

JOB _____ TYPE _____

NOTES _____ APPROVALS _____

FEATURES

- Lumen range from 10,000 to 20,000 lm
- Color Temperature 3000K, 4000K, 5000K at 70 and 80 CRI
- Yoke, Threaded Knuckle, Slipfitter Knuckle mounting options.
- 6 beam distributions and beam angles including: Narrow 17°x17°, Medium 26°x26°, Medium Flood 62°x62°, Wide 80°x81°, Horizontal 53°x21°, and Vertical 21°x53°.
- IP66 sealed optical and driver chamber.

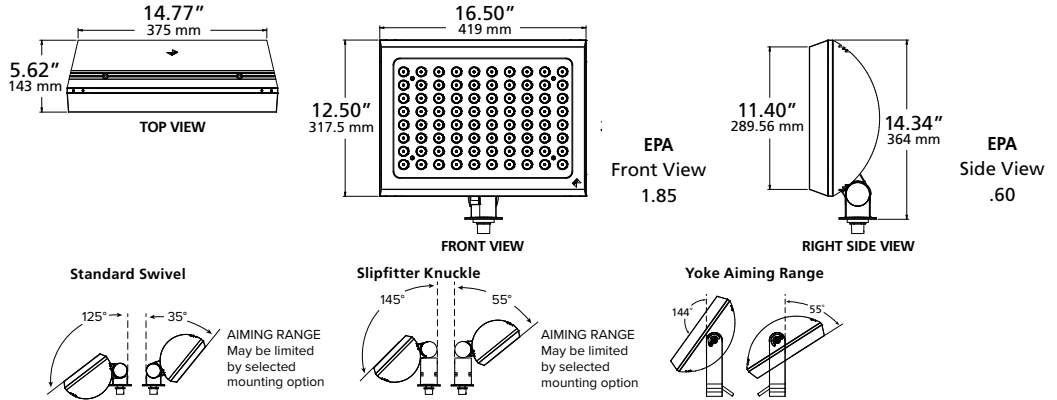
Certifications



SPECIFICATIONS



Max Weight = 30 lbs. / 13.6 kg



ORDERING CODE

KFL3							
Fixture	LED Engine	CCT/CRI	Beam Spread	Voltage	Mounting	Color	
	40L-90 90W, 10,000 lm 60L-135 135W, 15,000 lm 80L-175 175W, 20,000 lm	3K7 3000K, 70 CRI 3K8 3000K, 80 CRI 4K7 4000K, 70 CRI 4K8 4000K, 80 CRI 5K7 5000K, 70 CRI 5K8 5000K, 80 CRI	N Narrow M Medium MF Medium Flood WF Wide Flood HF Horizontal Flood VF Vertical Flood	UNV Universal 120-277V 347 347V 480 480V	Y Architectural Yoke K Threaded Knuckle S Slipfitter Knuckle	BL Black DB Dark Bronze GT Graphite LG Light Gray PS Platinum Silver TT Titanium WH White CC Custom Color*	

Control Options	Options	Optical Options	Mounting Accessories		
PC Button Photocontrol NXWE NX Wireless Enabled	SF Single Fuse 120, 277, 347 Line Volts DF Double Fuse 208, 240, 480 Line Volts	BD Barn Doors HS Half Glare Shield	JBR Brass In-Grade Architectural Junction Box JBR30 Composite In-Grade Architectural Junction Box JBR32 Brass In-Grade Staked Junction Box J-27N Surface Mount SM18 Stanchion Mount SPM Side Pole Mount JB1 Architectural Junction Box WM Wall or Ceiling Mount WM1 Wall Mount	M2B Twin Mount Tenon M3E Triple Mount Tenon PT Post Top Mount PT2 Twin Post Top Mount SPT Side Pole Mount Tenon SM2 Stanchion Mount Tenon SMT Surface Mount Tenon WM2 Wall Mount Tenon	<u>Accessory Colors</u> BL Black DB Dark Bronze GT Graphite LG Light Gray PS Platinum Silver TT Titanium WH White CC Custom Color*

Kim Lighting reserves the right to change specifications without notice.

