

JOB _____

TYPE _____

NOTES _____

APPROVALS _____

FEATURES

- Lumen range from 2,000 to 4,000 lm
- Color Temperature 3000K, 4000K, 5000K at 70 and 80 CRI
- Yoke and Threaded Knuckle mounting options.
- 6 beam distributions and beam angles including: Narrow 17°x17°, Medium 28°x27°, Medium Flood 62°x61°, Wide 79°x64°, Horizontal 54°x22°, and Vertical 22°x54°.
- IP66 sealed optical and driver chamber.

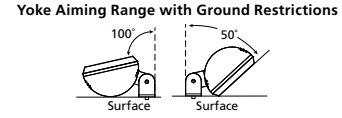
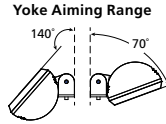
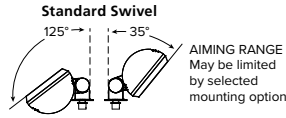
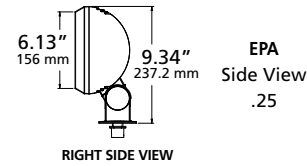
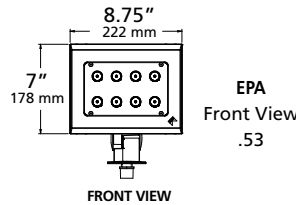
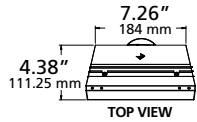
Certifications



SPECIFICATIONS



Max Weight = 9 lbs. / 4.08 kg



ORDERING CODE

KFL1						
Fixture	LED Engine	CCT/CRI	Beam Spread	Voltage	Mounting	Color
	8L-20 20W, 2,000 lm 16L-40 40W, 4,000 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	BL Black DB Dark Bronze GT Graphite LG Light Gray PS Platinum Silver TT Titanium WH White CC Custom Color*

*Consult factory

Options	Optical Options
SF Single Fuse 120, 277, 347 Line Volts DF Double Fuse 208, 240, 480 Line Volts	BD Barn Doors HS Half Glare Shield

Mounting Accessories		
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 TM2 Twin Mount PT Post Top Mount PT2 Twin Post Top Mount	<u>Accessory Colors</u> BL Black DB Dark Bronze GT Graphite LG Light Gray PS Platinum Silver TT Titanium WH White CC Custom Color*

*Consult factory

Kim Lighting reserves the right to change specifications without notice.

LUMINAIRE PERFORMANCE

LED #	Nominal Watts	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
8L	20	2,000 lm	N	17° x 17°	1895	15710	98.5	1948	16150	101.2	2022	16763	104.9
			M	28° x 28°	2003	6789	104.1	2059	6979	107.0	2137	7243	111.0
			MF	61° x 63°	1968	2139	102.3	2023	2199	105.1	2100	2283	109.1
			WF	79° x 83°	2118	1585	109.2	2177	1606	113.1	2260	1670	117.5
			HF	54° x 22°	1841	3276	95.7	1892	3367	98.3	1964	3495	102.0
			VF	22° x 55°	1839	3198	95.6	1890	3287	98.2	1962	3412	102.0
16L	40	4,000 lm	N	17° x 17°	3810	32563	104.7	3916	33469	107.7	4065	34742	111.4
			M	28° x 27°	3847	13558	105.8	3954	13935	108.7	4105	14467	112.8
			MF	62° x 61°	3755	4033	103.3	3860	4146	106.1	4007	4304	110.1
			WF	79° x 64°	3817	3075	105.0	3923	3160	107.9	4073	3281	112.0
			HF	54° x 22°	3443	6472	94.7	3539	6652	97.3	3674	6906	101.1
			VF	22° x 54°	3394	6441	93.3	3489	6622	95.9	3622	6874	99.6

