

VersaTEK Large LED Site & Area Series

VTLSA Specification Data Sheet

Luminaire Data

Weight 30.0 lbs [13.6 kg] ('SPM' square pole arm mount)
 30.8 lbs [14.0 kg] ('RPM' round pole arm mount)
 30.6 lbs [13.9 kg] ('MAF' mast arm fitter mount)



Ordering Information

Sample Catalog No. VTLSA-216A-MV-40K8-T3R-WH-CF-P7-SPM-D4I-TLR4U-TB-SP2-WL1-PWRD-SF277

Product	LED Code	Voltage	Color Temp CRI	Optical Distribution	Finish*	Performance Code	Mounting Options
VTLSA VersaTEK Large Site & Area	216A 216 LEDs Gen-A	MV 120-277V HV 347-480V	27K7 2700K, 70CRI	NR Narrow Roadway	BK Black	P1	SPM Universal Square Pole Arm Mount
			30K7 3000K, 70CRI	MR Medium Roadway	DB1 Dark Bronze (RAL8019)	P2	RPM Universal Round Pole Arm Mount
			40K7 4000K, 70CRI	WR Wide Roadway	WH White	P3	MAF Horizontal Mast Arm Fitter (compatible w/ 1-5/8", 2-3/8" and 3" O.D. tenons)
			50K7 5000K, 70CRI	T2R Type-2 (regular)	GY Gray	P4	WM Wall Mount Fixed (compatible w/ 3" & 4" square/octagonal recessed J-boxes)
			30K8 ¹ 3000K, 80CRI	T2F Type-2 (forward)	NA ² Natural Aluminum	P5	WMSC Wall Mount Fixed w/ Surface Conduit J-Box
			40K8 ¹ 4000K, 80CRI	T3R Type-3 (regular)	CF ² Coastal Finish	P6	AWM Adjustable Wall Mount (compatible w/ 3" & 4" square/octagonal recessed J-boxes)
			50K8 ¹ 5000K, 80CRI	T3F Type-3 (forward)	*Consult factory for custom finish options, pricing & leadtimes.	P7	AWMSC Adjustable Wall Mount w/ Surface Conduit J-Box
			T4R Type-4 (regular)	(see Page 3 for details)		ASPM Universal Square Pole Adjustable Arm Mount	
			T4F Type-4 (forward)			ARPM Universal Round Pole Adjustable Arm Mount	
			T5 Type-5				
AFR Auto Front Row							
ORR Optics Rotated Right							
ORL Optics Rotated Left							

Driver & Control Options		General Options		General Accessories*	
D4I ³	DALI D4i Driver	TFL	Tamper free latch (driver electrical door)	TBS-VTL	Top, Bottom Shield
TLR4U ^{3,4}	DALI 4-PIN Twist Lock Receptacle (upper of housing receptacle location)	TB	3-position Terminal Block	LRS-VTL	Left, Right Side Shield
TLR4L ^{3,4}	DALI 4-PIN Twist Lock Receptacle (lower driver door receptacle location)	SP2	20kV/10kA Extreme Surge, Fail-to-On	4SS-VTL	4-sided Shield
PCR7CR ^{3,9}	ANSI 7-wire Control Ready Receptacle	LSSP2	20kV/10kA Extreme Surge, Fail-to-Off	BDS-VTL	Barn Door Shield
SC	Shorting Cap (factory installed)	WL	Wattage Label, ANSI C136.15-2015 compliant	VS-VTL	Poly Vandal Shield
LLPC ⁵	Long Life Photocontrol	WL1	Wattage Label, ANSI C136.15-2020 compliant	WG-VTL	Wire Guard
PS ⁶	Field Adjustable Performance Selector	DSC	Optional Driver Door Safety Cable	BLS-VTL	Enhanced Backlight Shield
PND1 ⁷	Part Night Dimming V1	PWRD	Power Door Option (tool-free removable door w/ serviceable electrical items)	FSS-VTL	Front Side Shield
PND2 ⁷	Part Night Dimming V2	SFXXX ¹¹	Single Fuse ('XXX' = specify 120, 277, 347V)	CSS-VTL	Cul-de-sac Shield
PND3 ⁷	Part Night Dimming V3	DFXXX ¹¹	Double Fuse ('XXX' = specify 208, 240, 480V)	BSK	Bird Deterrent Spider Kit
MSL3 ^{8,9}	Motion Sensor w/ L3 Lens	BLS	Enhanced Back Light Shield (factory installed)	LLPCMV	Long Life Photocontrol MV
MSL7 ^{8,9}	Motion Sensor w/ L7 Lens	FSS	Front Side Shield (factory installed)	LLPCHV	Long Life Photocontrol HV
MSL3P ^{8,10}	Motion Sensor w/ L3 Lens w/ PCR7	CSS	Cul-de-sac Shield (factory installed)	FSIR100	MS Configuration Tool
MSL7P ^{8,10}	Motion Sensor w/ L7 Lens w/ PCR7				

*Accessories are ordered & shipped separately, not to be included in the luminaire's catalog number. (requires field installation)