LUMINAIRE PERFORMANCE

LED #	Nominal Wattage	Nominal Lumens	Distribution	Beam Angles	3000K 70CRI			4000K 70CRI			5000K 70CRI		
					Lumen	Center Beam Candlepower	lm/w	Lumen	Center Beam Candlepower	lm/w	Lumen	Center Beam Candlepower	lm/w
40L	90	10000 lm	N	17° x 17°	9447	82353	104.4	9710	84646	107.3	10080	87871	111.6
			M	27° x 28°	9883	34135	109.2	10159	35088	112.2	10546	36425	116.5
			MF	62° x 63°	9941	10543	109.8	10217	10835	112.9	10607	11249	117.1
			WF	81° x 81°	10699	7957	118.2	10997	8178	121.5	11416	8490	125.8
			HF	53° x 21°	9458	16271	104.5	9721	16724	107.4	10092	17362	111.6
			VF	21° x 53°	9411	16308	104.0	9673	16762	106.9	10042	17401	111.1
60L	135	15000 lm	N	17° x 17°	13951	125164	104.7	14339	128645	107.6	14886	133553	111.6
			M	27° x 27°	14488	50783	108.7	14891	52195	111.7	15459	54186	116.1
			MF	62° x 62°	14753	16207	110.7	15164	16658	113.8	15742	17293	117.6
			WF	80° x 80°	15738	11759	118.1	16176	12086	121.4	16793	12547	125.8
			HF	53° x 21°	13709	23862	102.9	14091	24529	105.7	14628	25464	110.2
			VF	21° x 53°	13610	23691	102.1	13990	24352	105.0	14523	25280	109.3
80L	175	20000 lm	N	17° x 17°	18241	164445	103.8	18749	169024	106.7	19464	175470	110.7
			M	26° x 26°	18966	67733	107.9	19495	69623	111.0	20238	72276	115.0
			MF	62° x 62°	19035	20901	108.3	19565	21483	111.4	20311	22302	115.5
			WF	80° x 81°	20346	15200	115.8	20913	15624	119.0	21710	16219	123.7
			HF	53° x 21°	17615	31364	100.3	18106	32238	103.0	18796	33467	107.1
			VF	21° x 53°	17679	31509	100.6	18171	32386	103.4	18864	33621	107.5

CRI Lumen Multiplier	
CCT	80 CRI
3000K	0.9119
4000K	0.8941
5000K	0.8625

ELECTRICAL CHARACTERISTICS

Light Engine	System Watts	Drive Current	Electrical								Min. Power Factor	Max THD (%)	Dimming Range	Dimming			
			Line Voltage		Amps AC									Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
40L	90	700 mA	120-480	50/60	0.75	0.43	0.38	0.32	0.26	0.19	>0.9	20	10% to 100%	0mA	1mA	0V	10V
60L	135	700 mA			1.13	0.65	0.56	0.49	0.39	0.28							
80L	175	700 mA			1.46	0.84	0.73	0.63	0.50	0.36							

TM-21 LIFETIME CALCULATION

Projected Lumen Maintenance (25°C / 77°F)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	95.95%	94.71%	93.16%	87.84%	> 60,000

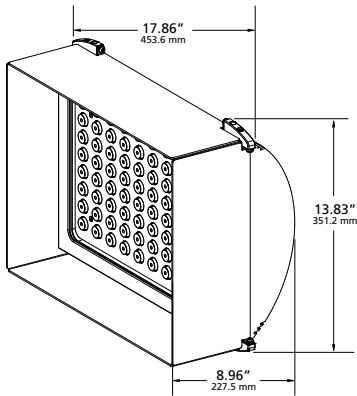
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Optical Options

Barn Doors (BD)

Formed 3/32" thick aluminum. Each door is hinged to a cast, low copper (<0.6% Cu) aluminum frame, and locks by set screws. Doors are individually removable. Barn Door assembly mounts to predrilled door frame holes. Assembly will be painted to match fixture housing.

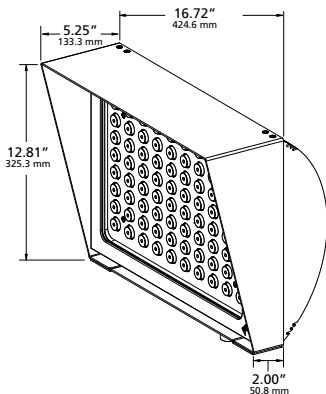
CAUTION: Not recommended for ground mounted fixtures in vandal prone areas.



