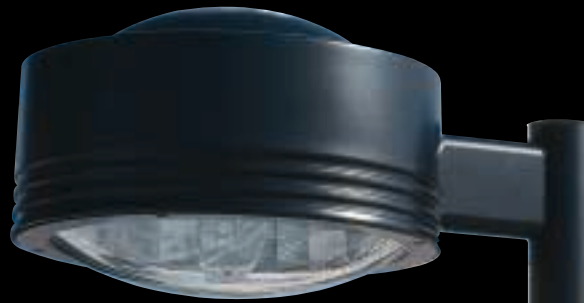


# Vertical Lamp

Cylindrical Body Luminaire

70 - 1000 Watt



**KIM LIGHTING**

## Vertical Lamp Luminaire

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Photometrics: See separate VL Photometric Catalog.	

**ISO 9001:2000**



**SITE / AREA  
PARKING STRUCTURE  
ROADWAY  
ARCHITECTURAL FLOOD  
ACCENT  
LANDSCAPE**

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U.S. PATENT D358,898

[www.kimlighting.com](http://www.kimlighting.com)



**Hubbell  
Lighting, Inc.**

Printed in U.S.A.  
5501403244  
Version 1.01 (6/06)

### Design Logic

The strong architectural lines of Kim VL Series luminaires are a combination of aesthetics and robust engineering, producing the defining form and function in vertical lamp technology. Four housing sizes (17", 21", 25", and 29"), each accommodating four types of optical systems, provide the ultimate in application flexibility. The unity of design and engineering produces a vertical lamp luminaire of unprecedented performance and value -- The Kim VL Series.

### Ultra Performance

Vertical orientation of H.I.D. light sources can generate very broad light distributions with excellent uniformity. The Kim VL reflector systems are carefully engineered to optimize vertical lamp performance. They are totally sealed to insure both initial and long term maintenance of light output.

### Advanced Technology

Kim VL housings are produced on computerized spinning machines which accurately control wall thickness and dimension. Horizontal ribbing and flange hemming adds tremendous strength to the housing while the aerodynamic shape reduces drag. This reduced luminaire wind loading means lighter and less expensive poles may be used. All VL luminaires are finished with a state-of-the-art powder coat paint applied over a chromate pretreatment; the same method used for commercial aircraft.





# Kim Theory of Relativity

## The Relationship of Outdoor Lighting to Site and Architecture



VLA Vertical Lamp Arm



VLP Vertical Lamp Post



VRB Vandal Resistant Bollard



LTV Lightvault®



AFL Architectural Floodlight



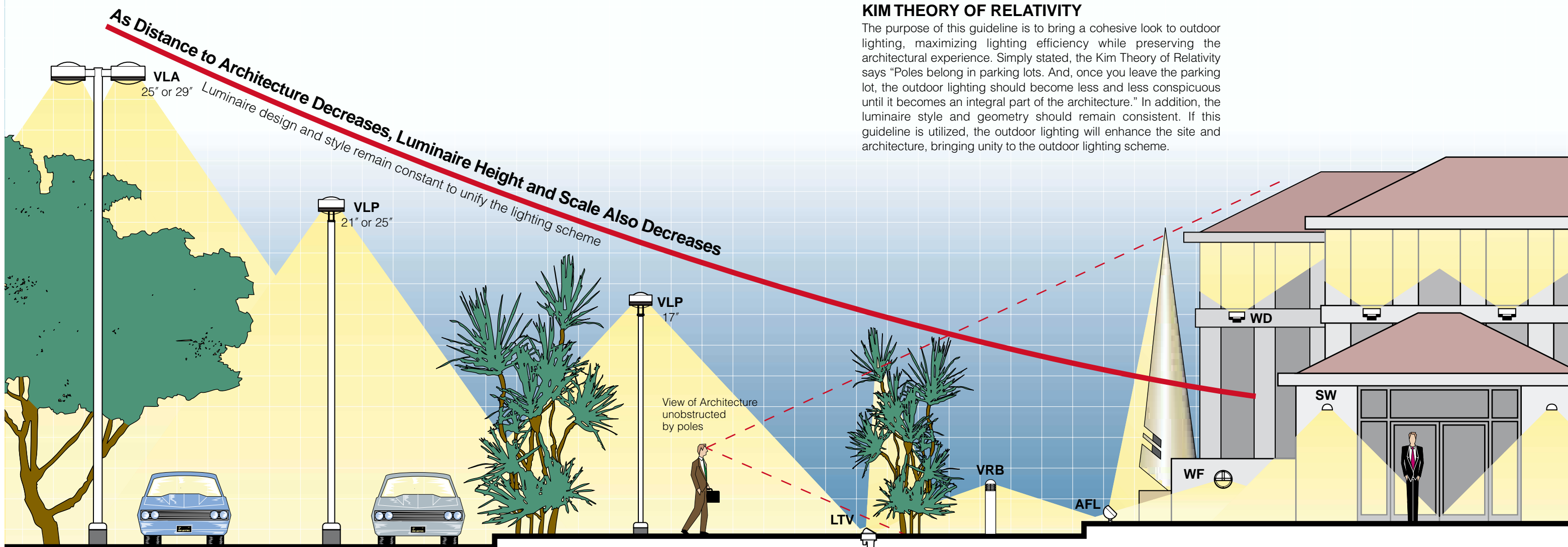
WF Wall Form®



SW Site Wallform



WD Wall Director®



### KIM THEORY OF RELATIVITY

The purpose of this guideline is to bring a cohesive look to outdoor lighting, maximizing lighting efficiency while preserving the architectural experience. Simply stated, the Kim Theory of Relativity says "Poles belong in parking lots. And, once you leave the parking lot, the outdoor lighting should become less and less conspicuous until it becomes an integral part of the architecture." In addition, the luminaire style and geometry should remain consistent. If this guideline is utilized, the outdoor lighting will enhance the site and architecture, bringing unity to the outdoor lighting scheme.

#### SITE / ROADWAY ZONE

Parking lots and roadways require luminaires on 20' - 40' poles to efficiently light these large areas. Therefore, this lighting becomes dominant, and sets the design and style for all other lighting as you progress towards the building.

#### PEDESTRIAN ZONE

As you leave the parking lot and transition to pedestrian areas, poles should decrease in height to 10' - 16'. In addition, luminaires should decrease in scale, and can have more decorative features to be appreciated at the pedestrian level.

#### LANDSCAPE / PATH ZONE

Near the building, luminaires should begin to disappear, blending into the landscape and hardscape elements.

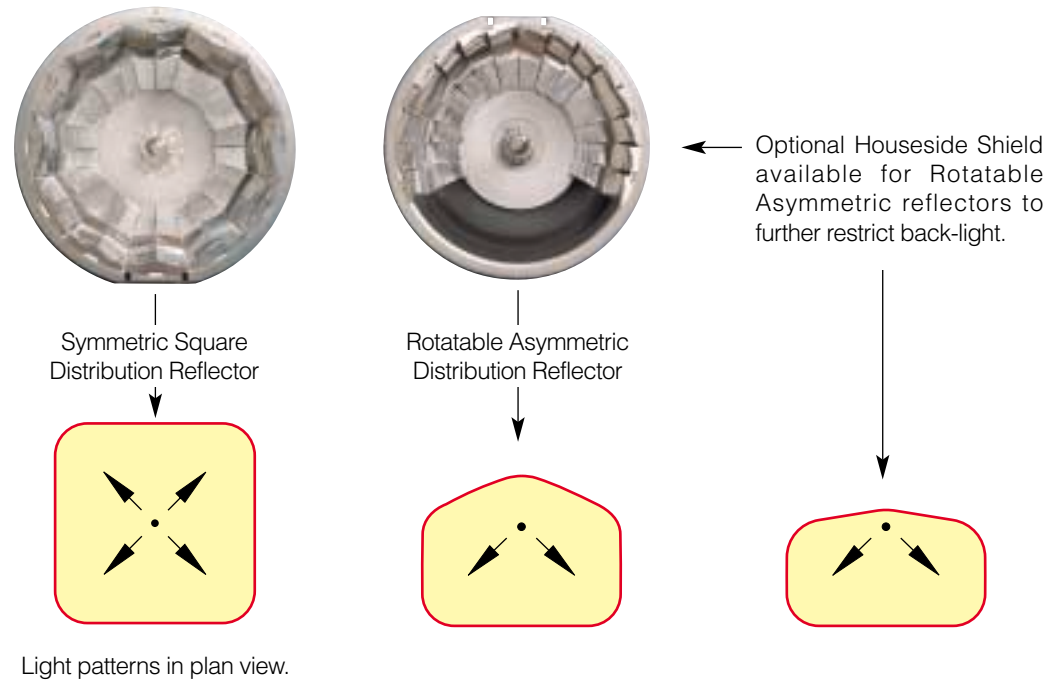
#### BUILDING / PERIMETER ZONE

No pole mounted luminaires should ever be used near the building, as they will dominate the architecture. The only exception would be the use of decorative luminaires to delineate entrances to the structure. Building mounted, architecturally compatible fixtures should be almost invisible.