1. 80CRI option only available in 3000K, 4000K & 5000K CCTs and may have longer leadtimes (contact factory). 2. Contact factory for 'NA-CF' Natural Aluminum Coastal Finish availability (extended leadtimes may apply).
 3. For full 100% D4i DALI functionality a 'PCR7CR', 'TLR4U' or 'TLR4L' must be selected w/ 'D4I' DALI driver option. DALI compatible node or sensor (by others).
 4. 'TLR4U' & 'TLR4L' twist lock receptacle options requires 'D4I' driver option to be selected. 5. 'LLPC' requires 'PCR7CR' option to be selected (does not ship installed, included w/ luminaire).
 6. 'PS' Performance Selector enables field adjustable light output dimming control from the specified Performance Code (see table on pg.3 for details).
 7. 'PND' options only available w/ 'MV' 120-277V (contact factory for 'HV' 347-480V availability). 8. Motion Sensor options only available w/ 'SPM', 'RPM', 'MAF', 'WM' and 'WMSC' horizontal mounting options.
 9. 'MSL3', 'MSL7' motion sensors require secondary controls for ON/OFF capability (ex. time clock or 0-10V by others). Contact factory for Motion Sensor availability w/ 'PCR7CR' control ready receptacle for use with wireless 7-PIN control node (by others).
 10. 'MSL3P', 'MSL7P' motion sensors includes a PCR7 photocontrol receptacle for use with a twist lock photocontrol for ON/OFF capability (for use with our 'LLPC' or photocontrol by others, PINs 6 & 7 are not wired for controls, not compatible w/ wireless nodes).
 11. For single or double fusing, 'XXX' must specify required voltage.

Luminaire Specifications

Housing & Construction

Rugged grade A360 die-cast aluminum housing, lens and door frame (<0.6% copper). Housing includes integral heatsink fins and (3) pass-thru convective cooling slots between the LED array heatsink and driver compartment for enhanced cooling and maximum thermal management to maximize LED platform and electrical component lifetime. Electrical access door provides access to electrical components via two corrosion resistant stainless-steel tool-free latches (tamper free latch option 'TFL' is available). Door can be removed without the use of tools. Optional 'PWRD' Power Door mounts all serviceable electrical components on the door with tool-free removal for easy field maintenance or replacement. All exposed hardware and fasteners are corrosion resistant stainless-steel. Entire luminaire is IP66 rated.

Light Emitting Diodes

Hi-flux/Hi-power white LEDs produce a minimum of 90% of initial lumen output at 100,000 hours of life based on IES TM-21 (at 40°C). LEDs are tested in accordance with IES LM-80 testing procedures. IES TM-21 lumen maintenance life projection is based on 6X the duration of the LED's IES LM-80 performance data. LED correlated color temperature options of 2700K, 3000K, 4000K, or 5000K @ 70CRI or 80CRI (2700K is 70CRI only). LEDs are 100% mercury and lead free.

Site & Area and Wall Mounting Options

All site & area and wall mounting options are constructed of rugged A360 die-cast aluminum. Universal/retrofit square pole 'SPM', round pole 'RPM' and adjustable square 'ASPM', adjustable round 'ARPM' arm mount options can accept bolt spacings from 1-1/2" to 5-1/4" and are designed for quick and easy single person installation. Horizontal mast arm fitter 'MAF' is designed to install to horizontal 1-5/8", 2-3/8" and 3" O.D. tenons. Fixed 'WM' and adjustable 'AWM' wall mount options mount to recessed 3" or 4" square or octagonal recessed J-boxes (by others). Surface conduit wall mount options 'WMSC' and 'AWMSC' includes (4) 3/4" NPT thru-wire taps with plugs. Mounting provisions meet 3G vibration per ANSI C136.31-2010 Normal Application, Bridge & Overpass.

Optical Systems

All Micro-lens optical systems are fully sealed to maintain an IP66 rating. All Site & Area and Roadway optical distributions produce 0% total lumens above 90° when installed horizontally (BUG Rating, U=0). Auto Front Row (AFR) optics are designed to enhance light levels at dealership's site perimeter while minimizing wattage and backlight. Multiple glare and light trespass shielding options and accessories are available (see 'Ordering Information' for details).

Photometry

Luminaires photometrics are tested by certified independent testing laboratories in accordance with IES LM-79 testing procedures.

Electrical

Rated life of electrical components is 100,000 hours. Standard 0-10V dimmable drivers use an isolated power supply with 6kV integral surge standard. Power supply features a minimum power factor of 0.90 and <20% Total Harmonic Distortion (THD). EMC meets or exceeds FCC CFR Part 15. Optional DALI D4i certified LED drivers also available, which complies with IEC 62386 and ANSI C137.4 and DiiA. Optional 3-position terminal block accommodates 6 to 16AWG wire. Standard surge protection (10kV/5kA Surge, Fail-to-On) complies with IEEE/ANSI C62.41 and ANSI C136.2-2015. Optional 'SP2' and 'LSSP2' provides (20kV/10kA) extreme level surge protection.

Controls

ANSI C136.41 7-wire controls ready photocontrol receptacle 'PCR7CR' option is available (wireless control module/node by others). Photocontrol receptacle has a tool-less rotatable base with a positive lock to not allow for over-rotation and possible damage to the receptacle. Optional, DALI D4i and Part Night Dimming driver configurations are also available for added controllability and design flexibility. DALI compatible 'TLR4U' and 'TLR4L' 4-PIN twist lock receptacle options available (wireless DALI control nodes or sensors by others). Integral motion sensor options are available for horizontal site & area and fixed wall mounting options only. Please refer to pg.7 for additional motion sensor specifications and ordering details.

Field Adjustability

Optional Performance Selector 'PS' is an integral 8-step fixed position dial allowing field adjustable lumen and wattage dimming control for added project and design versatility to meet installation specific requirements. The specified Performance Code provides maximum lumen output and will be factory set when the 'PS' option is selected.

Finish

Housing receives a fade and abrasion resistant polyester powder coat finish with 3.0 mil nominal thickness. Finish tested to withstand 5000 hours in salt spray exposure per ASTM B117 and Coastal Finish per ASTM G85. Finish tested 500 hours in UV exposure per ASTM G154 and meets ASTM D523 gloss retention.

Listings/Ratings/Labels

Luminaires are UL listed for use in wet locations in the United States and Canada and are rated IP66. DesignLights Consortium™ Premium Classification qualified product. Horizontally installed Site & Area luminaire configurations are International Dark Sky Association listed. Luminaires are qualified to operate at ambient temperatures of -40°C to 50°C. (-40°F to 122°F)

Quality Control

Every luminaire is assembled in the USA and is performance tested before and after a 2-hour burn-in period.