Half Glare Shield (HS)

Formed 3/32" thick aluminum. Mounts to predrilled door frame holes. Can be mounted along the top or bottom of the fixture to shield the lamp and lens from view. Assembly will be painted to match fixture housing.

CAUTION: Not recommended for ground mounted fixtures in vandal prone areas.

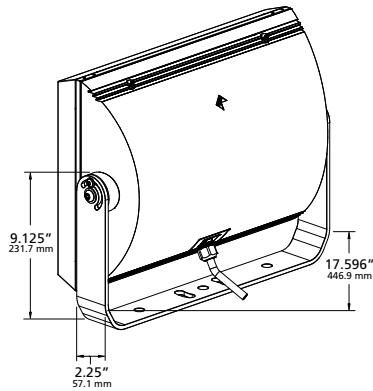


Mounting Options

Architectural Yoke (Y)

Architectural Yoke Mount used for surface mounting applications. Secured to surface using three 1/2" bolts.

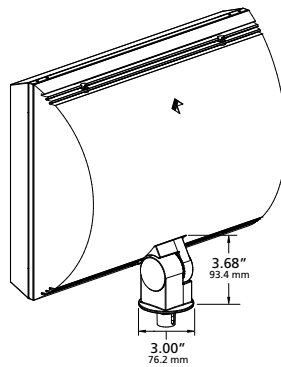
Yoke is stainless steel material with powder coating finish.



Threaded Knuckle (K)

Threaded Knuckle is die-cast aluminum with integral locking teeth providing 5° adjustment intervals. Stainless steel allen-head screw with spring locking washer and 1/2" NPSM. Clear anodized prior to chromate conversion coating for added corrosion resistance.

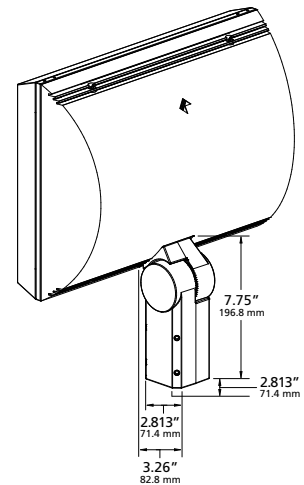
Threaded Knuckle mounting used in conjunction with mounting accessories listed on page 1.



Slipfitter Knuckle (S)

Slipfitter Knuckle is die-cast aluminum with integral locking teeth providing 5° adjustment intervals. Stainless steel hardware Allen-head screw with spring locking washer and four set screws. Clear anodized prior to chromate conversion coating for added corrosion resistance.

Note: slips over 2" pipe-size tenon (2 3/8" O.D. x 3 1/2" min length).

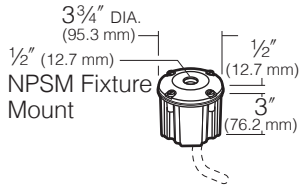


MOUNTING ACCESSORIES

Brass In-grade Architectural Junction Box (Standard swivel mount only)

- JBR-2** (2) 1/2" NPT in bottom
- JBR-3** (2) 3/4" NPT in bottom
- JBR-21** (2) 1/2" NPT in sides,
(2) 1/2" NPT in bottom
- JBR-24** (4) 1/2" NPT in sides,
(4) 1/2" NPT in bottom

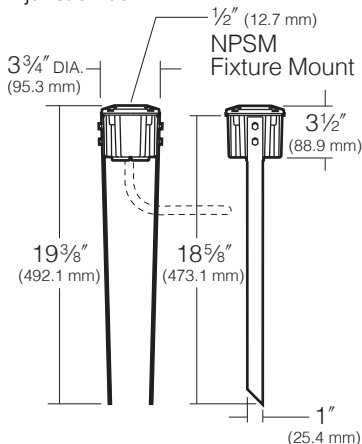
Die-cast brass with 1/2" NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. internal volume. **NOTE:** All side taps provided with plugs. Creates a flush-mounted appearance. May be cast in concrete for increased stability. **CAUTION:** Fixture stem and swivel must not contact soil or standing water. Provide drainage away from junction box.