# Optical Design / Versatility

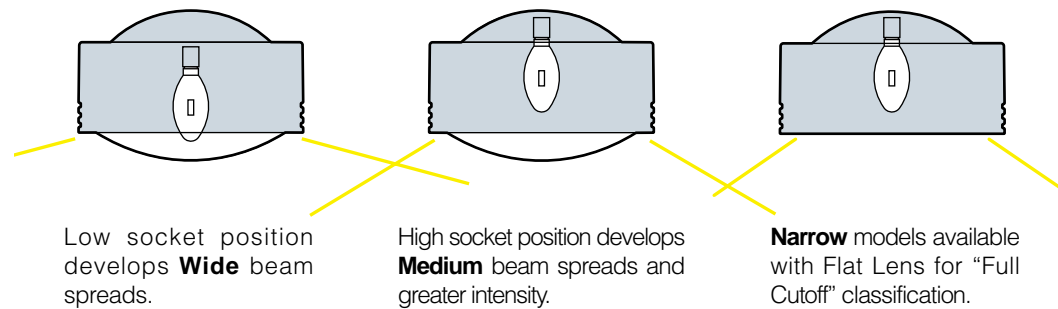
## Light Distributions

Kim VL luminaires are available in two basic light distributions: Symmetric Square and Asymmetric. These two distributions will efficiently light any site. The Square distribution is designed for maximum pole spacing in open areas, while the Asymmetric distribution is designed for perimeters to minimize spill light onto adjacent property, for roadway lighting, or for pathways using the small 17" unit. A houseside shield is available for the Asymmetric distribution to control spill light onto sensitive surrounding property. All reflectors are self-contained modules fully sealed for long term maintenance of light output, and are fabricated from premium Alzak® reflector material.



## Beam Spreads

The two light distributions are available in three beam spreads: Wide, Medium, and Narrow. The beam spreads are controlled by socket position which may be changed on the job site, if adjustments are desired after installation. Initial beam spread is specified by catalog number and is set at the factory.



## Site Adaptability

Two light distributions, two beam spreads, houseside shielding, four housing sizes and six pole mounting configurations provide total site adaptability. The Kim VL line offers efficient site coverage and coordinated daytime aesthetics. The four housing sizes, ranging from 70 watts to 1000 watts, assures that all areas of the site can be illuminated by luminaires of the same design.

Perimeters next to adjacent property are ideal for the **Asymmetric distribution** to control spill light. The optional houseside shield can be used for very sensitive areas next to residential neighborhoods.

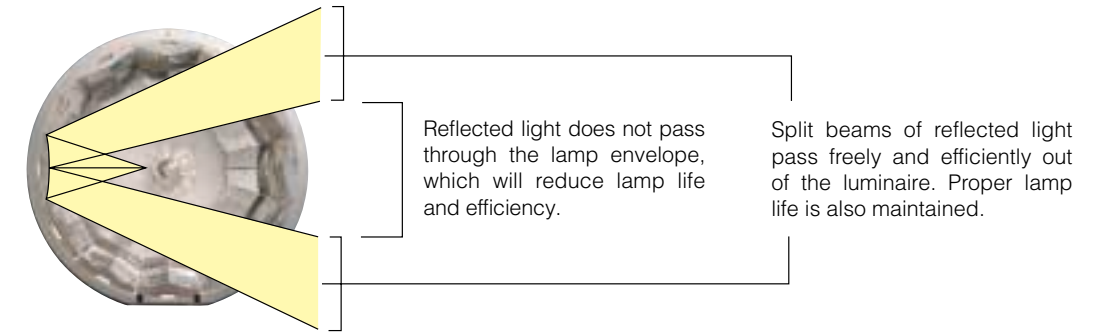
Pathways, courtyards, and spaces between buildings are ideal for the small 17" VL fixtures. This will bring the site lighting down to a human scale while maintaining design consistency.

The **Symmetric Square distribution** coupled with the **wide beam spread** (low socket position) designed for open site areas where maximum pole spacings can be utilized. Fixture wattage, pole height and number of fixtures per pole will control light levels.

**Medium and Narrow beam spreads** are ideal along roadway perimeters, medians, and parking lot entrances where higher light levels are required on-site and into the street. This scheme will provide improved visibility when entering the facility.

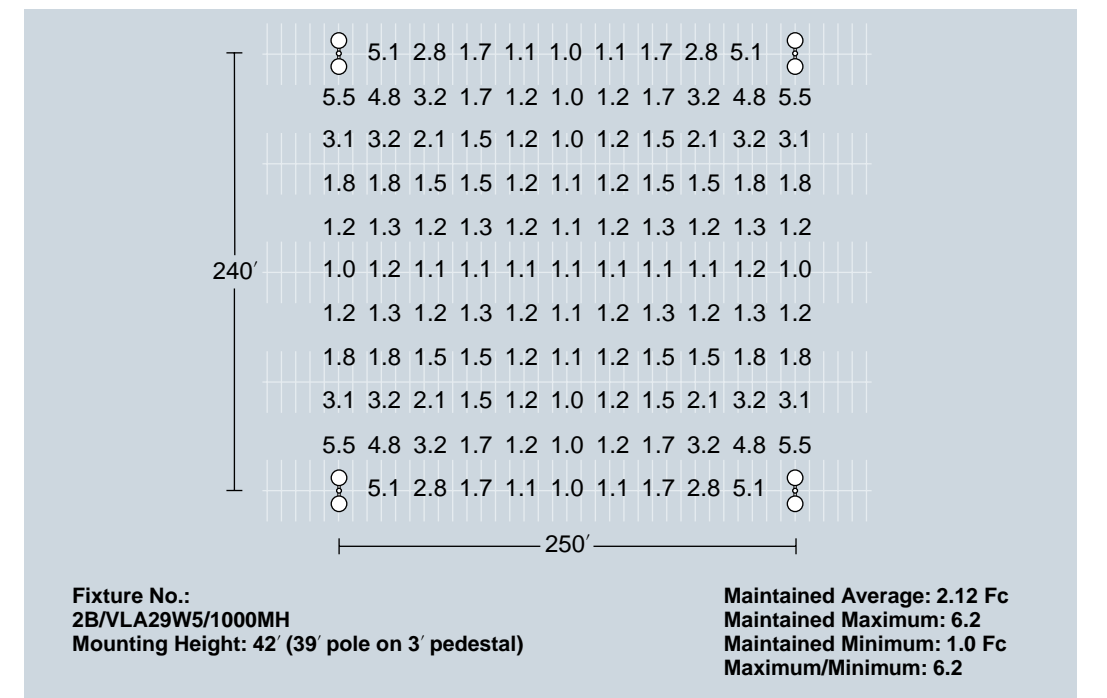
## Split Beam Reflectors

Wide-beam vertical lamp reflectors will simply redirect light back into the lamp unless designed properly. Kim VL reflectors are precision engineered to avoid this redirected energy by using split-beam reflector geometry.



## Efficiency and Uniformity

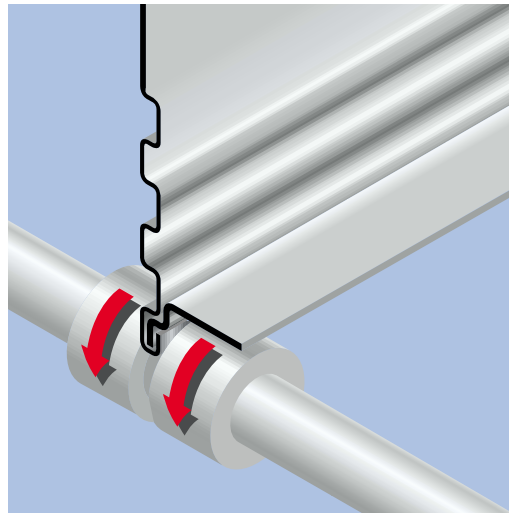
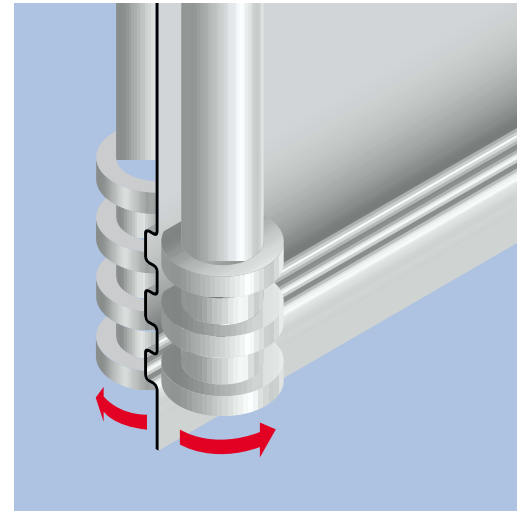
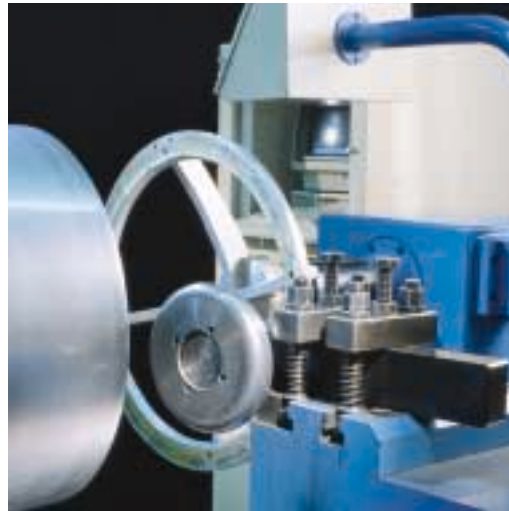
Kim VL luminaires are designed for maximum pole spacings while producing outstanding uniformity of illumination. This is made possible by vertical lamp orientation and a square light pattern, a 1977 Kim patent that revolutionized cutoff optics and reflector design. Using Square distribution luminaires with the wide beam spread, poles can be spaced at least six times the mounting height while achieving excellent uniformity. Light levels are controlled by wattage, mounting heights, and quantity of luminaires per pole. At right is a typical layout for a large parking lot utilizing twin arm mount fixtures.