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

ELECTRICAL CHARACTERISTICS

Light Engine	System Watts	Drive Current	Electrical										Dimming				
			Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
8L	20	700 mA	120-480	50/60	0.17	0.10	0.08	0.07	0.06	0.04	>0.9	20	10% to 100%	0mA	1mA	0V	10V
16L	40	700 mA			0.33	0.19	0.17	0.14	0.12	0.08							

TM-21 LIFETIME CALCULATION

Hours	Projected Lumen Maintenance (25°C / 77°F)					
	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	97.94%	96.78%	95.33%	90.33%	> 60,000

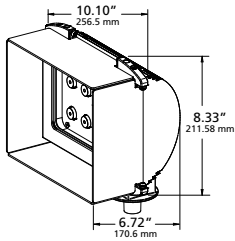
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Optical Options

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.

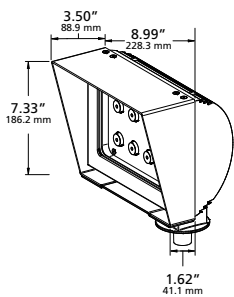
CAUTION: Not recommended for ground mounted fixtures in vandal prone areas.



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.

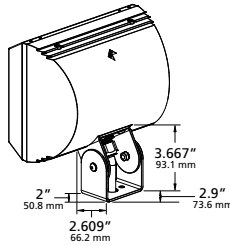


Mounting Options

Architectural Yoke (Y)

Architectural Yoke Mount used for surface mounting applications. Secured to surface using two 1/4" bolts.

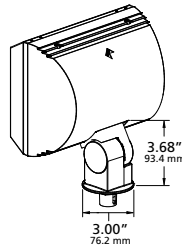
Yoke is stainless steel material with powder coating finish.



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.

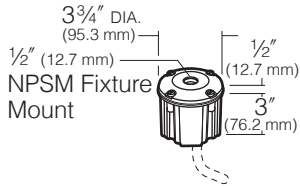


MOUNTING ACCESSORIES

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

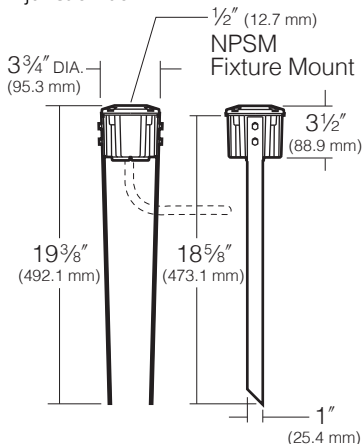
Die-cast brass with 1/2" NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. internal volume. **NOTE:** All side taps provided with plugs. Creates a flush-mounted appearance. May be cast in concrete for increased stability. **CAUTION:** Fixture stem and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



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

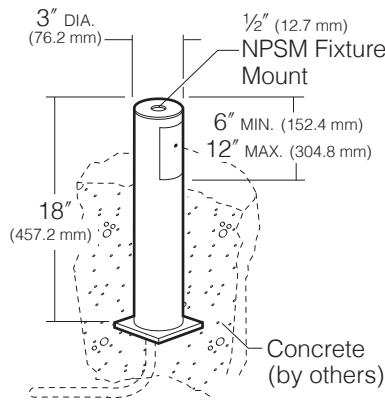
- JBR-30, JBR-32** (2) 1/2" NPT in bottom,
(2) 19" long stakes

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.



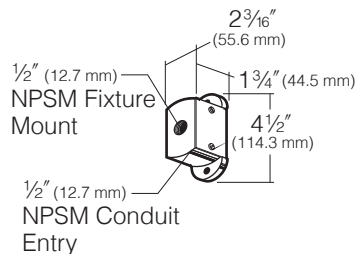
Stanchion Mount (SM18) (Standard swivel mount only)

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).



