

VersaTEK Large LED Floodlight Series

VTLFL Specification Data Sheet

Luminaire Data

- Weight** 34.6 lbs [15.7 kg] ('SF', 'SFH', 'SFC' mount)
 36.9 lbs [16.7 kg] ('TR' mount)
 34.2 lbs [15.5 kg] ('YK' mount)
 37.7 lbs [17.1 kg] ('AWM' mount)
 40.8 lbs [18.5 kg] ('AWMSC' mount)



(*VTLFL large housing w/ 'SF' slipfitter mount & optional 'PCR7CR' shown)

Ordering Information

Sample Catalog No. VTLFL-216A-MV-40K7-N66-DB1-CF-P7-SFH-D4I-PCR7CR-TB-WL1-SP2-SF120

Product	LED Code	Voltage	Color Temp CRI	Optical Distribution	Finish*	Performance Code	Mounting Options
VTLFL VersaTEK Large Flood	216A 216 LEDs Gen-A	MV 120-277V HV 347-480V	27K7 2700K, 70CRI 30K7 3000K, 70CRI 40K7 4000K, 70CRI 50K7 5000K, 70CRI 30K8 ¹ 3000K, 80CRI 40K8 ¹ 4000K, 80CRI 50K8 ¹ 5000K, 80CRI	N66 NEMA 6Hx6V Flood S33 NEMA 3Hx3V Spot NSP Narrow Spot RN Rectangular Narrow RM Rectangular Medium RW Rectangular Wide WG Wall Grazer	BK Black DB1 Dark Bronze (RAL8019) WH White GY Gray NA ² Natural Aluminum CF ² Coastal Finish *Consult factory for custom finish options, pricing & leadtimes.	P1 P2 P3 P4 P5 P6 P7 (see Page 3 for details)	SF ³ Slipfitter w/ Wire Leads (in UL splice compartment) SFH ⁴ Slipfitter w/ S/O Cord Exiting Housing Bottom (3-wire S/O cord, 16AWG, 4' exit length) SFC ⁴ Slipfitter w/ S/O Cord Exiting Center of Fitter (3-wire S/O cord, 16AWG, 4' exit length) TR ⁴ Trunnion Mount (3-wire S/O cord, 16AWG, 4' exit length) YK ⁴ Yoke Mount (3-wire S/O cord, 16AWG, 4' exit length) AWM Adjustable Wall Mount (compatible w/ 3" & 4" square/octagonal recessed J-boxes) AWMSC Adjustable Wall Mount w/ Surface Conduit J-Box ASPM Universal Square Pole Adjustable Arm Mount ARPM Universal Round Pole Adjustable Arm Mount

Driver & Control Options		General Options	
D4I ⁵	DALI D4i Driver	AIM45 ¹⁰	Slipfitter Factory Pre-aimed at 45°
TLR4U ^{5,6}	DALI 4-PIN Twist Lock Receptacle (upper housing receptacle location)	SS	Slipfitter Set Screw (replaces standard slipfitter set bolts)
TLR4L ^{5,6}	DALI 4-PIN Twist Lock Receptacle (lower driver door receptacle location)	TFL	Tamper free latch (driver electrical door)
PCR7CR ⁵	ANSI 7-wire Control Ready Receptacle	TB ³	3-position Terminal Block
SC	Shorting Cap (factory installed)	SP2	20kV/10kA Extreme Surge, Fail-to-On
LLPC ⁷	Long Life Photocontrol	LSSP2	20kV/10kA Extreme Surge, Fail-to-Off
PS ⁸	Field Adjustable Performance Selector	WL	Wattage Label, ANSI C136.15-2015 compliant
PND1 ⁹	Part Night Dimming V1	WL1	Wattage Label, ANSI C136.15-2020 compliant
PND2 ⁹	Part Night Dimming V2	DSC	Optional Driver Door Safety Cable
PND3 ⁹	Part Night Dimming V3	PWRD	Power Door Option (tool-free removable door w/ serviceable electrical items)
		SFXXX ¹¹	Single Fuse ('XXX' = specify voltage 120, 277, 347V)
		DFXXX ¹¹	Double Fuse ('XXX' = specify voltage 208, 240, 480V)
		5WSO ¹²	5-wire S/O Cord (16AWG, 4' length w/ dimming leads)
		SOXXYY ¹³	Special S/O AWG & Cord Length in Feet ('XX' = specify AWG 12, 14 or 16) ('YY' = specify S/O cord length 06, 08, 10, 15, 25)

