



NS
SERIES

NeoSphere™

CLASSIC SPHERICAL LUMINAIRE

70 - 175W H.I.D. • 85W INDUCTION



KIM LIGHTING

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SITE / AREA
PARKING STRUCTURE
ROADWAY
ARCHITECTURAL FLOOD
ACCENT
LANDSCAPE

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FOUR VARIATIONS



NS1
Horizontal or Vertical Lamp
70-175W H.I.D.
Clear Hemispherical Lens



NS2
Horizontal Lamp
70-175W H.I.D.
Clear Flat Lens



NS3
Vertical Lamp
70-175W H.I.D.
Translucent White
Hemispherical Lens



NS4
Vertical Lamp
85W 100,000 hour
Induction Lamp
Translucent White
Hemispherical Lens





The sphere is a classic architectural form. It was the first contemporary shape used in outdoor lighting when the modern architectural era became rooted. During the 1960s the sphere was so widely used that the lighting industry simply referred to it as “The Lollypop”.

The 1974 energy crisis was a turning point for the lighting industry, and ultimately doomed the sphere. Energy conscious specifiers realized that the sphere was one of the most inefficient luminaires ever invented. In fact, the sphere actually projected more light toward the sky than it directed toward the ground.

Now, Kim Lighting has reinvented the sphere by integrating the latest technology into this classic form. The NeoSphere™ has all the features expected in today's outdoor lighting environment: Performance, Glare-Control, Vandal Resistance, Longevity, Ease of Maintenance and Architectural Relevance. Once again this classic shape can grace the outdoors without apology.

- *Classic Form*
- *Performance*
- *Glare Control*
- *Vandal Resistance*
- *Longevity*
- *Kim Quality*



*Sphere Luminaire
Circa 1965*

AREA & PATH APPLICATION

Application Versatility

The NeoSphere™ has an amazing ability to look and function in harmony with many different environments. This adaptive nature is the product of classic design integrated with functional optics. The NeoSphere is at home in a strong architectural setting, or an open park area where landscape is the principal theme.

Architectural

Strong vertical and horizontal lines resolve themselves into a classic sphere that complements contemporary or traditional architecture. In addition, the NeoSphere projects a highly functional image along with strength and vandal resistance. As a design statement it says "I may be a sphere, but I am the state-of-the-art in technology".

Open Space

For public spaces, parks or any landscaped area, the NeoSphere functions as an unobtrusive yet powerful lighting element. Its simple form becomes a part of the sitescape, while its pedestrian scale provides intimate lighting for pathways or wherever people circulate and congregate.

Function

With a choice of vertical or horizontal lamp optics, types II, III, IV, and V Square distributions plus three lens configurations, the NeoSphere is a versatile lighting instrument. All reflector systems are engineered for maximum pole spacing and superb uniformity of illumination, while the three lens configurations offer a selection of brightness control and vandal protection. A 100,000 hour lamp option is available for installations where relamping is to be avoided for decades. See page 13.





- *Architectural Compatibility*
- *Excellent for Parks and Public Spaces*
- *Highly versatile optics*



DESIGN & SITE COORDINATION

Parking Lots

For large parking areas, Kim's VL (Vertical Lamp) and CC Series (Horizontal Lamp) luminaires are highly efficient and architecturally relevant. Curvilinear shapes have been utilized for minimum wind resistance which allows for lighter and less expensive poles. These luminaires are available in four sizes with HID lamp models from 70W. to 1000W. Single or multiple head configurations coupled with many available light distributions means tremendous application versatility.



Pathways & Courtyards

Transitioning from the parking lot to pedestrian areas creates the need for reduced luminaire scale and simplicity. The NeoSphere is perfect for lighting pathways, driveways, courtyards and park areas because its classic form and size relates to these human spaces. For more intimate areas, Kim's VRB (Vandal Resistant Bollard) is the ideal solution providing

smaller scale, low brightness & extremely rugged construction. The curvilinear forms and fixture detailing maintain a family relationship to the larger parking lot luminaires.



Sitescape

Planters and retaining walls are the ideal elements to begin integrating outdoor lighting into the sitescape. Kim's WF (Wall Forms) luminaires provide design continuity and performance lighting in a rugged fixture engineered for mounting within concrete, brick, stone, or plaster walls.