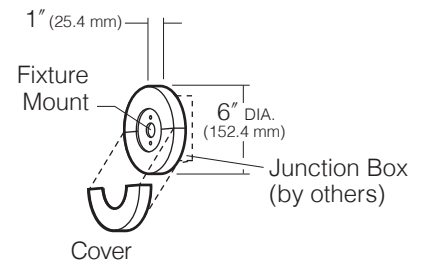
Surface Mount (J-27N) (Standard swivel mount only)

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).



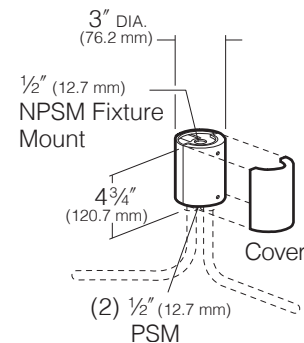
Wall or Ceiling Mount (WM) (Standard swivel mount only)

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.



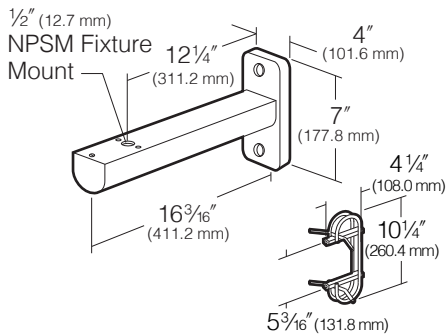
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MOUNTING ACCESSORIES (cont.)

Wall Mount (WM1)

(Standard swivel mount only)

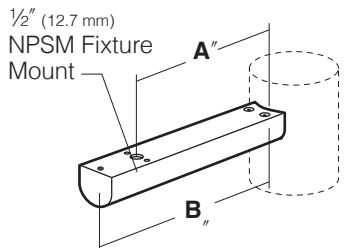
Extruded aluminum arm with a removable end cap for wiring access. Arm is welded to a cast aluminum plate with two 1/2" dia. mounting holes. Optional Wall Embedment Bracket (**WEB**) provides 3/8-16 bolt receptacles welded in a galvanized re-bar cage for casting into poured-in-place concrete walls. Bolt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



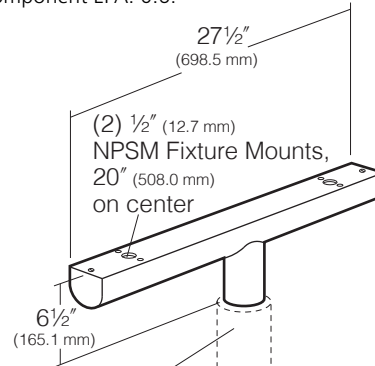
A 11 1/2" (292.1 mm) For Round Poles
12" (304.8 mm) For Square Poles

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.

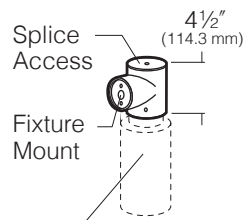


Option with Steel
2" Pipe-Size Tenon (50.8 mm)
(SM2, SMT, or KIM Pole)

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.



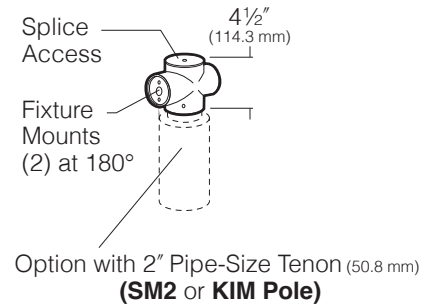
Option with 2" Pipe-Size Tenon (50.8 mm)
**(WM2, SMT, SM2, M2B, M3E,
or KIM Pole)**

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.



Option with 2" Pipe-Size Tenon (50.8 mm)
(SM2 or 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.

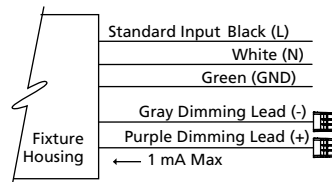
Dimming:

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>