General Accessories*	
TBS-VTL	Top, Bottom Shield
LRS-VTL	Left, Right Side Shield
4SS-VTL	4-sided Shield
BDS-VTL	Barn Door Shield
VS-VTL	Poly Vandal Shield
WG-VTL	Wire Guard
BSK	Bird Deterrent Spider Kit
LLPCMV	Long Life Photocontrol MV
LLPCHV	Long Life Photocontrol HV

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

- 80CRI option only available in 3000K, 4000K & 5000K CCTs and may have longer leadtimes (contact factory).
- Contact factory for 'NA-CF' Natural Aluminum Coastal Finish availability (extended leadtimes may apply).
- 'TB' Terminal Block is not available for use with the 'SF' Slipfitter mounting option.
- Mounting option includes 16AWG 3-wire S/O cord w/ a 4' exit length & last 6" of insulation removed.
- 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).
- 'TLR4U' & 'TLR4L' twist lock receptacle option requires 'D4I' DALI driver option to be selected.
- 'LLPC' requires 'PCR7CR' option to be selected (does not ship installed, ships included w/ luminaire).
- 'PS' Performance Selector enables field adjustable light output dimming control from the specified Performance Code (see table on pg.3 for details).
- 'PND' options only available w/ 'MV' 120-277V (contact factory for 'HV' 347-480V availability).
- Slipfitter options 'SF', 'SFC', 'SFH' ship pre-aimed at 45° from the factory if 'AIM45' is specified.
- For single or double fusing, 'XXX' must specify required voltage.
- '5WSO' only available with 'SFC', 'SFH', 'TR' & 'YK' mounting options. Not available w/ 'PCR7CR', 'PS', 'PND', 'D4I', 'TLR4U', 'TLR4L' options.
- 'SOXXYY' option, 'XX' & 'YY' must specify S/O cord AWG & length.

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.

Flood & Wall Mounting Options

Trunnion 'TR' and yoke 'YK' mounting options are constructed of formed steel. (3) adjustable slipfitter mounting options 'SF', 'SFC' and 'SFH' are rugged A360 die-cast aluminum and includes safety thru-bolt detail if required. Slipfitter 'AIM45' options ships factory preset to a tilt of 45°. Self-centering design feature also assists with leveling during installation. Designed to install to 1-5/8", 2-3/8" and 3" O.D. tenons (by others). Available in (3) wiring configurations ('SF' includes available wire leads accessed via an integral UL recognized splice compartment, 'SFC' and 'SFH' options include S/O cord exiting the center of the slipfitter or housing bottom). Standard S/O cord configurations ('TR', 'YK', 'SFH', 'SFC') are 16AWG 3-wire with an exit length of 4' and last 6" of weatherproof covering removed. Additional wire gauges and lengths available (see 'Ordering Information' for details). Adjustable wall mount 'AWM' options mount to recessed 3" and 4" square or octagonal recessed J-boxes (by others). Surface conduit wall mount option 'AWMSC' includes (4) 3/4" NPT thru-wire taps with plugs. Universal/retrofit 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. Mounting provisions meet 3G vibration per ANSI C136.31-2010 Normal Application, Bridge & Overpass.

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.

Optical Systems

All Micro-lens optical systems are fully sealed to maintain an IP66 rating. All-purpose flood optics include a NEMA 6x6 Wide Flood 'WFL' and NEMA 3x3 Spot 'SP'. Performance flood optics include a Narrow Spot 'NSP' (50% Beam 13°H x 13°V, 10% Beam 30°H x 30°V), Rectangular Narrow 'RN' (50% Beam 75°H x 12°V, 10% Beam 100°H x 65°V), Rectangular Medium 'RM' (50% Beam 80°H x 25°V, 10% Beam 115°H x 90°V), Rectangular Wide 'RW' (50% Beam 85°H x 50°V, 10% Beam 130°H x 15°V), Wall Grazer 'WG' (50% Beam 100°H x 20°V, 10% Beam 135°H x 80°V). An IK10 impact resistant glass lens is standard for ease of routine cleaning and improved light loss dirt depreciation over the life of the luminaire. 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.

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.

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).