## Strength Coupled with Architectural Character

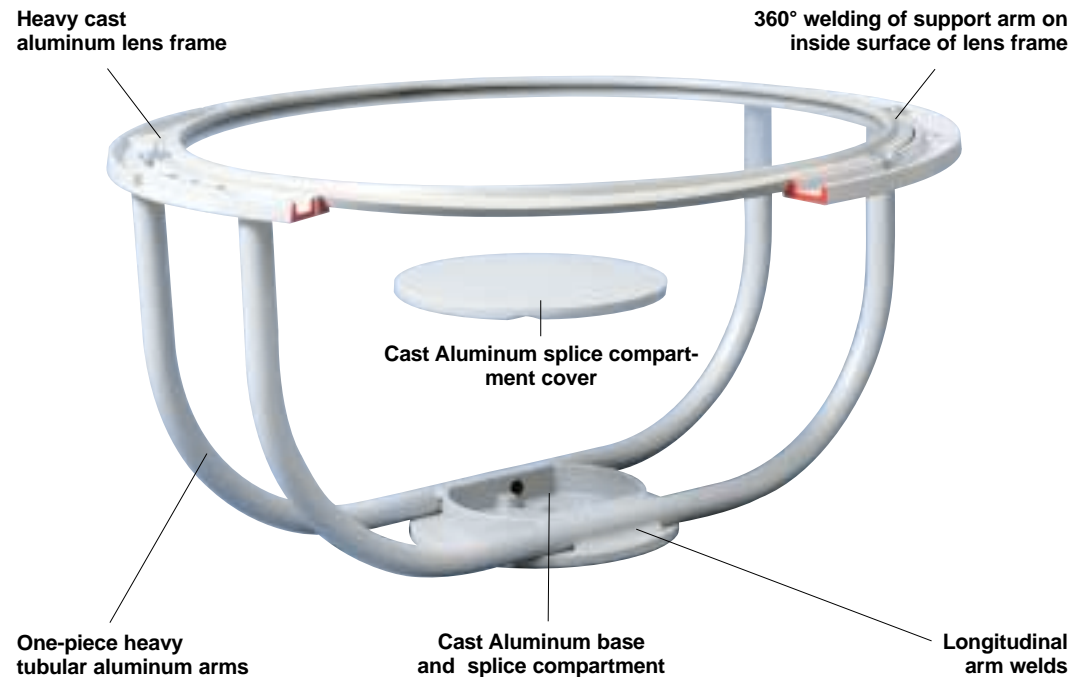
Engineering and design were conceived as one discipline in the VL series. The goal was to produce a housing with very high strength, low weight and aerodynamic drag, simple geometry, and basic architectural compatibility. The logical solution was a clean cylinder accented by horizontal reveals.

Our precision computer controlled spinning process is used to produce the clean, crisp housing with consistent wall thickness and smooth sides. Three reveals are rolled into the housing for stiffening and to create a smart, classic profile. The final process adds a support flange by mechanical hemming, eliminating welds and fasteners.



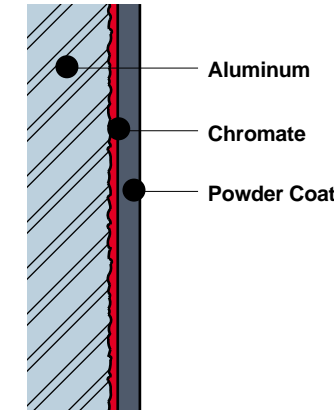
## High Strength Yoke

Post top mounted VLs utilize Kim's unique yoke configuration which optimizes component strength while reducing stress on the welds. The key element of this design is a single tube system which spans the lens frame with longitudinal welding at the hub. This design efficiently transfers the fixture weight to the center hub and away from the welds. Stress at the weld is minimized to resist wind and vibration forces. The base hub also serves as a field-splice compartment and completes the horizontal-plane design developed in the housing.



## Durable Powder Coat Finish

Kim's state-of-the-art powder coat paint system is engineered to provide the highest quality finish with absolute paint adhesion under weather extremes. The Super TGIC thermoset polyester powder coat finish is applied over a chromate pretreatment. This finish system has exceeded the A.S.T.M. 1000 hour salt spray test, enduring over 5000 hours without failure.

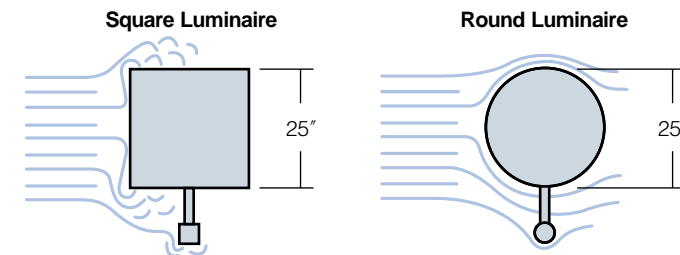


## Eight Stage Finish

1. Power wash and degrease.
2. Detergent tank bath.
3. Clear water rinse bath.
4. Chromate bath. The best known pretreatment of aluminum for corrosion resistance and paint adhesion.
5. Clear water rinse bath.
6. Dry off oven.
7. Powder coating, 2.5 mil nominal thickness.
8. Bake for 20 minutes at 410°F.

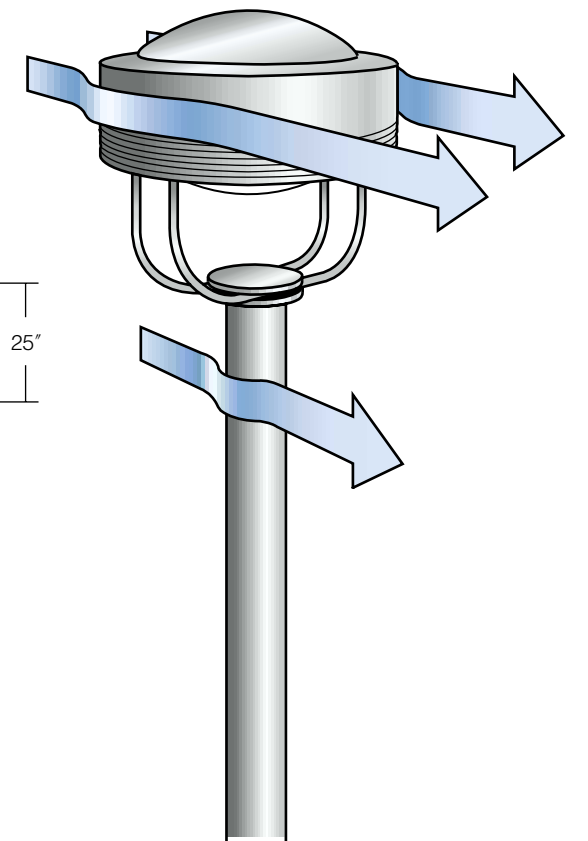
## Low E.P.A. Housing and Components

The choice between round or square housings becomes a "no contest" selection when the effect of wind is compared. A round housing produces 40% less E.P.A. (Effective Projected Area) than a square housing having the same width and height. This translates to a large potential savings, as lighter gauge poles may be utilized.



Coefficient of Drag (CD)	1.2	0.7
EPA	2.5	1.5

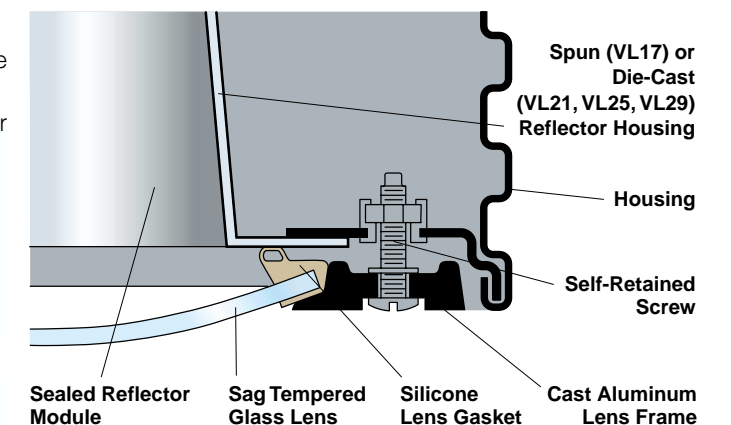
Comparison of 25" round and square arm mounted luminaires shows 40% less E.P.A. for the round unit. The same percentage decrease also applies to post top mounted fixtures.



## Sealed Optics

In outdoor lighting it is not enough to seal the optical chamber from outside air, moisture and insects. Some of these contaminants can also enter through internal wireways, which is why all VL optics are totally sealed inside and out. This assures maximum performance between maintenance cycles which are typically three to five years.

Die-cast reflectors are used in the VL21, VL25, and VL29 (shown). VL17 reflector utilizes a spun outer housing.



# Installation and Maintenance

## Maintenance and Access

Fast installation and easy maintenance are achieved by modular construction. Hinged lens frames (arm mounts) and housings (post top mounts) lock in the open position freeing both hands for work.

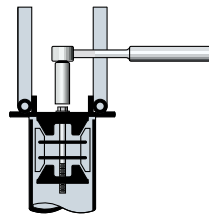
Reflectors snap out for easy access to the housing interior. The ballast module is factory prewired with quick-disconnect plugs, and mounts inside the housing with keyhole slots. Pole mounting uses the least number of fasteners, maintaining simple, clean detailing.



Prewired ballast module

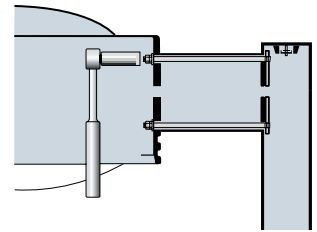
## Post Top Installation

Post top mounts can be specified with Kim's patented wedge grip. A single concealed bolt attaches the fixture.