KIM Theory of Relativity



The Kim Theory of Relativity says that design logic should always exist between outdoor lighting and architecture. This design logic must be a relationship between form and scale that provides functional outdoor lighting in harmony with the site and architecture. The theory says:

Pole-mounted luminaires belong in parking lots where high mounting heights and lamp wattage are the only energy-efficient way to light such large areas. However, once you leave the parking lot and begin the transition toward the building, outdoor lighting equipment should continuously decrease in scale until it ultimately becomes an integral part of the sitescape and architecture. At some point in this transition, the outdoor lighting disappears into the architectural scheme allowing the viewer to experience the architecture without distracting hardware. All lighting equipment must also have a common theme design.



Parking Garage

The Curvilinear design theme can be carried into parking garage lighting with Kim's PGL1HP, PGL2 and PGL3 (Parking Garage Luminaires). These high performance luminaires are the most innovative and versatile fixtures available for today's parking structures. For the top deck, any of the pole mounted luminaires at left are ideal, including the NeoSphere.



Floodlighting

Kim's AFL (Series Floodlights) are the industry standard for performance and architectural compatibility. Generally located near the building, these floodlights perform their task while continuing the design theme with elegant curvilinear simplicity.



Wall Mounted

Pole mounted luminaires should be avoided in close proximity to the architecture. Yet, high light levels are usually needed around the building for security. The Kim WD (Wall Director) and WF (Wall Forms) are high performance luminaires specifically designed to complement the architecture as an integral part of the structure, and continue the design theme for all luminaires from parking lot to building.



- *Design Logic*
- *Luminaire Family Unity*
- *Single source – KIM*





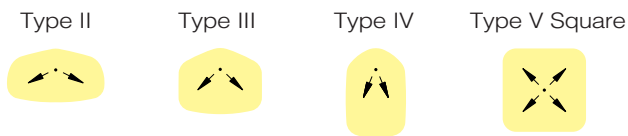


OPTICAL DESIGN/VERSATILITY

Horizontal Lamp Optics

Kim horizontal lamp reflector systems are engineered to produce sharp cutoff, wide pole spacing and excellent uniformity of illumination. Each reflector type is a self contained module that is easily removable for ballast access. Four light distributions are available plus a louvered houseside shield for areas where light trespass onto adjacent property must be reduced. Horizontal lamp modes should be selected for the NeoSphere where the highest degree of brightness control is needed, plus the application flexibility of having four light distributions to cover various site geometrics. Two lens configurations are also available: Flat glass, or clear acrylic (polycarbonate optional) in a hemispherical shape. See page 9 for selection criteria.

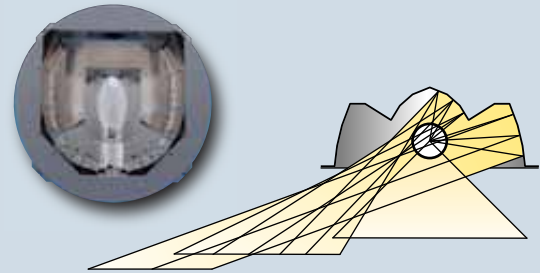
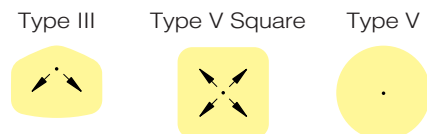
Available light distributions:



Vertical Lamp Optics

Kim vertical lamp reflectors have been engineered to produce the widest possible light throw while creating outstanding uniformity of illumination. Because of the very wide throw, these reflector systems produce greater high-angle fixture brightness which can have numerous benefits. In general, fixture brightness makes the outdoor lighting more apparent from a distance giving visitors a more secure feeling that they are about to enter a well lighted area. It also advertises that a business is open, creating a more inviting atmosphere. Each reflector type is a self-contained module; easily removed mounting screws utilize keyhole slots for ballast access. Three light distributions are available, with a houseside shield option for the Type III asymmetric. Two hemispherical lens configurations are also available: Clear or translucent white acrylic with polycarbonate optional for vandal prone areas. See page 9 for selection criteria.

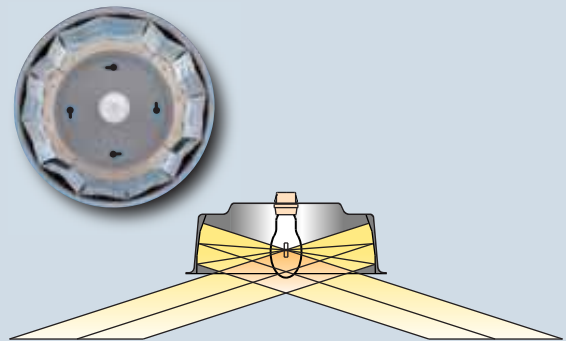
Available light distributions:



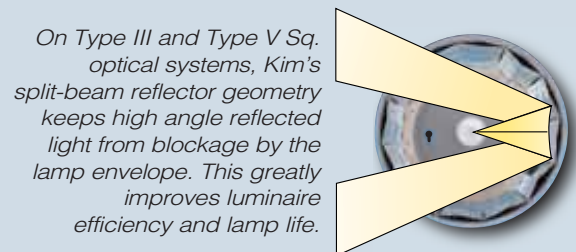
High Angle maximum candlepower & sharp cutoff are produced by the smooth specular side panels.