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. 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. 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 *(NEMA 6x6 optic, 70CRI, standard IK10 rated glass lens, 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	29,018	161
	P2	480	211	32,443	154
	P3	600	263	39,822	151
	P4	660	290	43,469	150
	P5	720	317	47,036	148
	P6	780	345	50,504	146
	P7	840	373	53,882	144

Nominal Performance Data 3000K *(NEMA 6x6 optic, 70CRI, standard IK10 rated glass lens, 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	30,880	172
	P2	480	211	34,457	163
	P3	600	263	42,407	161
	P4	660	290	46,263	160
	P5	720	317	50,068	158
	P6	780	345	53,773	156
	P7	840	373	57,340	154

Nominal Performance Data 4000K & 5000K *(NEMA 6x6 optic, 70CRI, standard IK10 rated glass lens, 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	32,347	180
	P2	480	211	36,165	171
	P3	600	263	44,391	169
	P4	660	290	48,455	167
	P5	720	317	52,432	165
	P6	780	345	56,298	163
	P7	840	373	60,063	161

Field Adjustable Performance Selector 'PS'

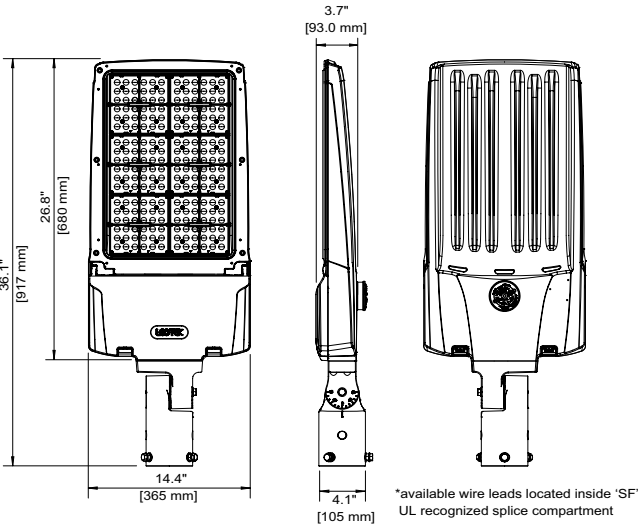
The optional Performance Selector is an integral dial that allows for field adjustable lumen/wattage dimming control for added design versatility. Normal tolerance +/- 5%.

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

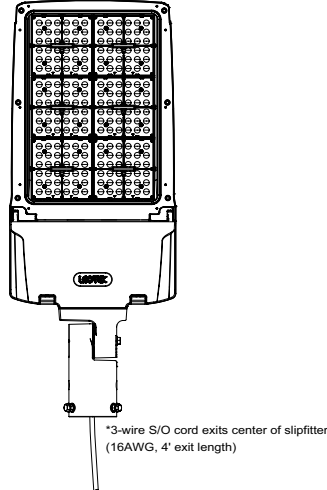
'SF' Slipfitter Mount #1*

(available wire leads in UL splice compartment)
(shown w/ optional 'PCR7CR')



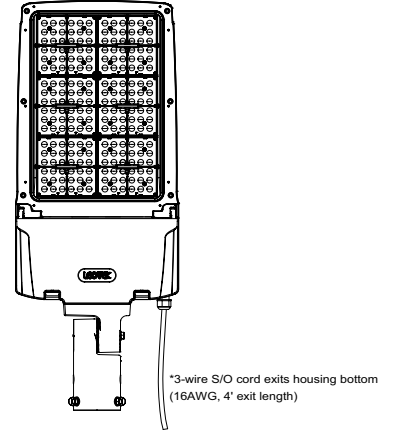
'SFC' Slipfitter #2*

(w/ 3-wire S/O Cord Center Fitter Exit)