Brass In-grade Staked Junction Box (Standard swivel mount only)

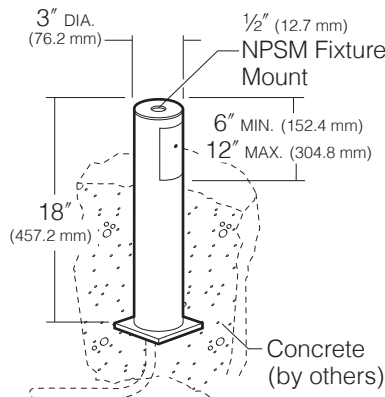
- JBR-30, JBR-32** (2) 1/2" NPT in bottom,
(2) 19" long stakes

Die-cast brass with 1/2" NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. internal volume. Creates a flush-mounted appearance. May be cast in concrete for increased stability. **CAUTION:** To assure a rigid installation, Staked Junction Box must be set in concrete (by others). Fixture stem and swivel must not contact soil or standing water. Provide drainage away from junction box.



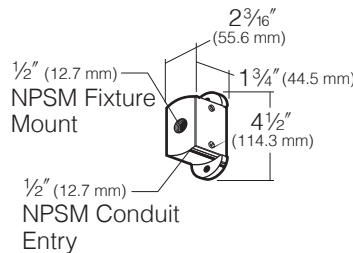
Stanchion Mount (SM18) (Standard swivel mount only)

3" O.D. by .188" wall cast low copper (<0.6% Cu) aluminum with 1/2" NPSM fixture mount and hand hole with flush cover. Internal set screw fixture lock accessible through hand hole. Internal ground lug supplied with installed lead. **CAUTION:** To assure a rigid installation, stanchion must be set in concrete (by others).



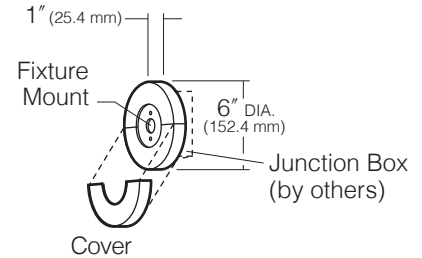
Surface Mount (J-27N) (Standard swivel mount only)

Cast low copper (<0.6% Cu) aluminum with mounting ears for wood screw attachment to tree or wood structure. 5.5 cu in. splice compartment with gasketed cover. 1/2" NPSM fixture mount and 1/2" NPSM conduit or cord seal entry. **NOTE:** Surface mount can be connected to conduit or outdoor cord with a waterproof cord seal (by others).



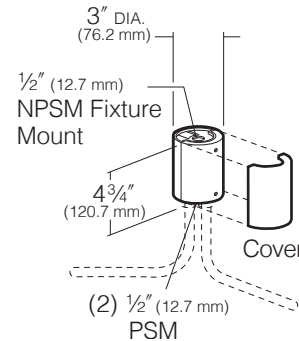
Wall or Ceiling Mount (WM) (Standard swivel mount only)

Electro zinc steel mounting plate adapts to standard 4" square or octagonal Junction Boxes. Fixture mounts to cast low copper (<0.6% Cu) aluminum upper cover which attaches to mounting plate. Lower cover half provides splice access. Dielectric sealing compound provided for wall interface.



Architectural Junction Box (JB1) (Standard swivel mount only)

Die-cast, low copper (<0.6% Cu) anodized aluminum with 1/2" NPSM fixture mount. Internal set screw provided for locking position. Two 1/2" NPSM in bottom, 17 cu in. internal volume. **CAUTION:** Junction Box must be installed high enough to avoid contact with soil or standing water.



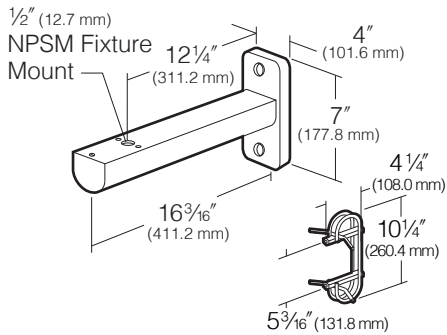
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MOUNTING ACCESSORIES (cont.)