A specular peened upper reflector spreads light into the midrange avoiding any low angle reflections.

At low angles, bare lamp illumination is more than adequate. The elimination of downward reflecting surfaces greatly increases uniformity.



Very high candlepower is generated at high angles because the vertical lamp projects the majority of its output toward the specular reflective surfaces.

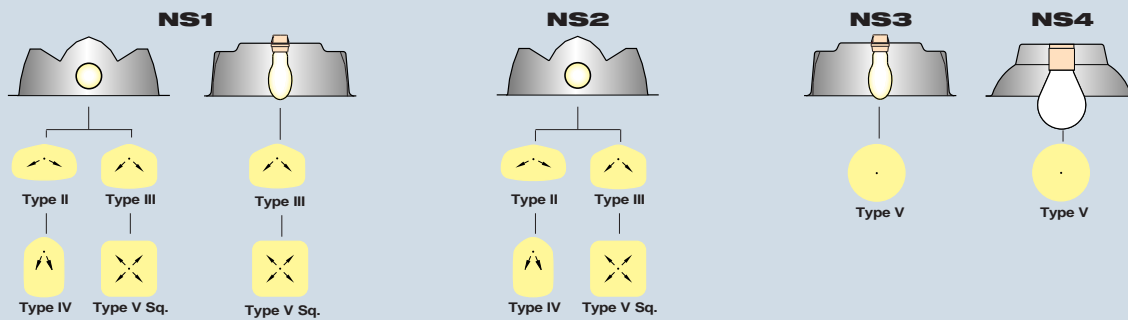


On Type III and Type V Sq. optical systems, Kim's split-beam reflector geometry keeps high angle reflected light from blockage by the lamp envelope. This greatly improves luminaire efficiency and lamp life.

Note: All NeoSphere optical systems use coated lamps to eliminate shadows projected on the ground from the luminaires' vertical support and lens guard system.

Horizontal & Vertical Lamp

Available light distributions and luminaire lens configurations.



Clear Hemispherical Acrylic

Available in both horizontal and vertical lamp modes, this model produces extra sparkle from the lens, which also visually completes the spherical luminaire shape. Optional polycarbonate is available for vandal prone areas.



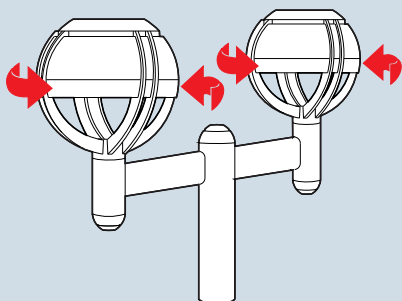
Flat Glass Lens

This model should be selected for maximum brightness control. Also, a black or dark bronze fixture finish will soften brightness by reducing reflections from the support arms. Only horizontal lamp modes are available in this model.



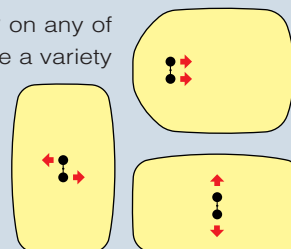
Translucent White Acrylic

Available in a vertical lamp mode only, this lens projects a soft glow that is more visible from a distance. It also visually completes the spherical luminaire shape both day and night. Because the lens is diffuse, only a standard Type V round light pattern is available. Optional polycarbonate is also available.



Twin Mount Variations

Because the NeoSphere can be rotated 360° on any of its mountings, twin arm mounting can produce a variety of light patterns without changing the arm orientation. This allows a more uniform visual site appearance if desired. The examples at right are variations that can be achieved using asymmetric light distributions II, III or IV.



- Vertical and Horizontal lamp modes
- Multiple light distributions
- Efficiency and Uniformity
- Three lens configurations
- Twin Mount Variations

FEATURES

Die Cast Aluminum Components

The NeoSphere housing and lens frame are die cast aluminum for precision and repeatability. These two major components are beautifully tied together with twin support arms that complete the overall spherical luminaire shape. Meticulous detailing is apparent throughout the luminaire with concealed housing hinges, a hidden latch screw and a pole mounting mechanism that eliminates all exposed fasteners at the pole top.