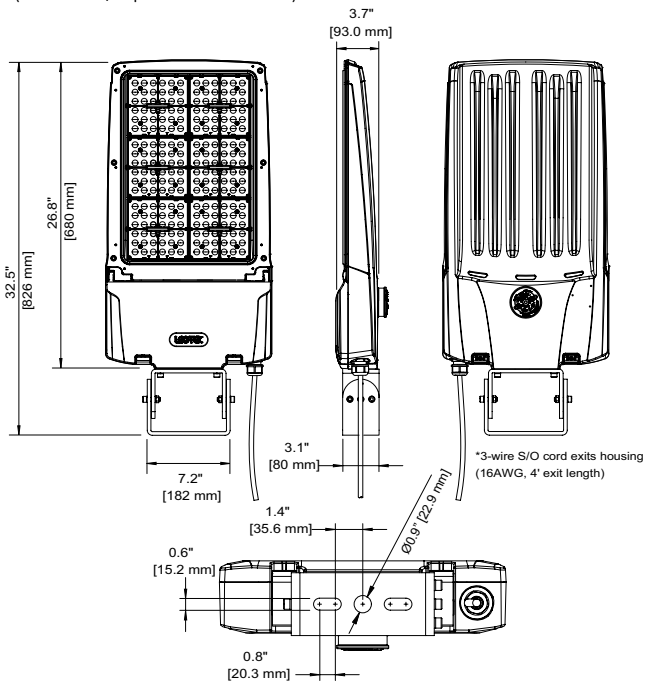
'SFH' Slipfitter #3*

(w/ 3-wire S/O Cord Bottom Housing Exit)



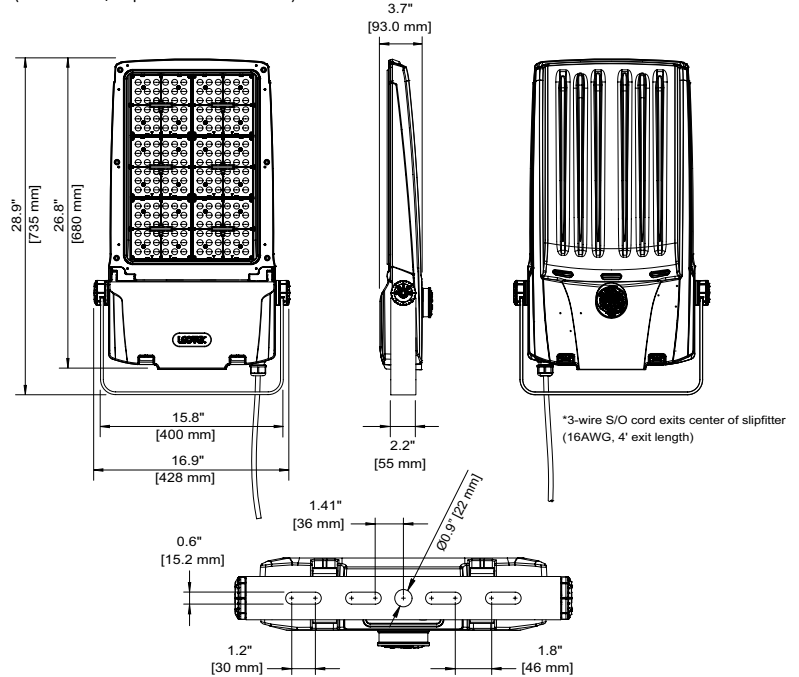
'TR' Trunnion Mount*

(shown w/ optional 'PCR7CR')



'YK' Yoke Mount*

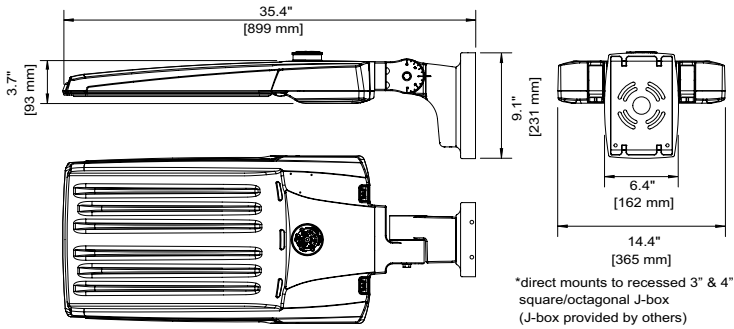
(shown w/ optional 'PCR7CR')



