting Hub. Hub accommodates a 2 7/8" x 3" tenon. All exposed hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. Panels are field replaceable and meet an IP66 rating.

PLED Optics with -WA Enclosure

- ASY-W1 distribution uses PLED-II Optic with -WA
- ASY-W2 distribution uses PLED-II/HSS Optic with -WA
- ASY-N1 distribution uses PLED-IV-FT Optic with -WA
- ASY-N2 distribution uses PLED-IV-FT/HSS Optic with -WA
- SYM distribution uses PLED-VSQ-M Optic with -WA

LED Emitters

High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field installation.)

Amber LED's

TRA (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

Finish

Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.



MRBT-WA (Tenon Mount)

(MRB21T-WA shown)

Patent pending

Fitter supplied to fit over 2 7/8" X 3" (73mm X 76mm) tenon.

Fixture	A	B
MRB21T-WA	21" (533mm)	40" (1016mm)
MRB18T-WA	18" (457mm)	34" (864mm)



MRBP-WA (Pendant Mount)

(MRB21P-WA shown)

Patent pending

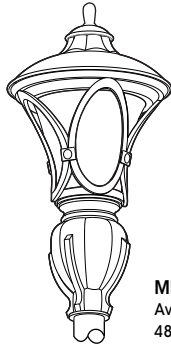
Fitter supplied to fit over 2 7/8" X 3" (73mm X 76mm) tenon.

Fixture	A	B
MRB21P-WA	21" (533mm)	38" (965mm)
MRB18P-WA	18" (457mm)	33" (838mm)

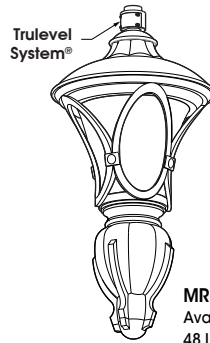
MRB-WA Series - PLED

SPECIFICATIONS

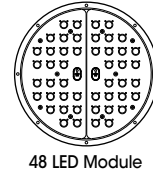
PLED™ Modules



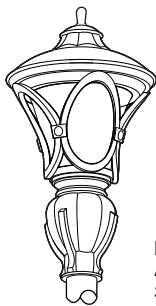
MRB21T-WA E.P.A.= 1.94
Available in:
48 LED Module Max



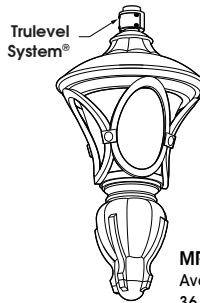
MRB21P-WA E.P.A.= 1.95
Available in:
48 LED Module Max