Injection Molded Lenses NS1, NS3, NS4

For precision and clarity the $\frac{3}{16}$ " thick hemispherical acrylic lenses are injection molded to eliminate optical distortion. This also eliminates density variations in the translucent white NS3 and NS4 lens. For vandal prone areas these lenses are available in UV stabilized polycarbonate.

Tempered Glass Lens NS2

Extra thick $\frac{3}{16}$ " glass is used in the NS2 along with heat tempering to produce a lens with unusual strength and longevity. This flat lens configuration is ideal where maximum brightness control is desired. See page 9.

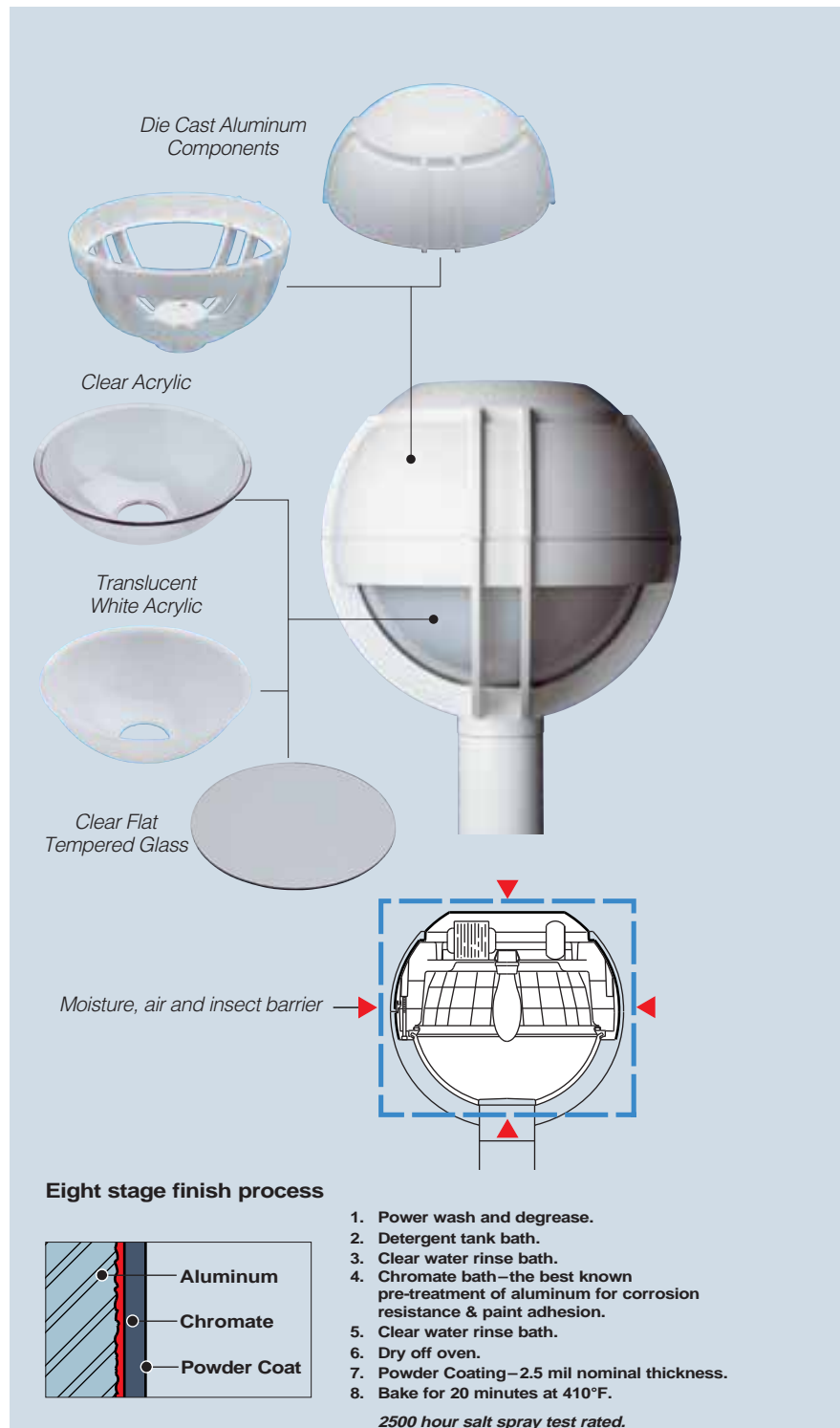
Totally Sealed Optics

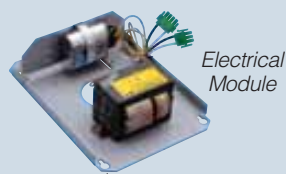
A hallmark of Kim luminaires is uncompromised sealing of the optical chamber, and the NeoSphere is no exception. All gasketing for the lens and housing is one piece silicone which has the highest heat rating and greatest memory retention. This assures a repeated seal after every relamping, and an optical chamber free of dirt, bugs, and moisture. It also assures maintained light efficiency over the life of the luminaire.