Mounting Option Details & Dimensional Information

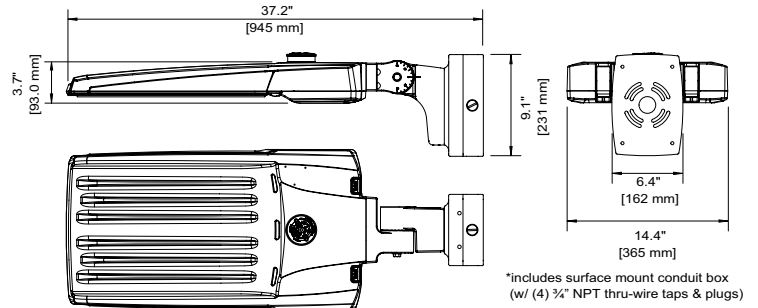
'AWM' Adjustable Wall Mount*

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



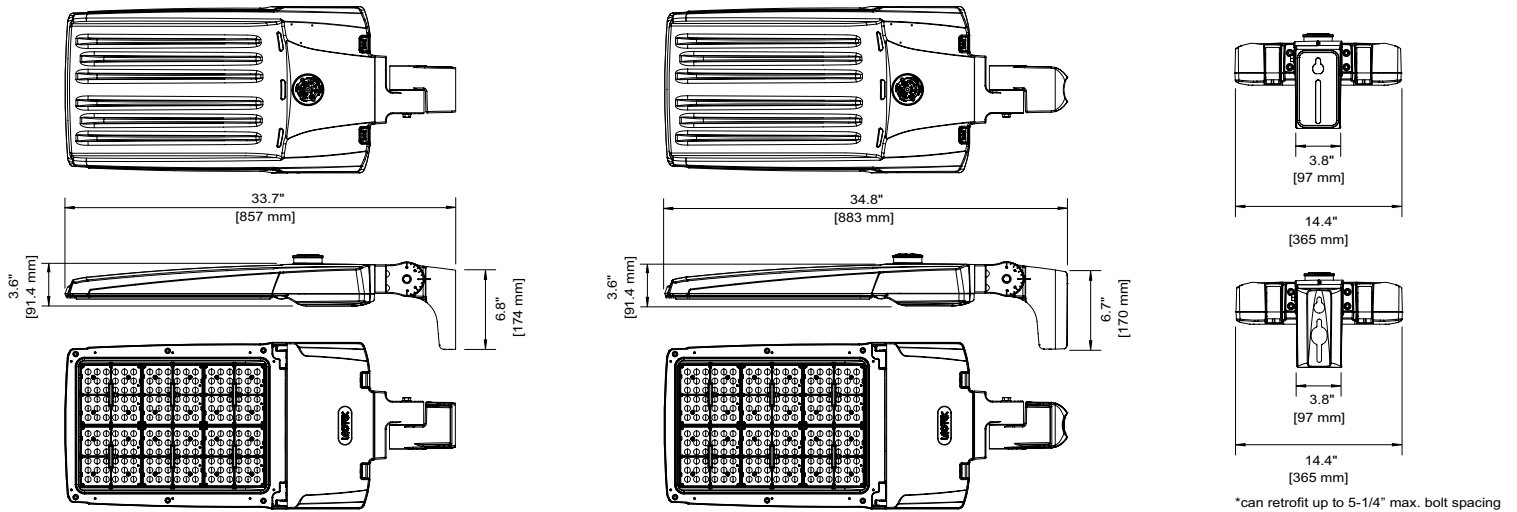
'AWMSC' Adjustable Wall Mount Surface Conduit*

(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)



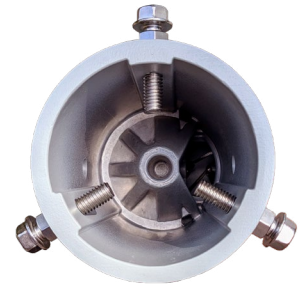
Slipfitter w/ UL Splice Box

'SF' Slipfitter w/ integral UL recognized splice compartment
(w/ available wire lead access & WAGOs for ease of installation)



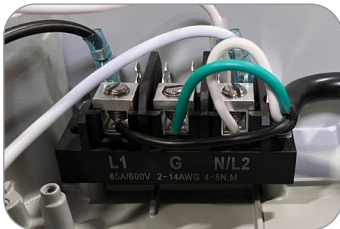
Self-Centering Design

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



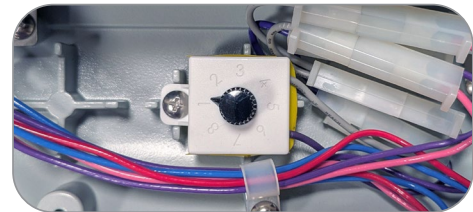
3-Position Terminal Block 'TB' Option

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)