48 LED Module



MRB18T-WA E.P.A.= 1.52
Available in:
36 LED Module Max

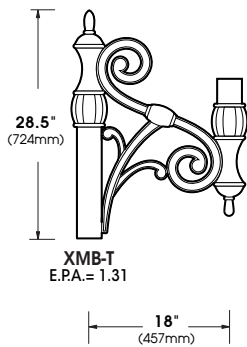


MRB18P-WA E.P.A.= 1.53
Available in:
36 LED Module Max

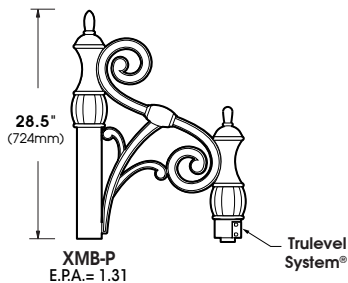


36 LED Module

Pole/Arm Mount



XMB-T
E.P.A.= 1.31



XMB-P
E.P.A.= 1.31

Wall Mount



WM-XMB1-UT
E.P.A.= 1.03



WM-MB1-UP
E.P.A.= 1.03

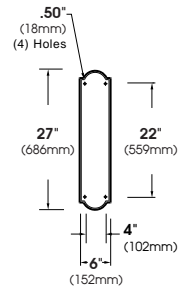


WM-XMB1-DT
E.P.A.= 1.03



WM-XMB1-DP
E.P.A.= 1.03

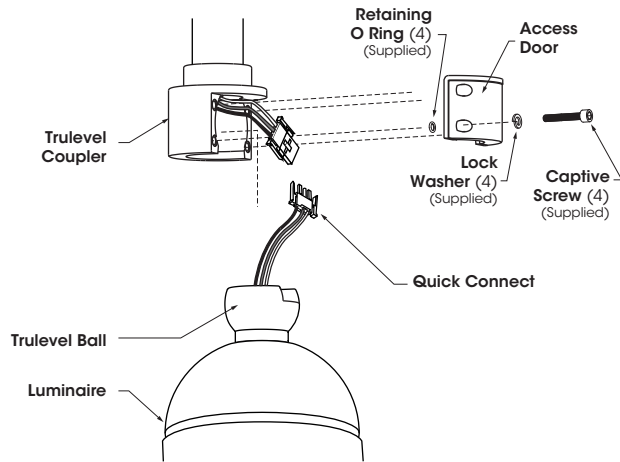
Wall Plate



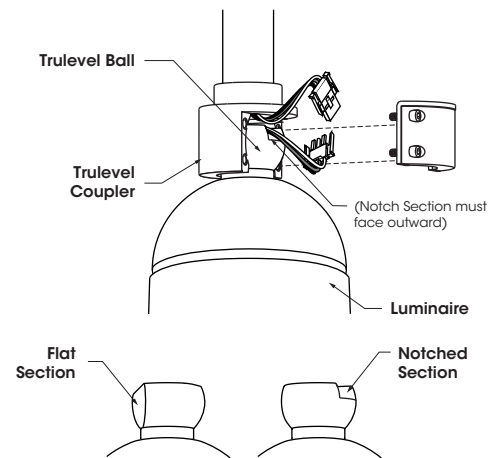
Extruded aluminum arm and cast aluminum wall bracket assembly provided with built in gasketed wire access for fixture/supply wire connection.

MRB-WA Series - PLED

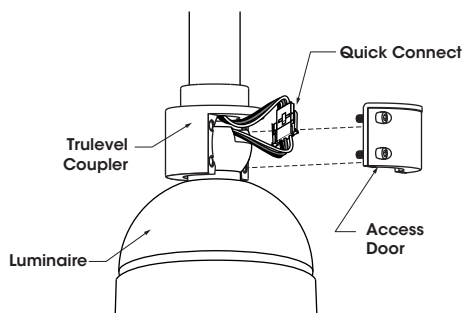
Trulevel System® Assembly for Installation of Pendant Mount Luminaires



1. Loosen (4) Captive Screws and remove Access Door from Trulevel Coupler, pull out Quick Connect from Trulevel Coupler and Trulevel Ball.

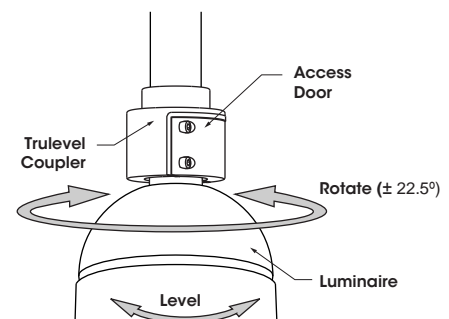


2. Place Trulevel Ball inside of Trulevel Coupler as illustrated.
 - A - Notched Section of Trulevel Ball must face outward as illustrated.
 - B - Flat Section of Trulevel Ball must face inward.



3. Connect Quick Connect components, push components inside of Trulevel Coupler cavity, replace Access Door and loosely secure, do not tighten.

Fixture will suspend without Access Door during installation.



4. Rotate (left to right $\pm 22.5^\circ$) and level Luminaire to desired position. Tighten Access Door.







(Tighten each bolt to recommended torque: **10 ft-lb, foot-pound**)

Trulevel Pendant Mount is intended to allow for fixture leveling, but is not intended to be "free-swinging" upon proper installation.