## Arm Mount Installation

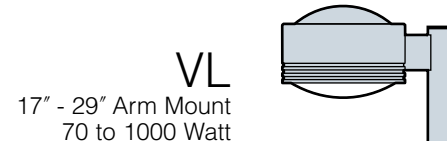
Arm mounts utilize a draw-bolt system concealed within the arm's internal centering guides.





# Ordering Information

## Vertical Lamp Arm Mount



17" - 29" Arm Mount  
70 to 1000 Watt

### Ordering Example:

For Standard Fixture and Pole

Mounting: **1A** / Fixture: **VLA25W5** / Electrical Module: **400MH277** / Finish: **LG-P** / Options: **A-33** / Accent Reveals: **BL-REV** / Pole: **PRA30-6250A** / **LG-P**

1 2 3 4 5-9 10 11 See separate Kim Pole Catalog. Omit for 1W Wall Mount.

**1 Mounting:**  
3Y configuration is available for round poles or vertical slipfitter mount (VSF) only.

Plan View:	1A	2B	2L	3T	3Y	4C	1W
Cat. No.:	1A	2B	2L	3T	3Y	4C	1W
EPA 17":	0.9	1.8	1.6	2.5	2.5	2.8	
21":	1.2	2.4	2.2	3.4	3.4	3.9	
25":	1.5	3.0	2.7	4.3	4.3	4.9	
29":	1.8	3.6	3.3	5.2	5.2	5.9	

### 2 Fixture:

Cat. No. designates VL fixture, light distribution and beam spread.

See the Kim Site/Roadway Optical Systems Catalog for detailed information on reflector design and application.

**NOTE:**  
1 250MH not available in 17" Flat Lens models.

2 25" Flat Lens models must use ED28 lamps.

3 29" Flat Lens models must use ED37 lamps.

4 All Flat Lens models are Full Cutoff, Narrow Distribution.

Fixture For selection of fixture and mounting configuration based on photometric performance, see the VL Photometric Catalog.

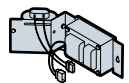
17"	21"	25"	29"
Light Distribution: Asymmetric Wide Beam Spread: Medium	Light Distribution: Asymmetric Wide Beam Spread: Medium	Light Distribution: Asymmetric Wide Beam Spread: Medium	Light Distribution: Asymmetric Wide Beam Spread: Medium
Cat. No.: VLA17W3 with optional Flat Lens: n/a	Cat. No.: VLA21W3 with optional Flat Lens: n/a	Cat. No.: VLA25W3 with optional Flat Lens: n/a	Cat. No.: VLA29W3 with optional Flat Lens: n/a
VLA17M3 VLA17N3F <sup>1,4</sup>	VLA21M3 VLA21N3F <sup>4</sup>	VLA25M3 VLA25N3F <sup>2,4</sup>	VLA29M3 VLA29N3F <sup>3,4</sup>
VLA17W5 VLA17M5 VLA17N5F <sup>1,4</sup>	VLA21W5 VLA21M5 VLA21N5F <sup>4</sup>	VLA25W5 VLA25M5 VLA25N5F <sup>2,4</sup>	VLA29W5 VLA29M5 VLA29N5F <sup>3,4</sup>

### 3 Electrical Module:

HPS = High Pressure Sodium

MH = Metal Halide

PMH = Pulse Start Metal Halide



Lamp Watts	Lamp Type	Line Volts
400	HPS	277

VL 17"			VL 21" and 25"			VL 29"	
70HPS120	100HPS120	150HPS120	150HPS120	250HPS120	400HPS120	750HPS120	1000HPS120
70HPS208	100HPS208	150HPS208	150HPS208	250HPS208	400HPS208	750HPS208	1000HPS208
70HPS240	100HPS240	150HPS240	150HPS240	250HPS240	400HPS240	750HPS240	1000HPS240
70HPS277	100HPS277	150HPS277	150HPS277	250HPS277	400HPS277	750HPS277	1000HPS277
70HPS347	100HPS347	150HPS347	150HPS347	250HPS347	400HPS347	750HPS347	1000HPS347
150HPS480	250HPS480	400HPS480	150HPS480	250HPS480	400HPS480	750HPS480	1000HPS480
70MH120	100MH120	150MH120	175MH120	250MH120	400MH120	1000MH120	
70MH208	100MH208	150MH208	175MH208	250MH208	400MH208	1000MH208	
70MH240	100MH240	150MH240	175MH240	250MH240	400MH240	1000MH240	
70MH277	100MH277	150MH277	175MH277	250MH277	400MH277	1000MH277	
70MH347	100MH347	150MH347	175MH347	250MH347	400MH347	1000MH347	
175MH120	200MH120	250MH120	175MH480	250MH480	400MH480	1000MH480	
175MH208	200MH208	250MH208	175PMH120	250PMH120	400PMH120	750PMH120	1000PMH120
175MH240	200MH240	250MH240	175PMH208	250PMH208	400PMH208	750PMH208	1000PMH208
175MH277	200MH277	250MH277	175PMH240	250PMH240	400PMH240	750PMH240	1000PMH240
175MH347	200MH347	250MH347	175PMH277	250PMH277	400PMH277	750PMH277	1000PMH277
		250MH480	175PMH347	250PMH347	400PMH347	750PMH347	1000PMH347
175PMH120			175PMH480	250PMH480	400PMH480	750PMH480	1000PMH480
175PMH208							
175PMH240							
175PMH277							
175PMH347							

### 4 Finish:

Super TGIC powder coat paint over chromate conversion coating.

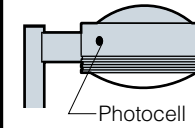
Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	Custom Colors
Cat. No.:	BL-P	DB-P	LG-P	PS-P	WH-P	CC-P

Consult representative for custom colors.

### 5 Optional Photocell:

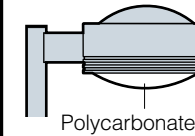
Factory installed photocell in housing with fully gasketed sensor on side wall.

\* Fixture with photocell  
s slave unit(s)



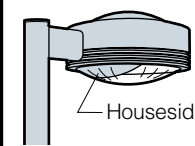
Mounting (see page 10)	Wattage per fixture	Voltage	Cat. No.
1A, 1W	150 to 400W	120	A-30
2B	750 & 1000W Each fixture has a photocell	208	A-31
2L		240	A-32
3T, 3Y	150 to 250W	277	A-33
4C		480	A-34
4C	400W	347	A-35
4C		120	2A-30
4C		208	2A-31
4C		240	2A-32
4C		277	2A-33
4C		480	2A-34
4C		347	2A-35

### 6 Optional Polycarbonate Lens:



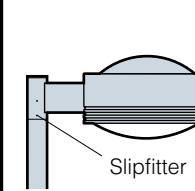
Cat. No.: L17 for 17" models  
L21 for 21" models  
L25 for 25" models  
Polycarbonate Lens replaces standard tempered glass lens. 250 watt maximum. May be used with 400HPS in outdoor locations where ambient air temperature during fixture operation will not exceed 85°F. See "CAUTION" on page 13.

### 7 Optional Houseside Shield:



Cat. No.: HS  
For asymmetric wide and asymmetric narrow distributions only. Recommended for use with clear lamps only. Effectiveness is reduced for coated lamps.

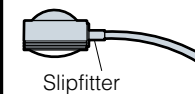
### 8 Optional Vertical Slipfitter Mounts:



Cat. No.	Mounting Configuration
VSF-1A	1A - Single arm mount
VSF-2B	2B - 2 at 180°
VSF-2L	2L - 2 at 90°
VSF-3T	3T - 3 at 90°
VSF-3Y	3Y - 3 at 120°
VSF-4C	4C - 4 at 90°

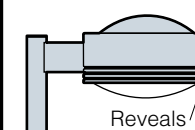
Allows standard fixture and arm to be mounted to poles having a 2" pipe-size steel tenon (2 3/8" O.D. x 4 1/2" minimum length).

### 9 Optional Horizontal Slipfitter Mount:



Cat. No.: HSF  
Replaces standard mounting arm with a slipfitter for mounting to a horizontal pole davit-arm with 2" pipe-size mounting end (2 3/8" O.D.).

### 10 Optional Accent Reveals:



Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	Custom Colors
Cat. No.:	BL-REV	DB-REV	LG-REV	PS-REV	WH-REV	CC-REV

Consult representative for custom colors.

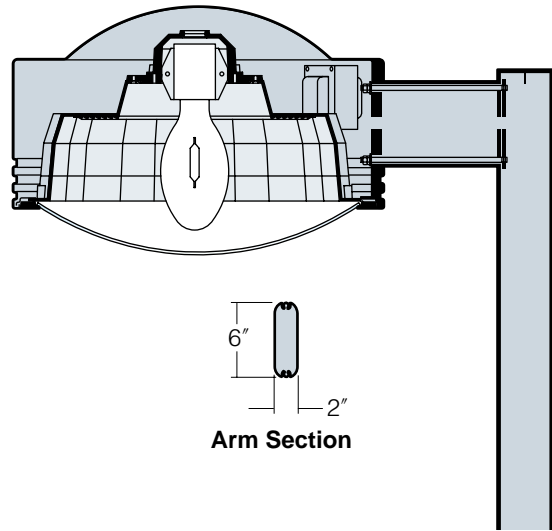
### 11 Poles:

See Kim Pole Catalog for a complete selection of round and square poles in aluminum or steel.