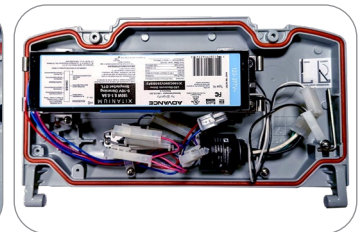
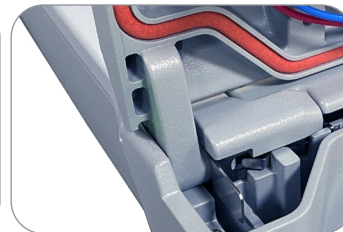
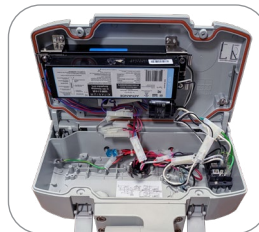
Pass-Thru Convective Cooling

(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



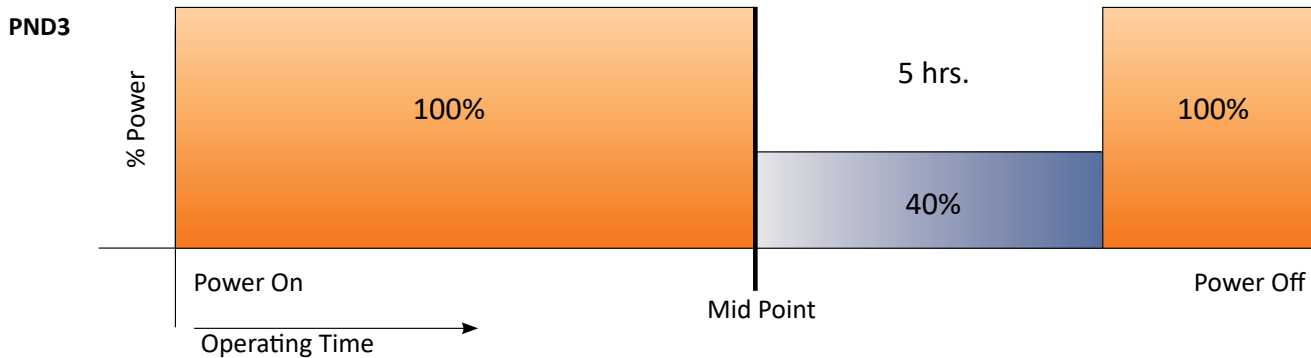
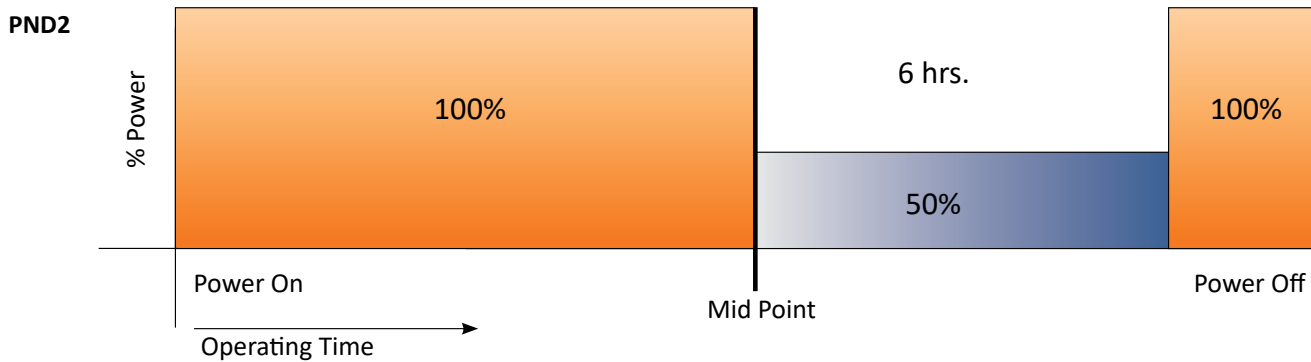
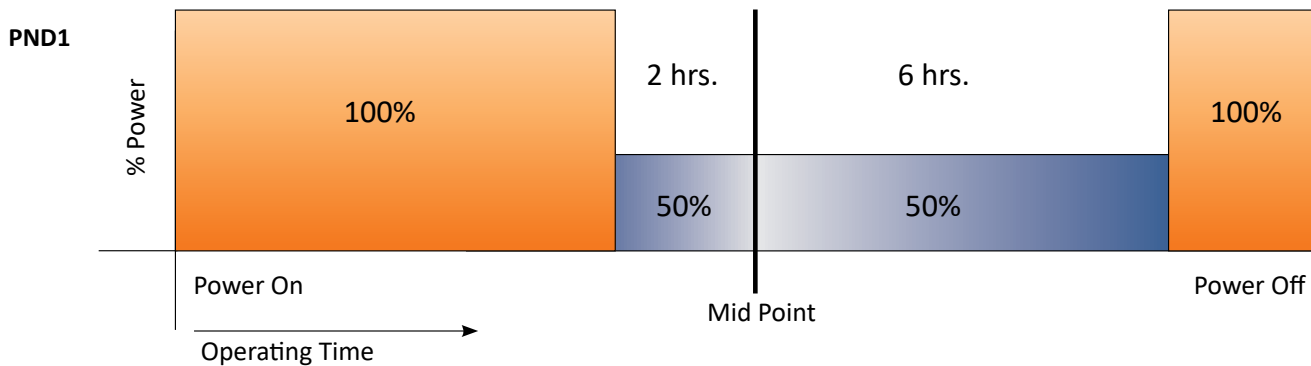
Part-Night Dimming Specifications