MRB-WA Series - PLED

SPEC/ORDERING INFORMATION

Spec/Order Example: MRB21T-WA/PLED-SYM/48LED-875mA/WW/FM/RAL-9005-T

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options	
Luminaire	Optics	LED	Voltage	Mounting	Finish	Options	
<input type="checkbox"/> MRB21T-WA <input type="checkbox"/> MRB21P-WA	<p>PLED™ Distribution Type</p> <input type="checkbox"/> Type Asymmetric PLED-ASY-W1 	<p># of LEDs</p> <p>MRB21-WA</p> <input type="checkbox"/> 48LED ¹ <input type="checkbox"/> 36LED <input type="checkbox"/> 20LED	<p>Drive Current</p> <input type="checkbox"/> 1050mA ² <input type="checkbox"/> 875mA ² <input type="checkbox"/> 700mA ² <input type="checkbox"/> 525mA <input type="checkbox"/> 350mA	<p>Color Temp - CCT</p> <input type="checkbox"/> NW (4000K)* *Standard <input type="checkbox"/> CW (5000K) <input type="checkbox"/> WW (3000K) Other LED Colors Available Consult Factory	<p>Post Top</p> <input type="checkbox"/> FM Expansion Filter Flush Mount <input type="checkbox"/> PT Pole Tenon <p>Arm Mount</p> <input type="checkbox"/> 1 <input type="checkbox"/> 2-180 <input type="checkbox"/> 2-90 <input type="checkbox"/> 3-90 <input type="checkbox"/> 3-120 <input type="checkbox"/> 4-90	<p>Standard Textured Finish</p> <input type="checkbox"/> Black RAL-9005-T <input type="checkbox"/> White RAL-9003-T <input type="checkbox"/> Grey RAL-7004-T <input type="checkbox"/> Dark Bronze RAL-8019-T <input type="checkbox"/> Green RAL-6005-T	<input type="checkbox"/> Internal House Side Shield inc. LED Count (Example: HS-PLED/48) HS-PLED <input type="checkbox"/> Twist Lock Receptable Only TPR <input type="checkbox"/> 7-Pin Twist Lock Receptable Only TPR7 <input type="checkbox"/> High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) HLSW <input type="checkbox"/> Photo Cell + Voltage (Example: PC120V) PC+V <input type="checkbox"/> Single Fuse (120V, 277V) SF <input type="checkbox"/> Double Fuse (208V, 240V) DF <input type="checkbox"/> Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75c) MS-F311
<input type="checkbox"/> MRB18T-WA <input type="checkbox"/> MRB18P-WA	<input type="checkbox"/> Type Asymmetric PLED-ASY-N1  <input type="checkbox"/> Type Asymmetric PLED-ASY-N2 w/HouseSide Shield  <input type="checkbox"/> Type Symmetric PLED-SYM 	<p>MRB18-WA</p> <input type="checkbox"/> 36LED ¹ <input type="checkbox"/> 20LED	<p>Amber³</p> <input type="checkbox"/> True Amber ⁴ TRA	<p>Wallmount</p> <input type="checkbox"/> XMB1-U  <input type="checkbox"/> XMB1-D 	<p>For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S)</p> <p>Consult factor for custom colors</p>		
<p>NOTES:</p> <p>1 - 875mA maximum</p> <p>2 - 700mA, 875mA and 1050mA not for use with TRA LED's</p> <p>3 - Narrow band Ambers have no Definable CCT equivalent</p> <p>4 - Available in 350mA & 525mA drive currents only</p>							