Eight Stage Finish

The NeoSphere is available in four standard Kim colors plus custom color options. All paint is Super TGIC thermoset polyester powder coat applied over a chromate pre-treatment as illustrated at right.

Lamp Notice: All NeoSphere optical systems are designed for **Coated Lamps**. The use of clear lamps will cause shadows from the support arms.





Ease of Installation

The NeoSphere attaches to its standard 4" diameter non-tapered pole by a single concealed center bolt that activates an internal expansion device within the pole. No external fasteners exist at the pole top. The ballast and all related electrical components are mounted on a single plate, with quick disconnect plugs on the wiring. To facilitate easy installation of this ballast module, the reflector module is quickly and easily removed. After the reflector module and lamp are installed, the housing closes and seals by a single screw concealed between two support arms.

Ease of Maintenance

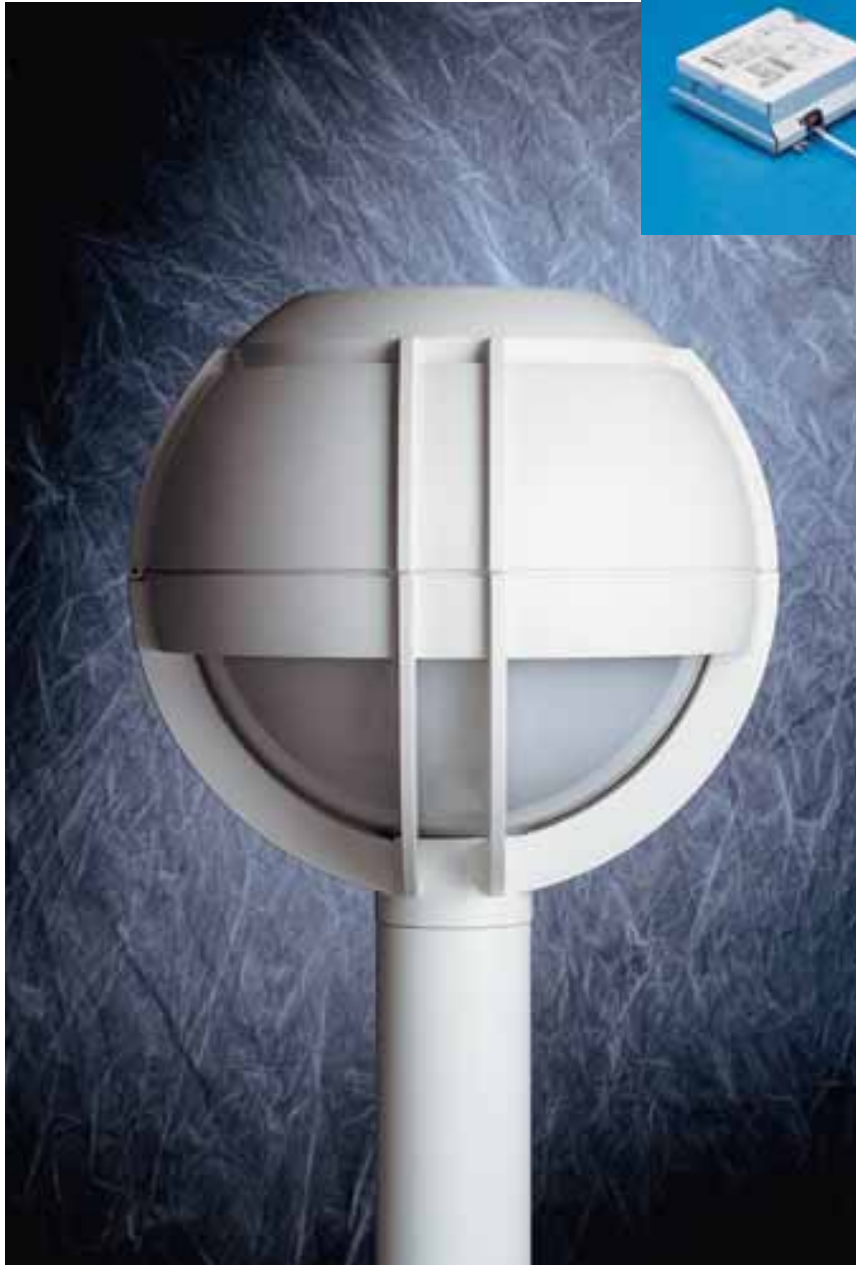
For routine relamping, the NeoSphere housing hinges open by a single screw and is held in the open position by a locking stop arm freeing both hands for servicing. Should the ballast module need servicing, the reflector module quickly removes for easy access. For projects where fixture downtime must be minimal, extra ballast modules may be ordered. Should a ballast fail, one of the stored modules can be immediately installed while the failed ballast can be replaced and stored as a future replacement. The NeoSphere optical chamber is so well sealed that generally the only maintenance is a light cleaning during relamp. Another consideration for easy maintenance is the use of hinged poles available for the NeoSphere in heights of up to 14 feet. See pages 18 and 19.