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. Three factory programmed PND profiles are available for selection:



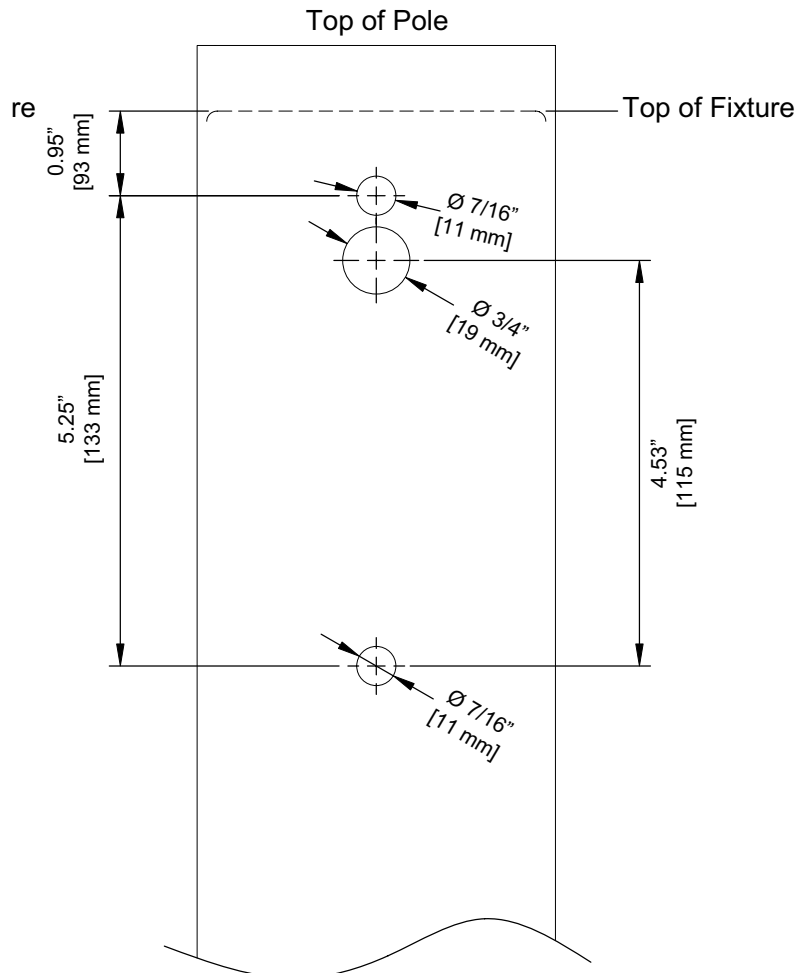
VersaTEK Large LED Flood - Luminaire EPA Values

(*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			
SF, SFH, SFC	0°	0.90	1.80	2.25
	10°- 90°	contact factory for details		
YK	0°	0.67	1.33	1.82
	10°- 90°	contact factory for details		
TR	0°	0.78	1.55	2.0
	10°- 90°	contact factory for details		
ASPM, ARPM	0°	0.90	1.80	2.36
	10°- 90°	contact factory for details		

Pole Adjustable Arm Mount Drilling Dimensions for New Construction

(for additional details, please consult online installation instructions)



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