## VL Arm Mount Models

See pages 10-11 for complete ordering information

### Dimensions



**Housing:** Spun aluminum with integral top dome and three equally spaced rollformed reveals, 1/2" wide, separated by 1/2" ribs, 1/4" deep. Sidewalls have a maximum 1° of taper, and are free of welds or fasteners. A rollformed aluminum flange is hemmed into the bottom providing support for the reflector module. An internal aluminum casting provides for mounting of the electrical module and support for the housing hinge.

**Lens Frame Assembly:** One piece cast aluminum lens frame is attached to the housing by a zinc plated cold rolled steel hinge with a stainless steel pin. Closure is by self-retained stainless steel screws; four provided for the 25" and 29" models, three provided for the 21" model, and a single screw for the 17" model. A zinc plated steel self-locking stop-arm is provided to hold the lens frame or housing in the open position while servicing. A 3/16" thick clear tempered sag-glass lens is fully gasketed by a one piece extruded and vulcanized silicone gasket. Lens is retained in the lens frame by zinc plated steel clips.

**Arm Mounting:** Arm is one piece extruded aluminum with internal bolt guides and fully radiussed top and bottom. Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief. Arm is circular cut to mate with specified round pole.

**Reflector Module:** Specular Alzak® optical segments are rigidly mounted within a die-cast aluminum enclosure (Spun for VL17) that attaches to the housing as a one-piece module. Reflectors are field rotatable in 90° increments. All sockets are factory prewired with a quick-disconnect plug for the ballast module. Wire penetrations to the socket are sealed by a silicone gasket to create a totally sealed optical chamber. The optical segments are positioned so that reflected light does not pass through the lamp arc tube. The socket is held in a heat sink die-cast segment and fastened to a multi-position plate set at the factory for "Wide" or "Medium" beam spread. The beam spread can be adjusted in the field with the simple removal of two screws and a turn of the socket brackets. "Narrow" beam reflectors are fixed and non-adjustable. All reflectors are equipped with a mogul base socket rated 4KV or 5KV (750 & 1000 watt). All optical systems are interchangeable within the housing. 400, 750, and 1000 watt vertical lamps utilizes a lamp vibration stabilizer that braces the neck of the lamp with two-prong stainless steel clamp extending from the socket mount.

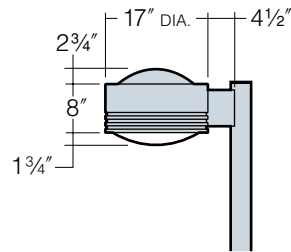
**Electrical Module:** All electrical components are UL and CSA recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Module attaches inside housing using keyhole slots. All ballasts are high power factor with starting temperatures of -40°F. for HPS and -20°F. for MH lamp modes.

**Finish:** Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a chromate conversion coating; 5000 hour salt spray test endurance rating. Standard colors are Black, Dark Bronze, Light Gray, Platinum Silver, or White. Custom colors are available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

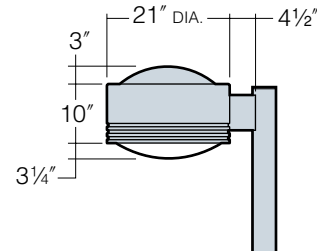
**Certification:** UL Listed to U.S. and Canadian safety standards for wet locations. Fixture manufacturer shall employ a quality program that is certified to meet the ISO 9001:2000 standard.

**CAUTION:** Fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

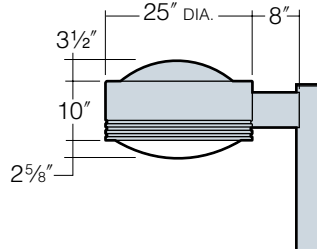
VLA17



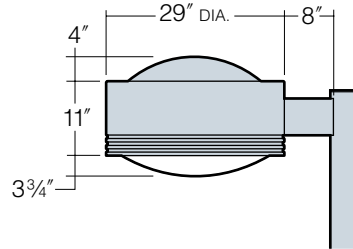
VLA21



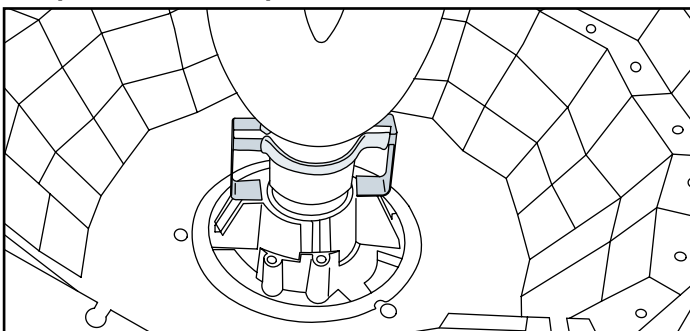
VLA25



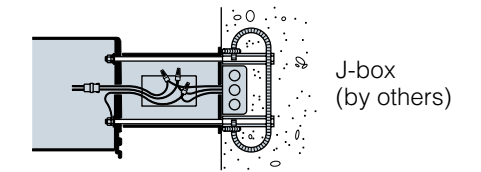
VLA29



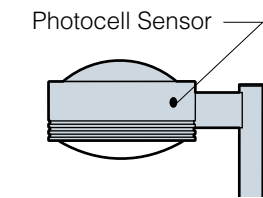
### Lamp Vibration Clamp



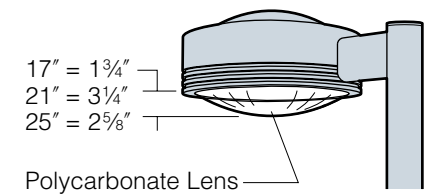
**Wall Mounting: (For poured concrete walls only).** Modified support arm with side access hole for field splicing. Zinc electro-plated steel embedment bracket for casting around a Junction Box, cover plate for Junction Box finished to match fixture. 8"L x 6"H x 2"W.



**Photocell:** Factory installed photocell inside housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others. (Exceptions: Four 400 watt fixtures where two fixtures will have photocells. 1000 watt fixtures will have individual photocells).

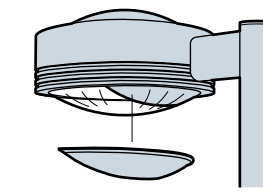


**Polycarbonate Lens: (17", 21", and 25" models).** Clear UV stabilized convex polycarbonate replaces standard flat glass lens, gasketed and integral with lens frame. 250 Watt maximum. For 21" and 25" models, 400 Watt HPS is allowable in locations where ambient air temperature will not exceed 85°F. during operation.



**CAUTION:** Use only when vandalism is anticipated to be high. Useful life is limited by UV discoloration from sunlight and metal halide lamps.

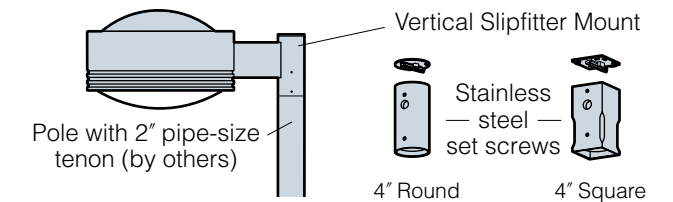
**Houseside Shield: (asymmetric distributions only).** Clear anodized spun aluminum on houseside. Black high heat paint on streetside. Attaches to reflector.



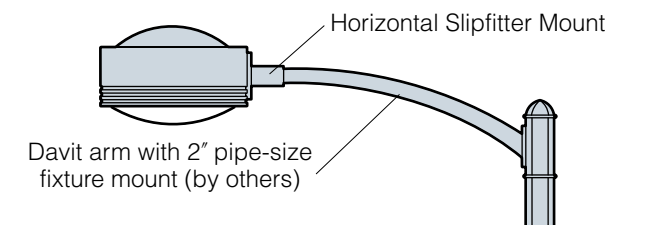
Houseside Shield for convex lens or polycarbonate lens

**NOTE:** Use with clear lamps only.

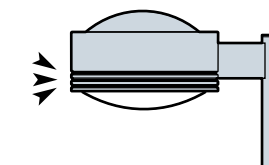
**Vertical Slipfitter Mount:** Allows standard fixture and arm to be mounted to steel poles having a 2" pipe-size steel tenon (2 3/8" O.D. x 4 1/2" min. length). 4" round cast aluminum with flush cap, secured by four 3/8" stainless steel set point allen screws. Pole tenon must be field drilled at one set screw location to insure against fixture rotation. Finished to match fixture.



**Horizontal Slipfitter Mount:** Replaces standard mounting arm with a slipfitter which allows VL Arm Mount model to be mounted to a horizontal pole davit-arm with 2" pipe-size mounting end (2 3/8" O.D.). Cast aluminum clamp-type slipfitter with set screw anti-rotation lock. Bolts to housing from inside the electrical compartment using mounting holes for the standard support arm. Davit-arm must be field drilled at a set screw location to insure against fixture rotation. Finished to match fixture and arm.



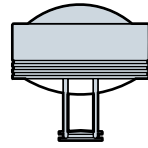
**Accent Reveals:** Three aluminum bands riveted inside the housing reveals. Available in five standard Kim powder coat finishes. Custom colors available.



# Ordering Information

## VL Post Top Mount

VL  
17" - 29" Post Top Mount  
70 to 1000 Watt



Mounting	Fixture	Electrical Module	Finish	Options	Accent Reveals	Pole
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5-7</b>	<b>8</b>	<b>9</b>
<b>FM / VLP25W5 / 400MH277 / LG-P / A-33 / BL-REV / PRA30-6250FM / LG-P</b>						
See separate Kim Pole Catalog.						