See USALTG.COM for additional arm styles

MRB-WA Series - PLED

LED/ Electrical Guide

LED Count	Applied B-U-G Rating	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (HR)	Starting Temp.	System Watts	Volts	Max Input Amps
20	III B1-U3-G1 VSQ B1-U3-G1	20 PLED® Optical Module - 350mA	1139 - 1653	1082 - 1569	1195 - 1735	90,000+	-40°C	22	120 277 347	0.18 0.08 0.06
20	III B1-U3-G2 VSQ B1-U3-G2	20 PLED® Optical Module - 525mA	1617 - 2347	1536 - 2229	1698 - 2464	90,000+	-40°C	33	120 277 347	0.28 0.12 0.10
20	III B1-U3-G2 VSQ B1-U3-G2	20 PLED® Optical Module - 700mA	2027 - 2942	1926 - 2794	2129 - 3089	90,000+	-40°C	44	120 277 347	0.37 0.16 0.13
20	III B1-U3-G2 VSQ B2-U3-G2	20 PLED® Optical Module - 875mA	2437 - 3537	2315 - 3360	2559 - 3713	90,000+	-40°C	55	120 277 347	0.46 0.20 0.16
20	III B1-U3-G3 VSQ B2-U3-G2	20 PLED® Optical Module - 1050mA	2836 - 4115	2694 - 3909	2977 - 4320	90,000+	-40°C	66	120 277 347	0.55 0.24 0.19
36	III B1-U3-G2 VSQ B1-U3-G2	36 PLED® Optical Module - 350mA	2050 - 2974	1948 - 2825	2153 - 3123	90,000+	-40°C	39.6	120 277 347	0.33 0.14 0.11
36	III B1-U3-G3 VSQ B2-U3-G3	36 PLED® Optical Module - 525mA	2911 - 4223	2766 - 4011	3056 - 4434	90,000+	-40°C	59.4	120 277 347	0.50 0.21 0.17
36	III B2-U4-G3 VSQ B2-U4-G3	36 PLED® Optical Module - 700mA	3949 - 5293	3467 - 5028	3832 - 5558	90,000+	-40°C	79.2	120 277 347	0.66 0.29 0.23
36	III B2-U4-G3 VSQ B2-U4-G3	36 PLED® Optical Module - 875mA	4388 - 6364	4168 - 6046	4607 - 6682	90,000+	-40°C	99	120 277 347	0.83 0.36 0.29
36	III B2-U4-G3 VSQ B2-U4-G3	36 PLED® Optical Module - 1050mA	5105 - 7405	4850 - 7034	8983 - 10616	90,000+	-40°C	118.8	120 277 347	0.99 0.43 0.34
48	III B1-U3-G3 VSQ B2-U3-G2	48 PLED® Optical Module - 350mA	2734 - 3965	2597 - 3767	2870 - 4163	90,000+	-40°C	52.8	120 277 347	0.44 0.19 0.15
48	III B2-U4-G3 VSQ B2-U4-G3	48 PLED® Optical Module - 525mA	3882 - 5631	3687 - 5349	4075 - 5912	90,000+	-40°C	79.2	120 277 347	0.66 0.29 0.23
48	III B2-U4-G3 VSQ B3-U4-G3	48 PLED® Optical Module - 700mA	4866 - 7058	4623 - 6705	5109 - 7411	90,000+	-40°C	105.6	120 277 347	0.88 0.38 0.30
48	III B2-U4-G3 VSQ B3-U4-G3	48 PLED® Optical Module - 875mA	5850 - 8485	5557 - 8060	6142 - 8909	90,000+	-40°C	132	120 277 347	1.10 0.48 0.38

True Amber LED - 590nm

20	III B0-U3-G1 VSQ B0-U3-G1	20 PLED® Optical Module - 350mA				90,000+	-40°C	17	120 277 347	
20	III B0-U3-G1 VSQ B1-U3-G1	20 PLED® Optical Module - 525mA				90,000+	-40°C	25.4	120 277 347	
36	III B0-U3-G1 VSQ B1-U3-G1	36 PLED® Optical Module - 350mA				90,000+	-40°C	30.5	120 277 347	
36	III B1-U3-G1 VSQ B1-U3-G1	36 PLED® Optical Module - 525mA				90,000+	-40°C	45.7	120 277 347	
48	III B1-U3-G1 VSQ B1-U3-G1	48 PLED® Optical Module - 350mA				90,000+	-40°C	40.7	120 277 347	
48	III B1-U3-G1 VSQ B1-U3-G1	48 PLED® Optical Module - 525mA				90,000+	-40°C	61	120 277 347	

- 1) Max Input Amps is the highest of starting, operating, or open circuit currents
- 2) System Watts includes the source watts and all driver components.
- 3) Lumen values for LED Modules vary according to the distribution type
- 4) Fuse value should be sufficient to protect all wiring components. For electronic driver and LED component protection, use 20KV surge suppressors.
- 5) L70(10K) – TM-21 6x rule applied

WARNING: All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.