- *Die Cast Aluminum housing*
- *Injection molded hemispherical lenses*
- *Flat tempered glass lens*
- *Totally sealed optics*
- *Eight stage finish*
- *Quick Installation & maintenance*

NS4

100,000 HOUR⁰ INDUCTION LAMP

*27 years at 10 hours
operation per night*



Applications:

- **Airports**
- **Apartments**
- **Bridges**
- **Condominiums**
- **Correctional Facilities**
- **Entertainment Centers**
- **Parks**
- **Parking Structures**
- **Public Buildings**
- **Railway Stations**
- **Resorts**
- **Roadways**
- **Schools**
- **Shopping Centers**

Any location where relamping is expensive, difficult, dangerous, highly disruptive, or where liability from lamp outage is a concern.

NS4 NeoSphere

Introducing the Philips Induction Lamp

Concept

The Induction Lamp is not simply an advancement in existing lamp systems. It is a totally new technology that brings with it unprecedented benefits in economy and performance. The Induction Lamp needs no electrodes or filament as in conventional discharge and incandescent lamps. These are the primary lifetime-determining components in most light sources, and are also subject to progressively declining performance during their life. In this new lamp, light generation is by means of *induction* — the transmission of energy via a magnetic field — combined with a gas discharge.

Features & Benefits

- ① **Ultra-long lamp life;** < 20% failure at 60,000 hours, and < 50% failure at 100,000 hours. See figure 1.
- **Excellent lumen maintenance;** over 70% of initial light output is maintained after 60,000 hours. See figure 2.
- **Good efficiency;** 85 Watt lamp rated at 6000 lumens or 70 lumens per watt. Comparable output to 70 Watt High Pressure Sodium.
- **Excellent color;** 4000°K. white light, CRI \geq 80, no color deviation.
- **Electronic control;** fluctuations in supply voltage have a negligible effect on light output, >0.9 power factor, -20°C. (-4°F.) starting.
- **Fast run-up time;** >80% light output in 10 seconds.
- **Instant restart;** < 0.1 seconds.
- **High frequency operation;** no flickering, noise or stroboscopic effect.

NS4 NeoSphere

Kim Lighting supplies the complete Philips Induction Lamp system with every NS4 model. This includes the fixture with a translucent white hemispherical lens, a reflector producing a type V distribution, and a single mounting plate containing the Induction Lamp and HF generator. The Induction Lamp system is always sold as a complete lamp and HF generator unit for future relampings. The NeoSphere is ideally suited for the ultra long life of the Induction Lamp because the optical chamber is completely sealed for years of maintenance free operation and our eight stage finish process will look good for years to come.

- Ultra long life
- Good Efficiency
- Soft White light
- Excellent operating characteristics

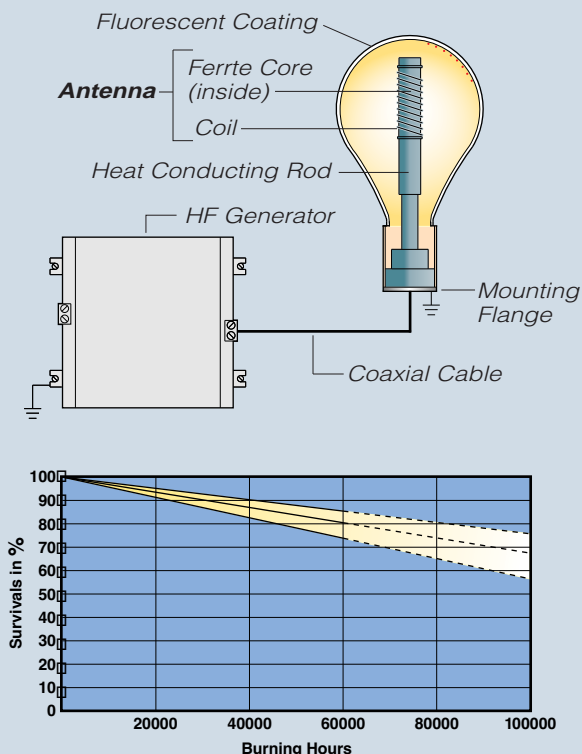


Figure 1: Life expectancy of Induction Lamp system; average failure rate vs burning hours.