Warranty

10-year limited warranty is standard on luminaire and components. 5-year limited warranty on luminaires and components with a motion sensor. See LEOTEK.com for warranty details, terms and conditions.

Standards

Luminaire complies with:
ANSI: C136.2, C136.3, C136.10, C136.13, C136.15, C136.22, C136.31, C136.35, C136.37, C136.41, C62.41, C78.377, C82.77
Other: FCC 47 CFR, IEC 60598, ROHS II, UL 1449, UL 1598

Color Specifications

Order Code	Color	RAL #	Pantone Equivalent
GY	Gray	7040	429C
BK	Black	9004	426C
DB1	Dark Bronze	8019	412
WH	White	9003	11-0601
NA	Natural Aluminum	9006	N/A

Nominal Performance Data 2700K *(IES Type-2R optic, 70CRI, 25°C ambient)*

All data shown is nominal. Normal tolerance +/- 10% due to factors that include distribution type, LED bin variance and ambient temperatures.

LED Code	Performance Code	Drive Current (mA)	System Wattage (W)	Delivered Lumens (Lm) ¹	Efficacy (Lm/W)
216A	P1	840	180	30,132	167
	P2	480	211	34,224	162
	P3	600	263	42,074	160
	P4	660	290	45,921	158
	P5	720	317	49,604	156
	P6	780	345	53,207	154
	P7	840	373	56,783	152

Nominal Performance Data 3000K *(IES Type-2R optic, 70CRI, 25°C ambient)*

All data shown is nominal. Normal tolerance +/- 10% due to factors that include distribution type, LED bin variance and ambient temperatures.

LED Code	Performance Code	Drive Current (mA)	System Wattage (W)	Delivered Lumens (Lm) ¹	Efficacy (Lm/W)
216A	P1	840	180	32,501	181
	P2	480	211	36,905	175
	P3	600	263	45,368	173
	P4	660	290	49,550	171
	P5	720	317	53,668	169
	P6	780	345	57,654	167
	P7	840	373	61,576	165

Nominal Performance Data 4000K & 5000K *(IES Type-2R optic, 70CRI, 25°C ambient)*

All data shown is nominal. Normal tolerance +/- 10% due to factors that include distribution type, LED bin variance and ambient temperatures.

LED Code	Performance Code	Drive Current (mA)	System Wattage (W)	Delivered Lumens (Lm) ¹	Efficacy (Lm/W)
216A	P1	840	180	34,402	191
	P2	480	211	39,347	186
	P3	600	263	48,464	184
	P4	660	290	52,923	182
	P5	720	317	57,295	181
	P6	780	345	61,580	178
	P7	840	373	65,674	176

Field Adjustable Performance Selector 'PS'

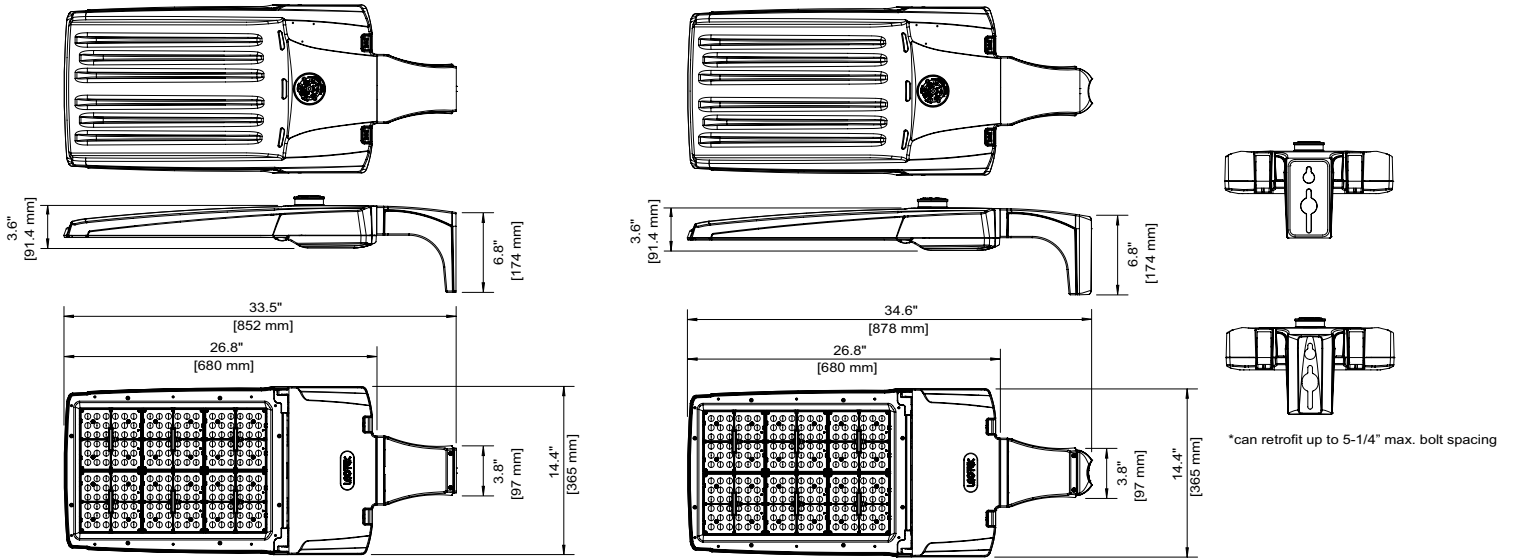
The optional Performance Selector is an integral dial that allows for field adjustable lumen/wattage dimming control for added design versatility. Normal tolerance +/- 5%.