Wall Mount (WM1)

(Standard swivel mount only)

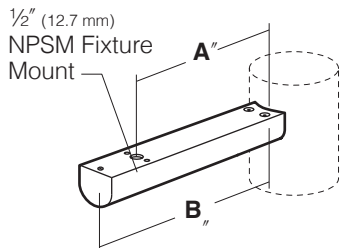
Extruded aluminum arm with a removable end cap for wiring access. Arm is welded to a cast aluminum plate with two 1/2" dia. mounting holes. Optional Wall Embedment Bracket (**WEB**) provides 3/8-16 bolt receptacles welded in a galvanized re-bar cage for casting into poured-in-place concrete walls. Bolt receptacles receive fixture attachment bolts. Component EPA: 0.3.



Side Pole Mount (SPM-X)

(Standard swivel mount only)

Available for Round and Square Poles. Extruded aluminum arm. Internal set screw fixture lock. Removable end cap for wiring access. For use with other Kim Site/Roadway Luminaires as an additional mid-pole floodlight. **X** in Side Pole Mount Cat. No. indicates 3", 3-1/2", 4", 5" or 6" pole dia. Example: SPM-4/BL is for 4" round pole with Black finish. For square poles, omit **-X**. **NOTE:** Field drilling of Poles is required. Component EPA: 0.3.



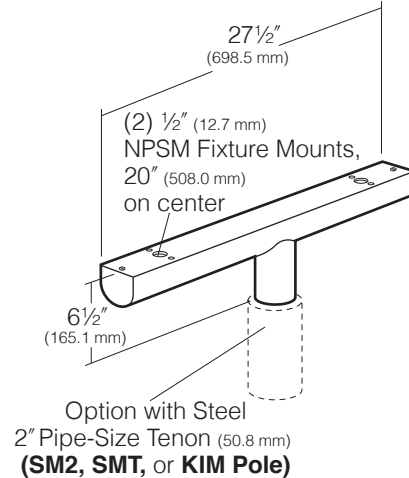
A 11 1/2" (292.1 mm) For Round Poles
12" (304.8 mm) For Square Poles

B 15 3/8" (390.5 mm) For Round Poles
15 7/8" (403.2 mm) For Square Poles

Twin Mount (TM2)

(Standard swivel mount only)

Extruded aluminum arm. Internal set screw fixture locks. Can be mounted on a SM2, SMT, or Steel Kim Pole with steel 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" min. length). Removable end caps for wiring access. **CAUTION:** Approved for mounting to poles with steel tenons only. Component EPA: 0.6.

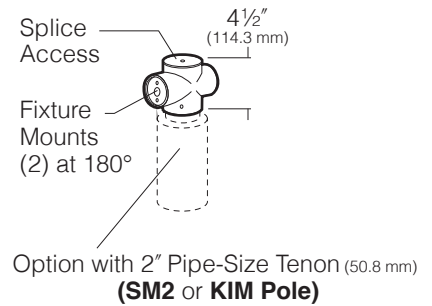


Twin Post Top Mount (PT2)

(Standard swivel mount only)

Cast aluminum mount for pole or other mounting option with 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" minimum length). Fixture attaches with concealed internal studs, mounting is with 1/4-20 allen set screws. Top cap provides splice access.

NOTE: Not for use with SMT, SPT, WM2, M2B, or M3E options. Component EPA: 0.1.



Surface Mount Tenon (SMT/BL)

(2" tenon for optional heavy duty swivel mount only)

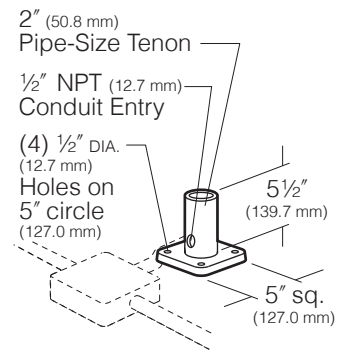
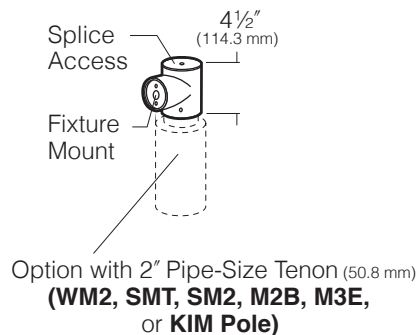
2" pipe-size tenon (2-3/8" O.D., 2" I.D.) welded to a cast aluminum plate. Plate has four 1/2" mounting holes, and tenon has one 1/2" NPT for side conduit entry. Black finish.