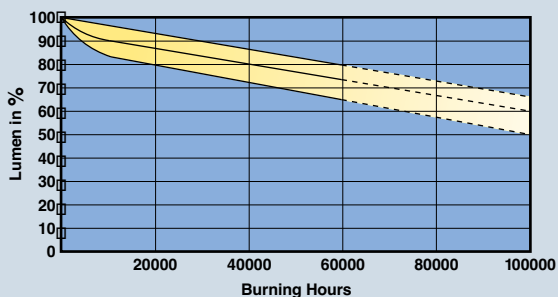


Figure 2: Lumen depreciation of Induction Lamp system; % of initial light output vs. burning hours.





*Excellent
for parks
and public
spaces.*

SPECIFICATIONS

Lamp Notice: All NeoSphere optical systems are designed for **Coated Lamps**. The use of clear lamps will cause shadows from the support arms.

Fixture Specifications

Housing: One piece die cast aluminum with integral hinge and support arm extensions that continue upward from the lens frame. Housing hinges upward for lamp and ballast access, and is held in the open position by a stainless steel self-locking stop arm freeing both hands for servicing. Hinge pin is stainless steel and the housing gasket is one piece silicone.

Lens Frame: One piece die cast aluminum with integral hinge and four sets of twin support arms at 90° intervals. Support arms form a spherical shape and blend with the housing support arm extensions. A single stainless steel socket head screw is held captive between two support arms for securing the housing. Three lens types are offered: NS1-clear 3/16" thick injection molded UV stabilized acrylic hemisphere; NS2-clear flat 3/16" thick tempered glass; NS3 and NS4-translucent white 3/16" thick injection molded UV stabilized acrylic hemisphere. (Optional polycarbonate available, see pages 17,26 & 27). Lenses are held in the lens frame by stainless steel clips and sealed by a one piece silicone gasket. Hemispherical lenses are also sealed at the support hub by a one piece silicone gasket. The integral support hub contains a field-splice compartment, a silicone gasketed cover and one of the following pole attachment means:

FM-Flush post top mount by means of an expansion device activated by a single bolt within the splice compartment. Pole must have a square-cut plain top. Standard pole size is 4" O.D. (3 3/8" O.D. pole adapter available upon request).

PT-Pole tenon mounting by means of a cast aluminum adapter containing four recessed 3/8" stainless steel allen head set point screws. Pole must have a 2" pipe tenon (2 3/8" O.D. X 4 1/2" min. length). Pole tenon must be field drilled at one set screw location to insure against fixture rotation.