PS Position	Lumen Output %	P1 Wattage (W)	P2 Wattage (W)	P3 Wattage (W)	P4 Wattage (W)	P5 Wattage (W)	P6 Wattage (W)	P7 Wattage (W)
8	100%	180	211	263	290	317	345	373
7	90%	159	187	233	257	281	305	330
6	80%	143	168	209	231	252	275	297
5	70%	124	145	181	200	218	237	257
4	60%	108	127	159	174	191	207	224
3	50%	89	104	130	144	157	171	185
2	40%	71	83	104	114	125	136	147
1	30%	53	62	78	86	94	102	110

Mounting Option Details & Dimensional Information

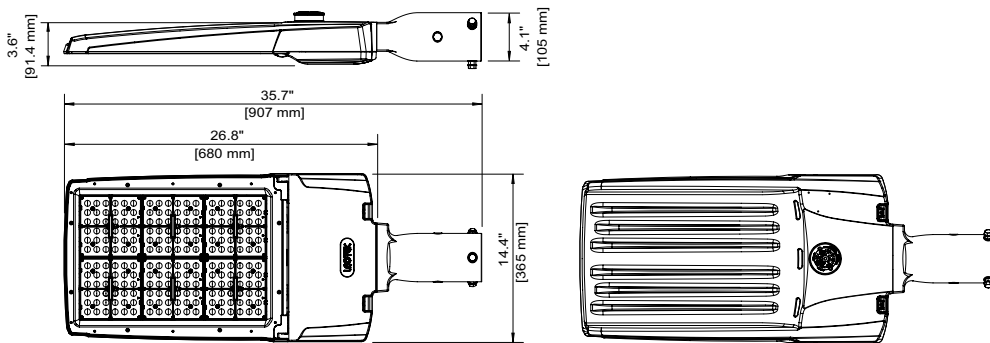
'SPM' Square & 'RPM' Round Pole Arm Mount*

(quick mount arm can retrofit up to 5.25" max. bolt spacing w/ no drilling required)



'MAF' Horizontal Mast Arm Fitter Mount*

(3/8" stainless steel thru-bolt & nut is included)

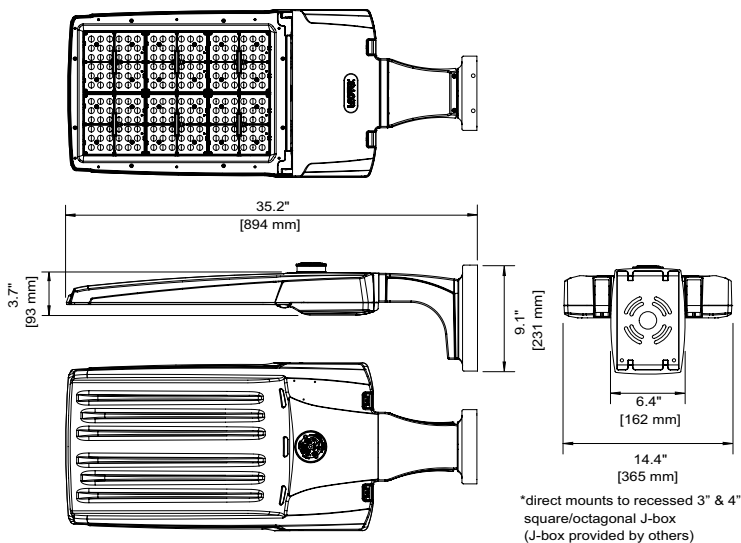


*compatible w/ 1-5/8" , 2-3/8" & 3" O.D. tenons

Mounting Option Details & Dimensional Information *(continued)*

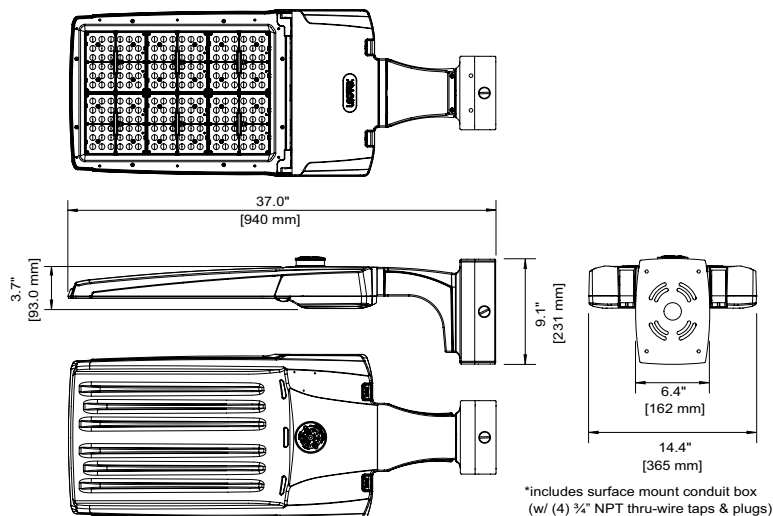
'WM' Wall Mount Fixed*

(mounts to recessed J-box, shown w/ optional 'PCR7CR')



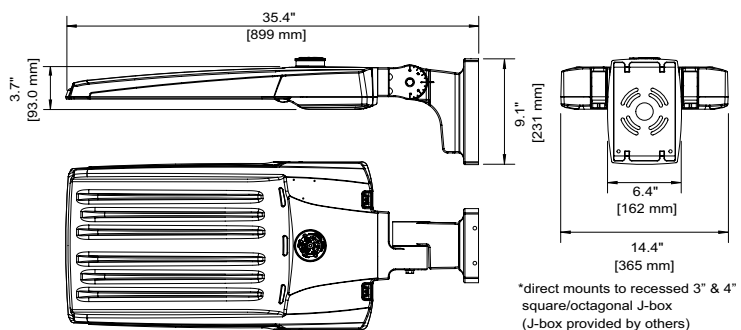
'WMSC' Wall Mount Fixed w/ Surface Conduit*