**1 Mounting:**  
17" 21" 25" 29"  
EPA: 0.7 1.0 1.2 1.5

Cat. No.:	<b>FM</b> Flush Mount	<b>PT</b> Pole Tenon Mount	<b>DM</b> Direct Mount
Pole Top Requirements:	17" 3 3/8", 4", 4 1/2" or 5" Dia. 21" 4", 4 1/2", 5", or 6" Dia. 25" 4", 4 1/2", 5", or 6" Dia. 29" 4", 4 1/2", 5", or 6" Dia.	2" Pipe-size Tenon (2 3/8" O.D. x 4 3/4" L) 2" Pipe-size Tenon (2 3/8" O.D. x 4 3/4" L) 2" Pipe-size Tenon (2 3/8" O.D. x 4 3/4" L) 2" Pipe-size Tenon (2 3/8" O.D. x 4 3/4" L)	n/a 3.1" to 3.9" Dia. 3.1" to 3.9" Dia. 3.1" to 3.9" Dia.

**2 Fixture:**  
Cat. No. designates VL fixture, light distribution and beam spread.  
See the Kim Site/Roadway Optical Systems Catalog for detailed information on reflector design and application.  
**NOTE:**  
\*250MH not available in 17" Flat Lens models.  
\*25" Flat Lens models must use ED28 lamps.  
\*29" Flat Lens models must use ED37 lamps.  
\*All Flat Lens models are Full Cutoff, Narrow Distribution.

Fixture					
17"	Light Distribution: Asymmetric Beam Spread: Wide Cat. No.: <b>VLP17W3</b> with optional Flat Lens: n/a	<b>VLP17M3</b> <b>VLP17N3F</b> <sup>1,4</sup>	<b>VLP17W5</b> n/a	<b>VLP17M5</b> <b>VLP17N5F</b> <sup>1,4</sup>	
21"	Light Distribution: Asymmetric Beam Spread: Wide Cat. No.: <b>VLP21W3</b> with optional Flat Lens: N/A	<b>VLP21M3</b> <b>VLP21N3F</b> <sup>4</sup>	<b>VLP21W5</b> n/a	<b>VLP21M5</b> <b>VLP21N5F</b> <sup>4</sup>	
25"	Light Distribution: Asymmetric Beam Spread: Wide Cat. No.: <b>VLP25W3</b> with optional Flat Lens: n/a	<b>VLP25M3</b> <b>VLP25N3F</b> <sup>2,4</sup>	<b>VLP25W5</b> n/a	<b>VLP25M5</b> <b>VLP25N5F</b> <sup>2,4</sup>	
29"	Light Distribution: Asymmetric Beam Spread: Wide Cat. No.: <b>VLP29W3</b> with optional Flat Lens: n/a	<b>VLP29M3</b> <b>VLP29N3F</b> <sup>3,4</sup>	<b>VLP29W5</b> n/a	<b>VLP29M5</b> <b>VLP29N5F</b> <sup>3,4</sup>	

**3 Electrical Module:**  
HPS = High Pressure Sodium  
MH = Metal Halide  
PMH = Pulse Start Metal Halide

Lamp Watts	Lamp Type	Line Volts
400	HPS	277

VL 17"	VL 21" and 25"	VL 29"
70HPS120 100HPS120 150HPS120 70HPS208 100HPS208 150HPS208 70HPS240 100HPS240 150HPS240 70HPS277 100HPS277 150HPS277 70HPS347 100HPS347 150HPS347	150HPS120 250HPS120 400HPS120 150HPS208 250HPS208 400HPS208 150HPS240 250HPS240 400HPS240 150HPS277 250HPS277 400HPS277 150HPS347 250HPS347 400HPS347 150HPS480 250HPS480 400HPS480	750HPS120 1000HPS120 750HPS208 1000HPS208 750HPS240 1000HPS240 750HPS277 1000HPS277 750HPS347 1000HPS347 750HPS480 1000HPS480
70MH120 100MH120 150MH120 70MH208 100MH208 150MH208 70MH240 100MH240 150MH240 70MH277 100MH277 150MH277 70MH347 100MH347 150MH347	175MH120 250MH120 400MH120 175MH208 250MH208 400MH208 175MH240 250MH240 400MH240 175MH277 250MH277 400MH277 175MH347 250MH347 400MH347 175MH480 250MH480 400MH480	1000MH120 1000MH208 1000MH240 1000MH277 1000MH347 1000MH480
175PMH120 200PMH120 250PMH120 175PMH208 200PMH208 250PMH208 175PMH240 200PMH240 250PMH240 175PMH277 200PMH277 250PMH277 175PMH347 200PMH347 250PMH347	175PMH120 250PMH120 400PMH120 175PMH208 250PMH208 400PMH208 175PMH240 250PMH240 400PMH240 175PMH277 250PMH277 400PMH277 175PMH347 250PMH347 400PMH347 175PMH480 250PMH480 400PMH480	750PMH120 1000PMH120 750PMH208 1000PMH208 750PMH240 1000PMH240 750PMH277 1000PMH277 750PMH347 1000PMH347 750PMH480 1000PMH480
175PMH120 175PMH208 175PMH240 175PMH277 175PMH347		

**4 Finish:**  
Super TGIC powder coat paint over chromate conversion coating.

Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	Custom Colors
Cat. No.:	<b>BL-P</b>	<b>DB-P</b>	<b>LG-P</b>	<b>PS-P</b>	<b>WH-P</b>	<b>CC-P</b> Consult representative for custom colors.

**5 Optional Photocell:**  
Factory installed photocell in housing with fully gasketed sensor on side wall.

Line Volts:	120V	208V	240V	277V	480V	347V
Cat. No.:	<b>A-30</b>	<b>A-31</b>	<b>A-32</b>	<b>A-33</b>	<b>A-34</b>	<b>A-35</b>

**6 Optional Polycarbonate Lens:**

Cat. No.:	<b>L17</b> for 17" models <b>L21</b> for 21" models <b>L25</b> for 25" models	Polycarbonate Lens replaces standard tempered glass lens. 250 watt maximum. May be used with 400HPS in outdoor locations were ambient air temperature during fixture operation will not exceed 85°F. See "CAUTION" on page 17.
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**7 Optional Houseside Shield:**

Cat. No.:	<b>HS</b>	For asymmetric wide and asymmetric narrow distributions only. Recommended for use with clear lamps only. Effectiveness is reduced for coated lamps.
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**8 Optional Accent Reveals:**

Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	Custom Colors
Cat. No.:	<b>BL-REV</b>	<b>DB-REV</b>	<b>LG-REV</b>	<b>PS-REV</b>	<b>WH-REV</b>	<b>CC-REV</b> Consult representative for custom colors.

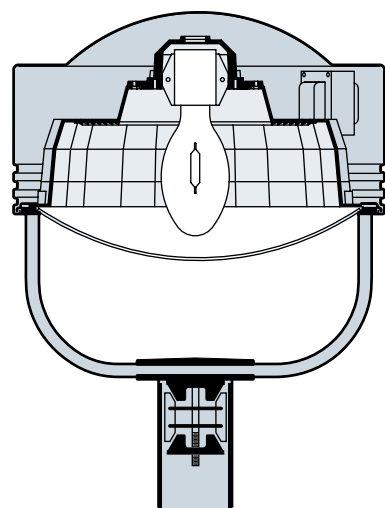
**9 Poles:**

See Kim Pole Catalog for a complete selection of round and square poles in aluminum or steel.

VL Post Top Mount Models

See pages 14-15 for complete ordering information

Dimensions



**Housing:** Spun aluminum with integral top dome and three equally spaced rollformed reveals, 1/2" wide, separated by 1/2" ribs, 1/4" deep. Sidewalls have a maximum 1° of taper, and are free of welds or fasteners. A rollformed aluminum flange is hemmed into the bottom providing support for the reflector module. An internal aluminum casting provides for mounting of the electrical module and support for the housing hinge.

**Lens Frame and Yoke:** One piece cast aluminum lens frame is attached to the housing by a zinc plated cold rolled steel hinge with a stainless steel pin. Closure of the housing is by self-retained stainless steel screws; four provided for the 25" and 29" models, three provided for the 21" model, and a single screw for the 17" model. A stainless steel self-locking stop arm is provided to hold the housing in the open position while servicing. A 3/16" thick clear flat tempered glass lens is fully gasketed by a one piece extruded and vulcanized silicone gasket. Lens is retained in the frame by removable zinc plated steel clips. Lens frame is supported at four points by two aluminum U-shaped tubular arms cradled in a cast aluminum hub. Arms are welded to the lens frame, and welded to the hub along their longitudinal axis. Hub contains a field-splice compartment, a cast aluminum cover and one of the following pole attachment means: **FM** - Flush Mounting, **PT** - Pole Tenon mounting, or **DM** - Direct Mounting (See page 17 for complete descriptions).

**Reflector Module:** Specular Alzak® optical segments are rigidly mounted within a die-cast aluminum enclosure (Spun for VL17) that attaches to the housing as a one-piece module. Reflectors are field rotatable in 90° increments. All sockets are factory prewired with a quick-disconnect plug for the ballast module. Wire penetrations to the socket are sealed by a silicone gasket to create a totally sealed optical chamber. The optical segments are positioned so that reflected light does not pass through the lamp arc tube. The socket is held in a heat sink die-cast segment and fastened to a multi-position plate set at the factory for "Wide" or "Medium" beam spread. The beam spread can be adjusted in the field with the simple removal of two screws and a turn of the socket brackets. "Narrow" beam reflectors are fixed and non-adjustable. All reflectors are equipped with a mogul base socket rated 4KV or 5KV (750 & 1000 watt). All optical systems are interchangeable within the housing. 400, 750, and 1000 watt vertical lamps utilizes a lamp vibration stabilizer that braces the neck of the lamp with two-prong stainless steel clamp extending from the socket mount.