NOTE: Not for use with PT2, M2B, or M3E options. May be wall mounted if horizontal fixture adjustment is not required. For wall mounting with horizontal fixture adjustment, use WM2.

Post Top Mount (PT)

(Standard swivel mount only)

Cast aluminum mount for pole or other mounting option with 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" minimum length). Fixture attaches with concealed internal studs, mounting is with 1/4-20 allen set screws. Top cap provides splice access. Component EPA: 0.7.



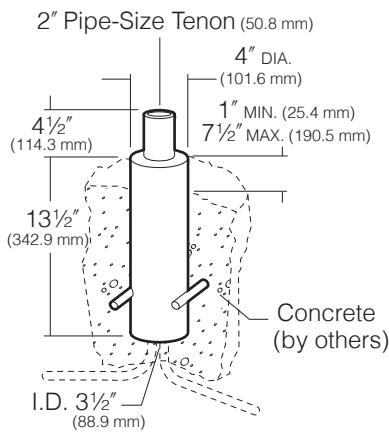
MOUNTING ACCESSORIES (cont.)

Stanchion Mount Tenon (SM2/BL)

(2" tenon for optional heavy duty swivel mount only)

4" O.D. cast low copper (<0.6% Cu) aluminum stanchion with 2" pipe-size tenon (2-3/8" O.D., 1-3/8" I.D.) for mounting a single fixture or multiple top-mounts. Black finish.

CAUTION: Multiple top-mounts must not be used in locations where people can climb on fixtures and mounting arms. To assure a rigid installation, stanchion must be set in concrete (by others).

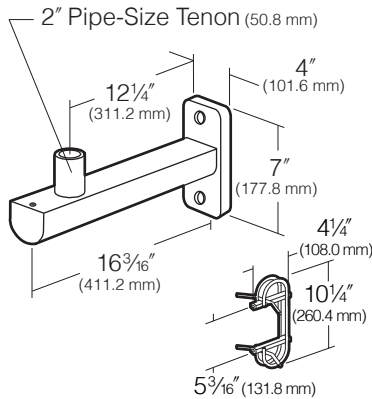


Wall Mount Tenon (WM2)

(2" tenon for optional heavy duty swivel mount only)

2" pipe-size tenon (2-3/8" O.D., 2" I.D.) welded to an extruded aluminum arm with a removable end cap for wiring access. Arm is welded to a cast aluminum plate with two 1/2" mounting holes. Optional Wall Embedment Bracket

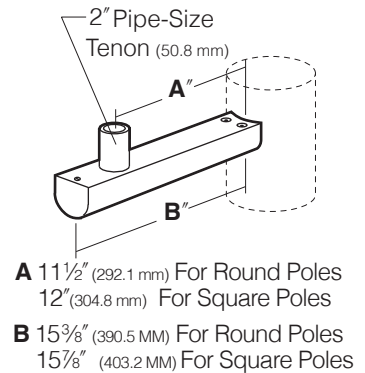
(WEB) provides 3/8-16 bolt receptacles welded in a galvanized re-bar cage for casting into poured-in-place concrete walls. Bolt receptacles receive fixture attachment bolts. Component EPA: 0.3.



Side Pole Mount Tenon (SPT-X)

(2" tenon for optional heavy duty swivel mount only)

Available for Round and Square Poles. Extruded aluminum arm with one 2" pipe-size tenon (2-3/8" O.D., 2" I.D.). Removable end cap for wiring access. For use with other Kim Site/Roadway Luminaires as an additional mid-pole floodlight. **X** in Side Pole Mount Cat. No. indicates 3", 3-1/2", 4", 5" or 6" pole dia. Example: SPM-4/BL is for 4" round pole with Black finish. For square poles, omit **-X**. **NOTE:** Field drilling of Poles is required. Not for use with PT2 option. Component EPA: 0.3.