(includes surface mount 3/4" conduit J-box, shown w/ optional 'PCR7CR')



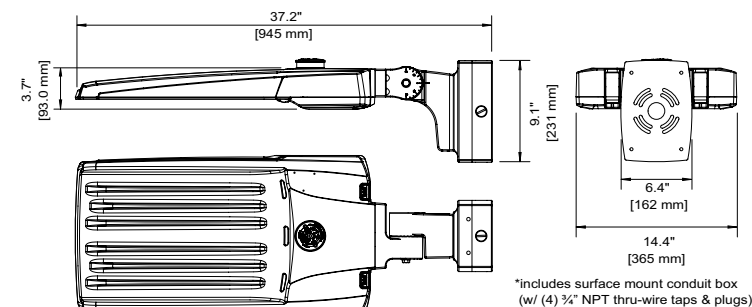
'AWM' Adjustable Wall Mount*

(mounts to recessed J-box, shown w/ optional 'PCR7CR')



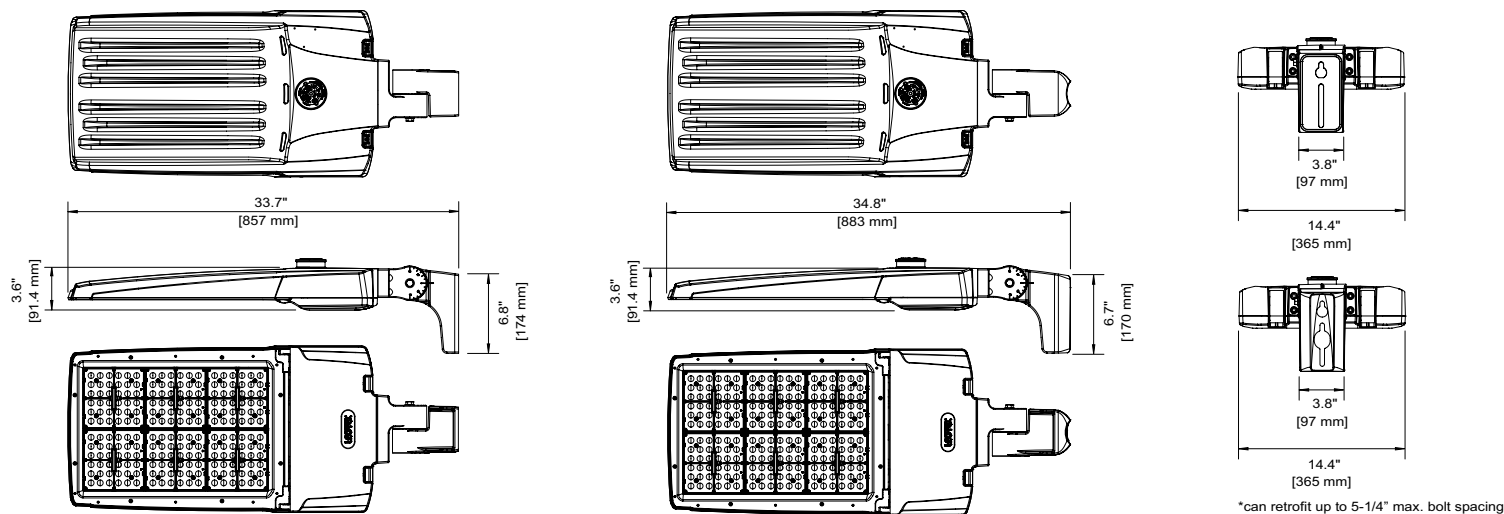
'AWMSC' Adjustable Wall Mount Surface Conduit*

(includes surface mount 3/4" conduit J-box, shown w/ optional 'PCR7CR')



'ASPM' Square & 'ARPM' Adjustable Round Pole Arm Mount*

(quick mount arm can retrofit up to 5.25" max. bolt spacing w/ no drilling required)



Key Additional Miscellaneous Product Features & Design Details

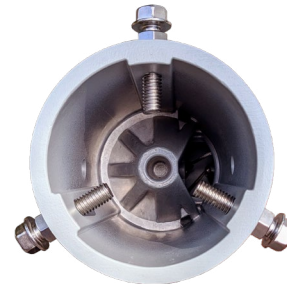
Integral Tool-Free Access Design

Tool-free electrical access & removable hinged door w/ fixed open door prop design for ease of installation or maintenance
(compatible w/ most lineman safety gloves)



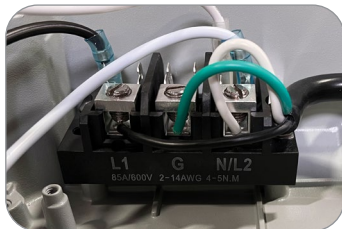
Self-Centering Design

Most arm fitter options are designed with a self-centering & leveling design feature
(compatible w/ 1-5/8", 2-3/8" & 3" O.D. tenons)



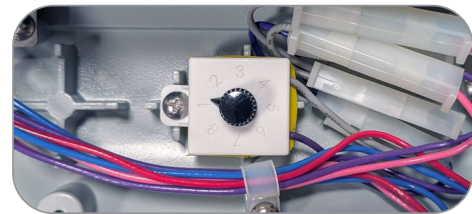
3-Position Terminal Block 'TB' Option

For ease of maintenance & increased safety, improved wire management & robust product life cycle operation
(includes line, neutral & ground, accommodates 6 to 16AWG wire)



Performance Selector 'PS' Option

Allows for quick & easy field adjustment of wattage, lumen output and reduced SKU complexity
(fixed position dial ensures correct output setting)