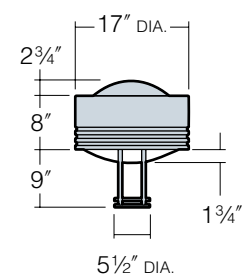
**Electrical Module:** All electrical components are UL and CSA recognized mounted on a single plate and factory prewired with quick-disconnect plugs. Module attaches inside housing using keyhole slots. All ballasts are high power factor with starting temperatures of -40°F. for HPS and -20°F. for MH lamp modes.

**Finish:** Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a chromate conversion coating; 5000 hour salt spray test endurance rating. Standard colors are Black, Dark Bronze, Light Gray, Platinum Silver, or White. Custom colors are available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

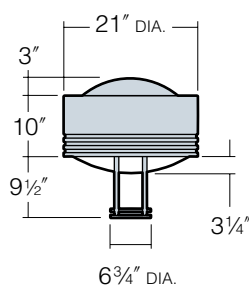
**Certification:** UL Listed to U.S. and Canadian safety standards for wet locations. Fixture manufacturer shall employ a quality program that is certified to meet the ISO 9001:2000 standard.

**CAUTION:** Fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

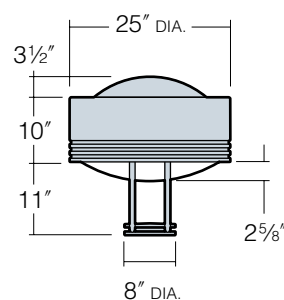
VLP17



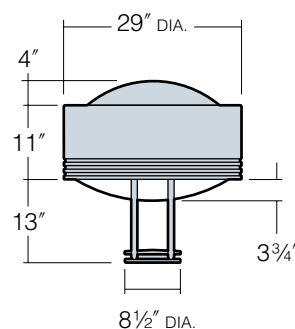
VLP21



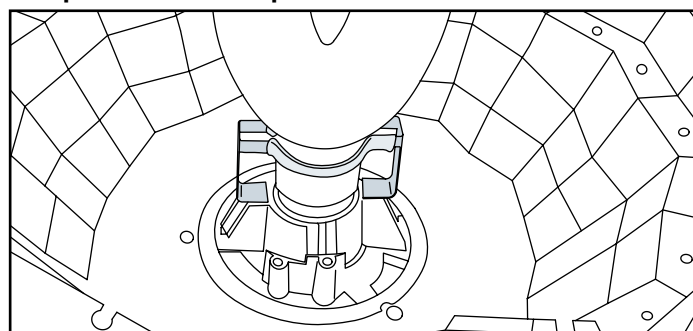
VLP25



VLP29



Lamp Vibration Clamp

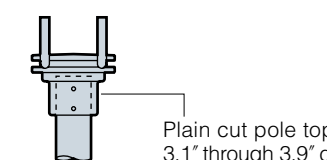
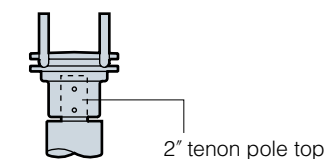
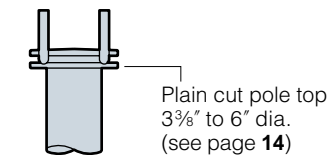


Pole Mounting

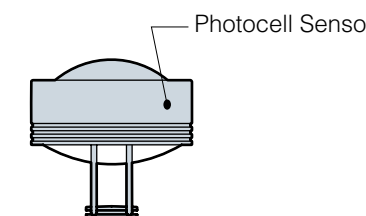
**FM** - Flush Mounting by means of an expansion device activated by a single bolt within the splice compartment. Pole must have a plain-cut top.

**PT** - Pole Tenon mounting by means of a cast aluminum extension sleeve containing four recessed 3/8" stainless steel allen head set point screws. Pole must have a 2" pipe-size tenon (2 3/8" O.D. x 4 3/4" minimum length). Pole tenon must be field drilled at one set screw location to secure against fixture rotation.

**DM** - Direct Mounting by means of a cast aluminum extension sleeve containing four recessed 3/8" stainless steel allen head set point screws. Pole must have a plain-cut top, 3.1" to 3.9" diameter. Pole must be field-drilled at one set screw location to secure against fixture rotation.

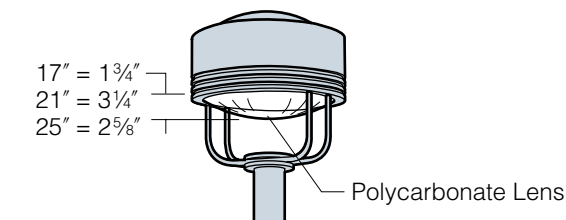


**Photocell:** Factory installed photocell inside housing with a fully gasketed sensor on the side wall.



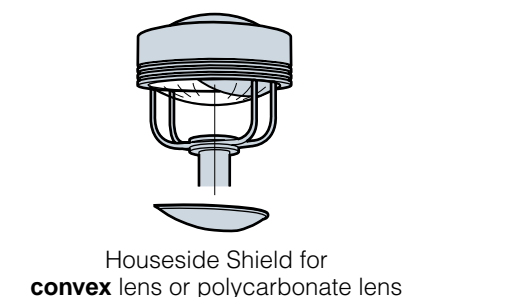
**Polycarbonate Lens: (17", 21", and 25" models).** Clear UV stabilized convex polycarbonate replaces standard flat glass lens, gasketed and integral with lens frame. 250 Watt maximum. For 21" and 25" models, 400 Watt HPS is allowable in locations where ambient air temperature will not exceed 85°F. during operation.

**CAUTION:** Use only when vandalism is anticipated to be high. Useful life is limited by UV discoloration from sunlight and metal halide lamps.

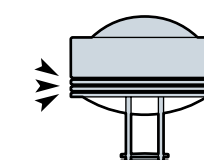


**Houseside Shield: (asymmetric distributions only).** Clear anodized spun aluminum on houseside. Black high heat paint on streetside. Attaches to reflector.

**NOTE:** Use with clear lamps only.



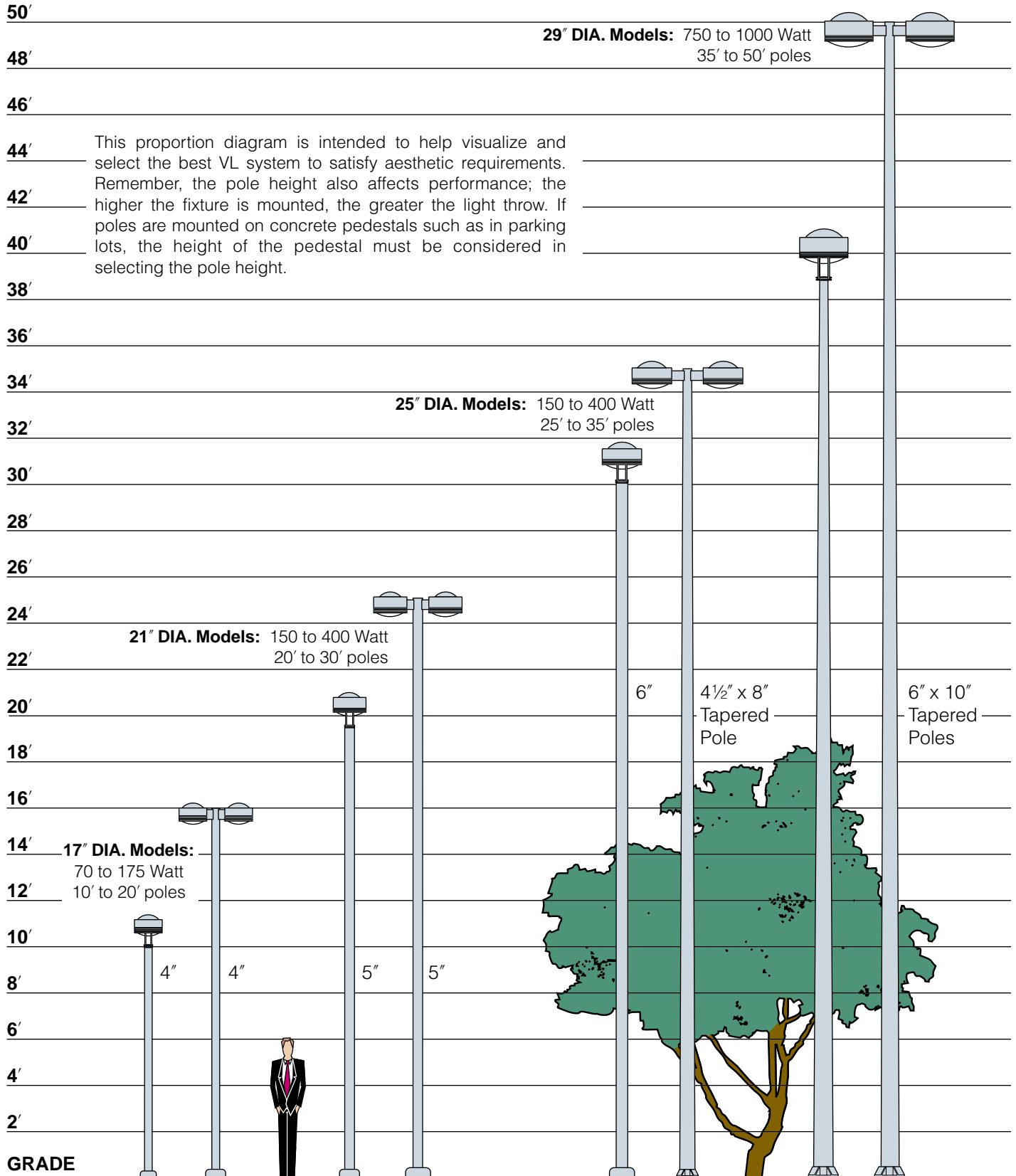
**Accent Reveals:** Three aluminum bands riveted inside the housing reveals. Available in five standard Kim powder coat finishes. Custom colors available.