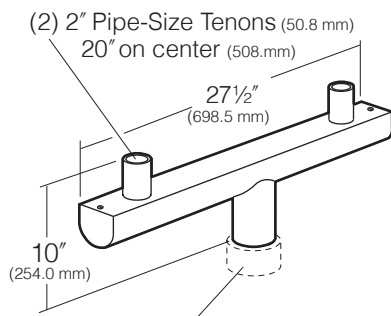
MOUNTING ACCESSORIES (cont.)

Twin Mount Tenon (M2B)

(2" tenon for optional heavy duty swivel mount only)

Extruded aluminum arm with two 2" pipe-size tenons (2-3/8" O.D., 2" I.D.). Can be mounted on a SM2, SMT, or Steel Kim Pole with a steel 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" min. length). Removable end caps for wiring access.

CAUTION: Approved for mounting to poles with steel tenons only. Not for use with PT2 option. Component EPA: 0.6.



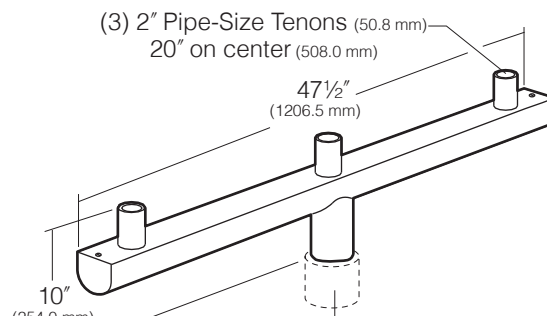
Option with Steel
2" Pipe-Size Tenon (50.8 mm)
(SM2, SMT or Steel KIM Pole)

Triple Mount Tenon (M3E)

(2" tenon for optional heavy duty swivel mount only)

Extruded aluminum arm with three 2" pipe-size tenons (2-3/8" O.D., 2" I.D.). Can be mounted on a SM2, SMT, or Steel Kim Pole with steel 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" min. length). Removable end caps for wiring access.

CAUTION: Approved for mounting to poles with steel tenons only. Not for use with PT2 option. Component EPA: 1.0.



Option with Steel
2" Pipe-Size Tenon (50.8 mm)
(SM2, SMT or Steel KIM Pole)

SPECIFICATIONS

Housing:

One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness.

Separate internal driver compartment rated for IP66 ingress protection.

Lens Frame:

Secondary lens is impact resistant 1/8" tempered glass with anti-reflective coating.

Lens has a one-piece extruded vulcanized silicone gasket.

Optical Array:

LEDs mount to a metal printed circuit board assembly (MCPCB).

Optical lenses are clear injection molded PMMA acrylic.

Frame:

Lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.

Lens frame has a one-piece O-ring extruded vulcanized silicone gasket.

Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.

Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws.

Gasketing:

Silicone gaskets throughout.

Fasteners:

All external fasteners are stainless steel.

Wiring:

No. 18AWM rated 105°C, wet rating.

Driver:

Universal voltage, 120 through 277V with a ±10% tolerance. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized.

High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized.

"Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.

Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.

Operating Temperature:

Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.

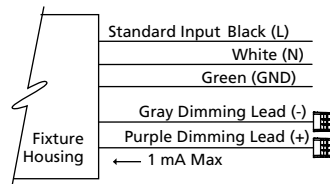
Dimming:

Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver.

Modular wiring harness in the service area provides user access to the dimming circuitry (Continuous Dimming option).

Optional factory programmed dimming profile.

IP710 dimmer recommended.



Surge Protection:

10,000V in parallel
20,000V in series

Fuse Options

SF for 120, 277, 347 Line volts
DF for 208, 240, 480 Line volts

Finish:

Fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.

Standard colors include (BL) Black, (DB) Dark Bronze, (GT) Graphite, (PS) Platinum Silver, (LG) Light Gray, (TT) Titanium, (WH) White, and (CC) Custom Color (Include RAL#).

Certifications and Listings:

UL 1598 Standard for Luminaires.

IP66 certified.

RoHS compliant.

CAUTION:

Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

WARRANTY:

For full warranty see: <http://www.hubbellighting.com/resources/warranty>