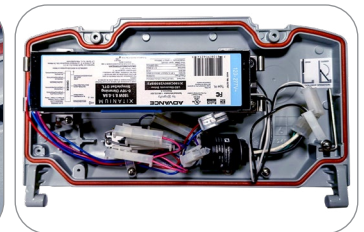
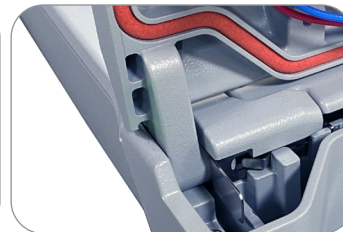
Pass-Thru Convective Cooling

(3) integral cooling slots allows ambient air to flow freely thru the luminaire for enhanced thermal management
(maximizes lifetime of electrical components & lumen maintenance)



Tool-Free Removable Power Door Option 'PWRD'

All serviceable electrical components are mounted to a tool-free removable Power Door that can be removed in less than 15 seconds to safely service on the ground or replace in seconds
(undo MOLEX connectors, push two spring clips inward to unlock door, slide the door forward & lift to remove)



'4SS-VTL'
4-Sided Shield



'TBS-VTL'
Top or Bottom Shield



'LRS-VTL'
Left or Right Side Shield



'BDS-VTL'
Barn Door Shield



'WG-VTL'
Wire Guard



'VS-VTL'
Poly Vandal Shield



Motion Sensor (Optional) Specifications*

Integral motion sensor options are available for horizontal site & area and fixed wall mounting options only.

'MSL3', 'MSL7' motion sensors require secondary controls for ON/OFF capability (*ex. time clock or 0-10V by others*). Contact factory for Motion Sensor availability w/ 'PCR7CR' control ready receptacle for use with wireless 7-PIN control node (*by others*).

'MSL3P', 'MSL7P' motion sensors, luminaire includes a PCR7 photocontrol receptacle for use with a twist lock photocontrol for ON/OFF capability.
(for use with our 'LLPC' or photocontrol by others, PINs 6 & 7 are not wired for controls, not compatible w/ wireless nodes).

Description

Digital passive infrared luminaire integrated outdoor occupancy sensor provides high/low/off control based on motion detection. Initial setup and subsequent sensor adjustments are made using a handheld configuration tool. PCR option is required for On/Off control using light detection. Available with both MV or HV input voltage options.

Operation

Standard factory setting will dim the luminaire to 50% until motion is sensed and then it will power to 100%. When motion is not detected for five minutes, the luminaire will dim back to 50%. Ramp up and fade down times are adjustable, but initially set to NONE. The percent dimming and time durations may be field adjusted as required using FSIR-100 configuration tool. FSIR-100 user guide available at: www.wattstopper.com.

Optical System

Multi-cell, multi-tier Fresnel lens with a 360 degree view detects unobstructed motion within one mounting height, up to 20 ft. maximum (MSL3) or 40 ft. maximum (MSL7). Consult factory for higher mounting height requirements.

Finish

Sensor exterior ring and lens are white polycarbonate, UV and impact resistant.

Listings/Ratings

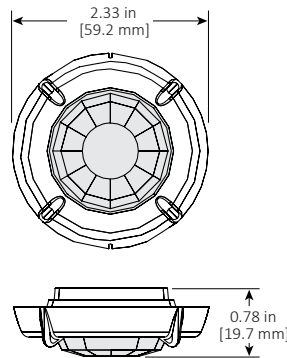
Sensor is TUV, UL and cUL listed, IP66 rated and CE compliant.

Warranty

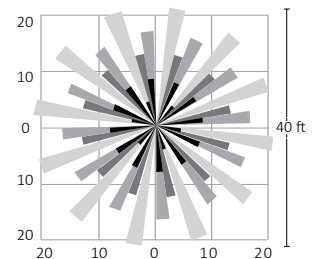
5-year limited warranty on luminaires and components with a motion sensor.