# Proportion Guide

## 70 to 1000 Watt / 10' to 50' Poles



# Lamp and Electrical Guide

Refer to Item 2 on pages **10** and **14** for allowable Lamp/Lens combinations.

Lamp	Lamp Watts	ANSI Ballast Type	Life (Hours)	Initial Lumens <sup>1</sup>	Voltage	Operating Amps.	Open Circuit	Starting Amps.	Max. Amps.
<b>HIGH PRESSURE SODIUM</b>									
<b>70HPS</b>									
ED-17 or B-17 Clear Mogul Base (17" only)	70	S-62	24000+	6300	120	0.82	1.40	0.90	1.40
					208	0.48	0.83	0.50	0.83
					240	0.41	0.72	0.44	0.72
					277	0.36	0.62	0.35	0.62
					347	0.30	0.55	0.30	0.55
<b>100HPS</b>									
ED-17 or B-17 Clear Mogul Base (17" only)	100	S-54	24000+	9500	120	1.14	2.20	0.80	2.20
					208	0.66	1.40	0.55	1.40
					240	0.57	1.10	0.41	1.10
					277	0.49	0.95	0.35	0.95
					347	0.39	0.70	0.45	0.70
<b>150HPS</b>									
E-23 1/2 Clear Mogul Base (21" and 25") ED-17 or B-17 Clear Mogul Base (17" only)	150	S-55	24000+	16000	120	1.66	3.00	1.95	3.00
					208	0.96	1.65	1.10	1.65
					240	0.83	1.45	0.95	1.45
					277	0.72	1.25	0.88	1.25
					347	0.56	0.92	0.52	0.92
					480	0.42	0.70	0.50	0.70
<b>250HPS</b>									
ED-18 or ET-18 Clear Mogul Base	250	S-50	24000+	30000	120	2.50	1.70	1.65	2.50
					208	1.50	1.00	0.95	1.50
					240	1.30	0.85	0.80	1.30
					277	1.10	0.75	0.70	1.10
					347	0.93	0.70	0.60	0.93
					480	0.63	0.45	0.40	0.63
<b>400HPS</b>									
ED-18 or ET-18 Clear Mogul Base	400	S-51	24000+	50000	120	3.80	2.00	3.30	3.80
					208	2.20	1.20	1.80	2.20
					240	1.90	0.95	1.50	1.90
					277	1.70	0.85	1.40	1.70
					347	1.32	0.70	1.00	1.32
					480	0.97	0.55	0.75	0.97
<b>750HPS</b>									
BT-37 Clear Mogul Base	750	S-111	24000+	110000	120	6.75	3.00	6.30	6.75
					208	4.00	1.75	3.70	4.00
					240	3.50	1.60	3.20	3.50
					277	3.10	1.50	3.00	3.10
					347	2.50	1.20	2.30	2.50
					480	1.78	0.90	1.65	1.78
<b>1000HPS</b>									
ED-37 Clear Mogul Base	1000	S-52	24000+	125000	120	9.50	4.80	6.40	9.50
					208	5.50	2.70	3.80	5.50
E-25 Clear Mogul Base	1000	S-52	24000+	140000	120	9.50	4.80	6.40	9.50
					208	5.50	2.70	3.80	5.50
					240	4.75	2.40	3.20	4.75
					277	4.15	2.20	2.80	4.15
					347	3.30	1.10	2.20	3.30
					480	2.30	0.90	1.60	2.30
<b>METAL HALIDE</b>									
<b>70MH</b>									
ED-17 Clear Mogul Base (17" only)	70	M-98 M-143	15000+	6200	120	0.85	1.70	0.80	1.70
					208	0.50	1.04	0.50	1.04
					240	0.43	0.87	0.43	0.87
					277	0.39	0.78	0.39	0.78
					347	0.30	0.60	0.30	0.60
<b>100MH</b>									
ED-17 Clear Mogul Base (17" only)	100	M-90 M-140	15000+	9000	120	1.15	2.60	1.15	2.60
					208	0.66	1.50	0.66	1.50
					240	0.58	1.30	0.58	1.30
					277	0.50	1.15	0.50	1.15
					347	0.40	1.00	0.40	1.00
<b>150MH</b>									
ED-17 Clear Mogul Base (17" only)	150	M-102 M-142	15000+	13500	120	1.60	3.65	0.95	3.65
					208	0.90	2.10	0.55	2.10
					240	0.80	1.80	0.50	1.80
					277	0.70	1.58	0.42	1.58
					347	0.55	1.25	0.65	1.25
<b>175MH</b>									
BT-28 or ED-28 Clear Mogul Base (21" and 25") ED-17 Clear Mogul Base (17" only)	175	M-57 H-39	10000+	16000	120	1.80	1.80	1.30	1.80
					208	1.04	1.04	0.75	1.04
					240	0.90	0.90	0.65	0.90
					277	0.80	0.80	0.55	0.80
					347	0.65	0.65	0.50	0.65
					480	0.45	0.45	0.35	0.45
<b>200MH</b>									
ED-17 Clear Mogul Base (17" only)	200	M-136	15000+	21000	120	2.00	2.00	0.75	2.00
					208	1.20	1.20	0.40	1.20
					240	1.00	1.00	0.35	1.00
					277	0.85	0.85	0.30	0.85
					347	0.70	0.65	0.25	0.70
<b>250MH</b>									
BT-28 or ED-28 Clear Mogul Base	250	M-58	10000+	22000	120	2.60	2.60	1.00	2.60
					208	1.50	1.50	0.60	1.50
					240	1.30	1.30	0.50	1.30
					277	1.10	1.10	0.45	1.10
					347	0.90	0.75	0.80	0.90
					480	0.65	0.65	0.30	0.65
<b>400MH</b>									
BT-28 or ED-28 Clear Mogul Base BT-37 or ED-37 Clear Mogul Base	400	M-59 H-33	20000+	40000	120	4.00	3.20	2.50	4.00
					208	2.30	1.80	1.40	2.30
					240	2.00	1.60	1.20	2.00
					277	1.70	1.50	1.00	1.70
					347	1.40	1.05	1.20	1.40
					480	1.00	0.75	0.90	1.00
<b>1000MH</b>									
BT-37 Clear Mogul Base	1000	M-47	15000+	110000	120	9.00	4.50	7.80	9.00
					208	5.20	2.70	4.00	5.20
					240	4.50	2.30	3.70	4.50
					277	3.90	2.20	3.20	3.90
					347	3.20	1.70	2.50	3.20
					480	2.25	1.20	1.90	2.25

Lamp	Lamp Watts	ANSI Ballast Type	Life (Hours)	Initial Lumens <sup>1</sup>	Voltage	Operating Amps.	Open Circuit	Starting Amps.	Max. Amps.
<b>PULSE START METAL HALIDE</b>									
<b>175PMH</b>									
BT-28 or ED-28 Clear Mogul Base ED-17 Clear Mogul Base	175	M-137	15000+	17500	120	1.80	1.80	0.95	1.80
					208	1.05	1.05	0.55	1.05
					240	0.90	0.90	0.45	0.90
					277	0.80	0.80	0.40	0.80
					347	0.63	0.60	0.32	0.63
					480	0.46	0.44	0.13	0.46
<b>250PMH</b>									
BT-28 or ED-28 Clear Mogul Base	250	M-138	15000+	25000	120	2.50	1.40	2.30	2.50
					208	1.45	0.80	1.30	1.45
					240	1.25	0.70	1.15	1.25
					277	1.10	0.60	1.00	1.10
					347	0.90	0.70	0.75	0.90
					480	0.62	0.62	0.32	0.62
<b>400PMH</b>									
ED-28 Clear Mogul Base BT-37 or ED-37 Clear Mogul Base	400	M-135	20000+	44000	120	3.80	2.20	2.85	3.80
					208	2.20	1.50	1.65	2.20
					240	1.90	1.10	1.45	1.90
					277	1.65	0.95	1.25	1.65
					347	1.35	0.75	1.10	1.35
					480	1.00	0.60	0.75	1.00
<b>750PMH</b>									
BT-37 Clear Mogul Base	750	M-149	16000+	80000	120	7.00	3.60	5.60	7.00
					208	4.00	2.00	3.00	4.00
					240	3.50	1.80	2.80	3.50
					277	3.00	1.80	2.20	3.00
					347	2.45	1.45	1.65	2.45
					480	1.75	1.00	1.25	1.75
<b>1000PMH</b>									
BT-37 Clear Mogul Base	1000	M-141	15000+	120000	120	9.00	4.50	7.80	9.00
					208	5.20	2.70	4.00	5.20
					240	4.50	2.30	3.70	4.50
					277	3.90	2.20	3.20	3.90
					347	3.20	1.75	2.25	3.20
					480	2.35	1.30	1.65	2.35

<sup>1</sup>All initial lumen values shown may vary, from one manufacturer to another. Consult lamp manufacturer's data for exact lumen and life data.

**NOTE:** For lamp/ballast information outside of the U.S.A. and Canada, please consult your local Kim representative.

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

Lamps by others.

## Application Engineering Services