Motion Sensor (Optional) Data

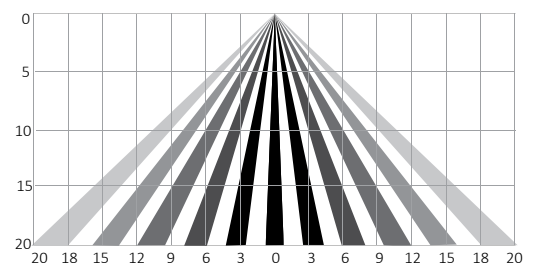
MSL3 Lens Dimensions



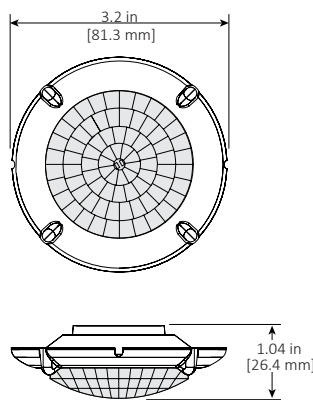
MSL3 Lens Coverage Top View



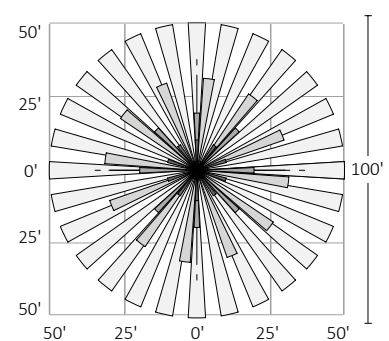
MSL3 Lens Coverage Side View



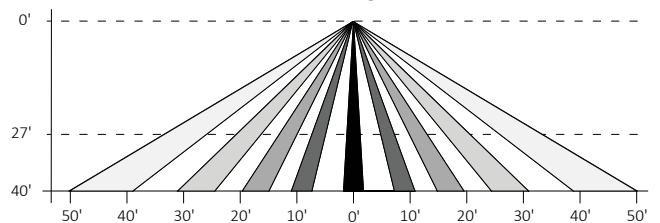
MSL7 Lens Dimensions



L7 Lens Coverage Top View



L7 Lens Coverage Side View



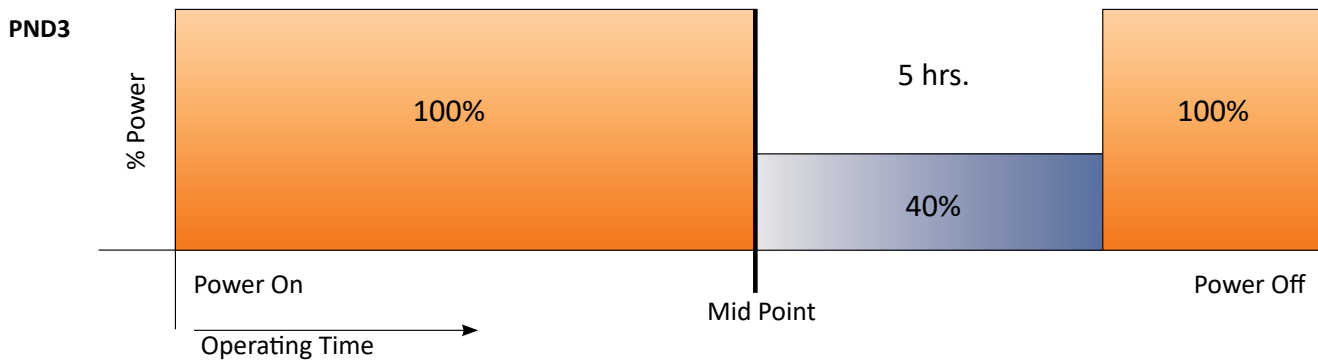
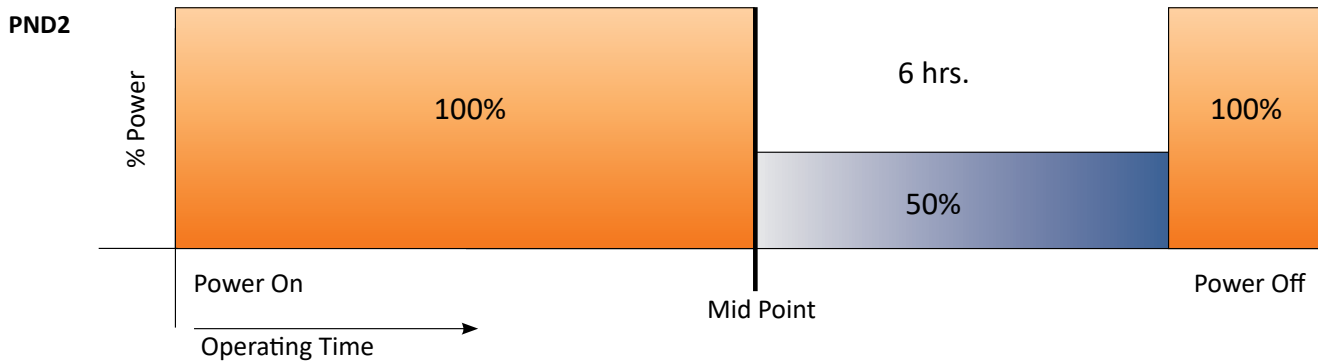
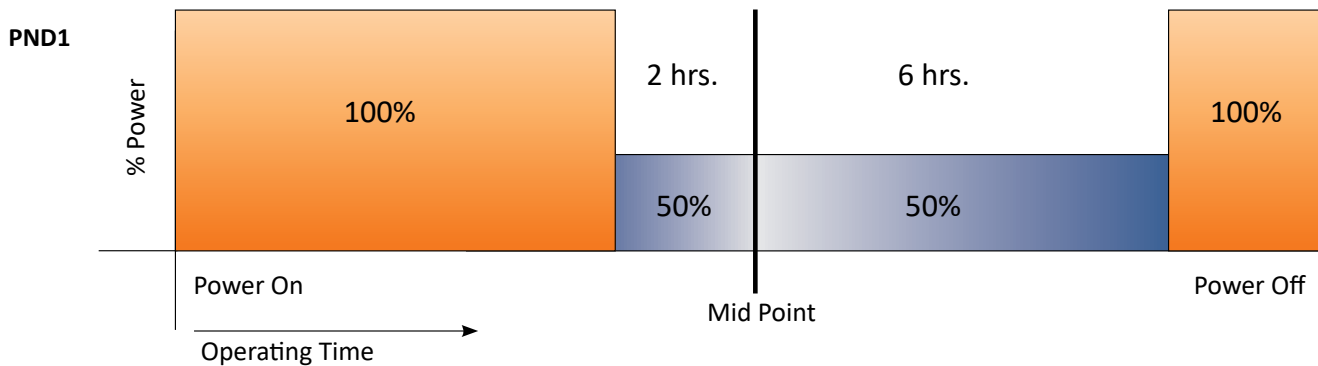
Part-Night Dimming Specifications

Description

Part-Night Dimming (PND) option enables significant energy savings by automatically dimming the luminaire during early morning hours when infrequent use is expected. Factory programmed dimming profiles automatically take into account seasonal changes based on geographical location by continuously monitoring the nighttime midpoint. PND does not provide power on/off control which is provided by external controls (example: time clock or a photocontrol using 'PCR7CR' option). Dimming profile of PND option is not field adjustable.




Operation

Based on the PND profile that is selected, the luminaire dims to the corresponding % power for the corresponding length of time (based on the nighttime mid-point) as shown below. Mid-point is continuously recalculated in the luminaire by monitoring the average length of time between when the light turns on (power on) and turns off (power off) over the previous two days. In effect, this functionality will take two days to initialize after installation before any dimming will occur. Power interruptions are ignored and do not affect the determination of mid-point. A motion sensor ('MSL3', 'MSL7' or 'MSL3P', 'MSL7P') can be used with PND to temporarily override the dimming profile when motion is detected. Three factory programmed PND profiles are available for selection:



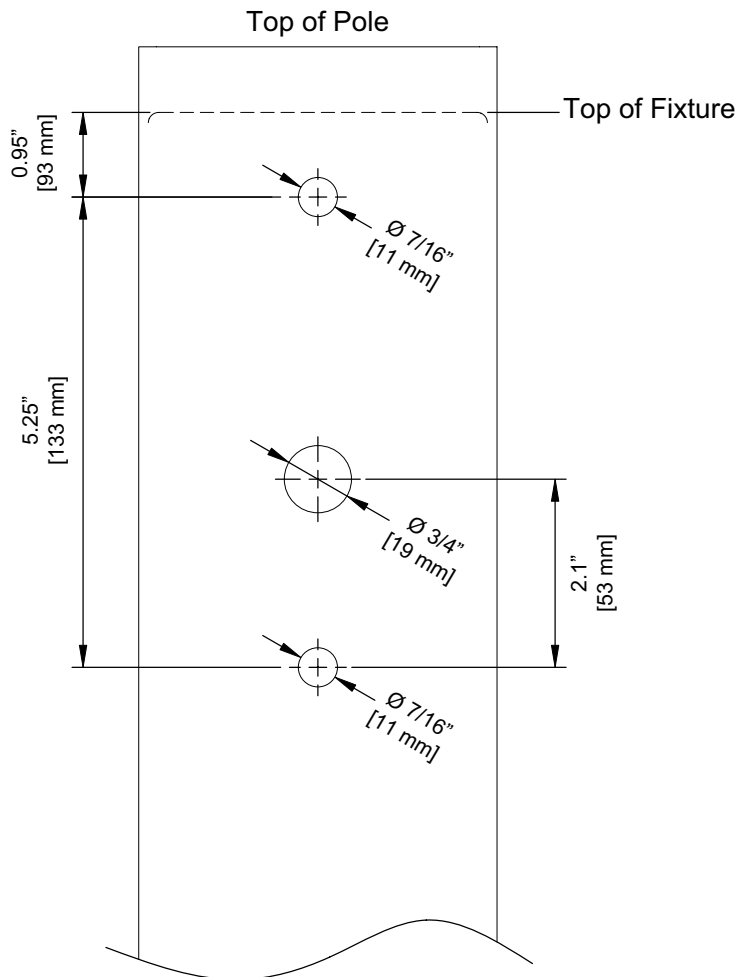
VersaTEK Large LED Site & Area - Luminaire EPA Values

(*Includes luminaire and mounting options shown. Secondary tenons, brackets or other accessories are not included in the EPA data.)

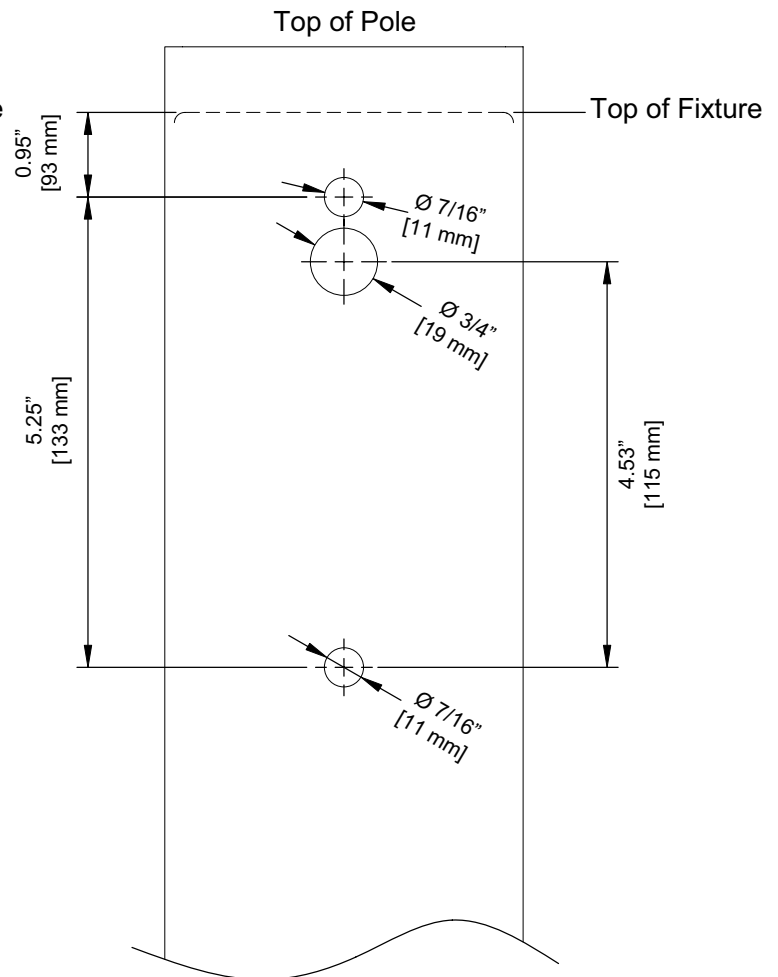
Luminaire Quantity & Orientation		Effective Projected Area (EPA ft ²)		
		Single	2 @ 180	4 @ 90
Mounting Option	Tilt			
SPM, RPM	0°	0.87	1.74	2.31
MAF	0°	0.91	1.82	2.26
ASPM, ARPM	0°	0.90	1.80	2.36
	10°- 90°	contact factory for details		

Pole Mount Drilling Dimensions for New Construction

(for additional details, please consult online installation instructions)



New Construction Pole Mount Drilling Dimensions
'SPM' 'RPM'



New Construction Pole Mount Drilling Dimensions
'ASPM' 'ARPM'