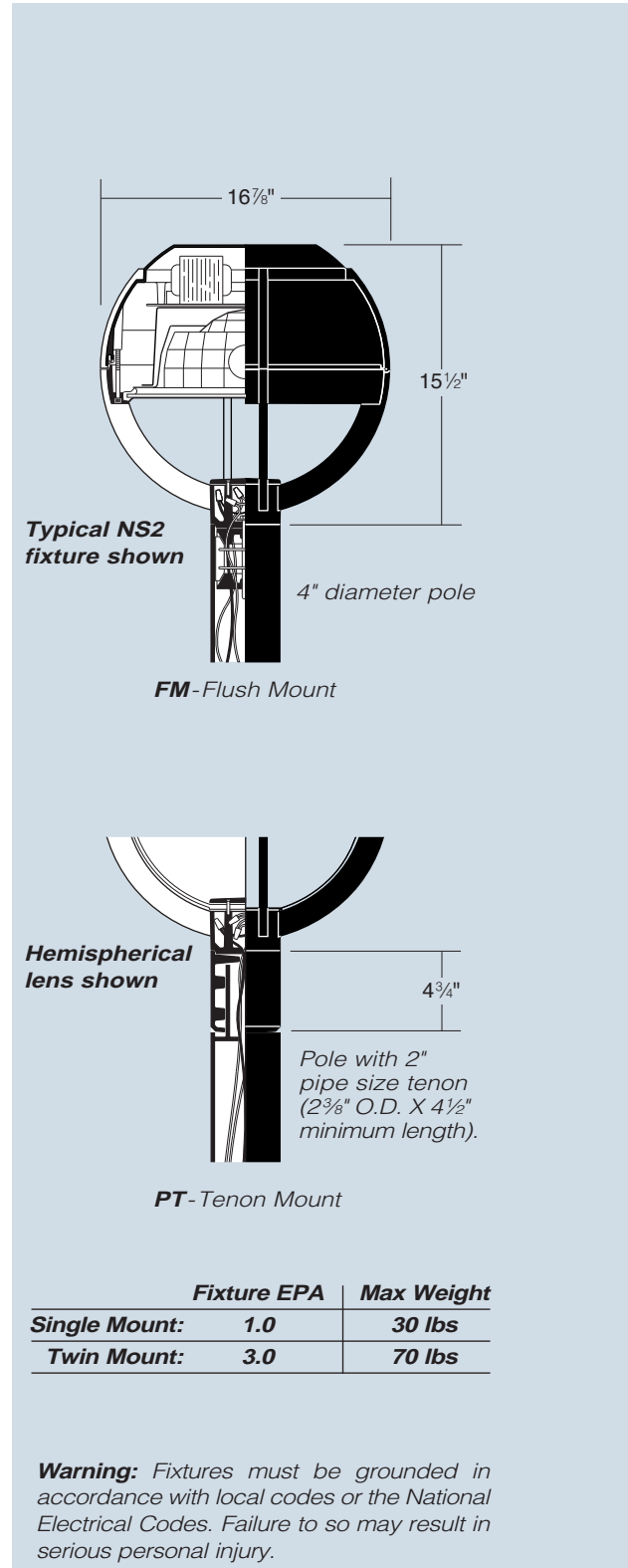
Horizontal Lamp Reflector Modules H2, H3, H4, H5: Specular Alzak® optical segments rigidly mounted in an aluminum frame which snaps into and out of the housing as a one piece module. All "H" reflector modules are interchangeable. Sockets are porcelain medium base rated 4KV, wired to a disconnect plug for the electrical module. Optical chamber is totally sealed by silicone gaskets at the Housing/Lens Frame interfaces.

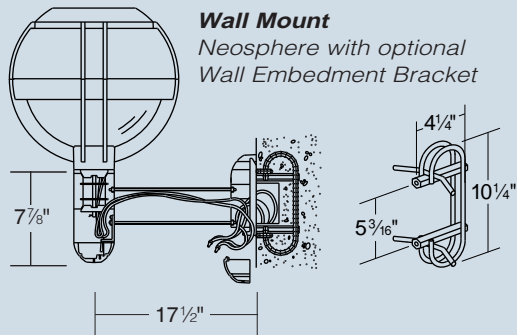
Vertical Lamp Reflector Modules V3, V5: Specular Alzak® optical segments mounted within a one piece spun aluminum shell. NS4 Induction Lamp model is spun aluminum bright dip Alzak®. Reflector modules attach to housing with keyhole slots and are interchangeable. Sockets are porcelain medium base rated 4KV and supported around their perimeter by a silicone sleeve press-fit between the socket and a heat-sink extrusion. Sockets are wired to a disconnect plug for the electrical module, optical chamber is totally sealed by silicone gaskets at the Housing/Lens frame interface.

Electrical Module: All electrical components are U.L. and C.S.A. recognized, mounted on a single aluminum plate with keyhole slots for quick attachment or removal from the housing. All components are prewired to disconnect plugs, and all ballast are high power factor rated for -40°F. (HPS) and -20°F. (MH) starting. For the NS4 Induction Lamp model, a complete HF generator and Induction Lamp system is furnished mounted to the aluminum plate. Induction Lamp System is high power factor rated for -4°F, starting. (See Page 13 for other data).

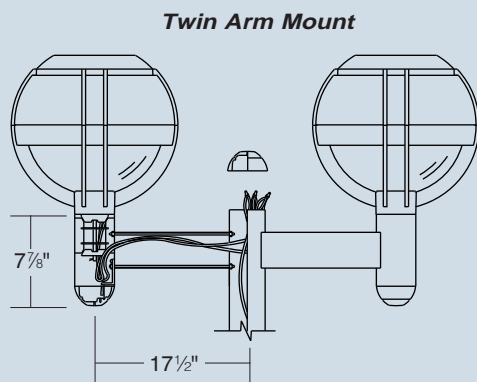
Finish: Super TGIC thermoset polyester powder coat paint. Standard colors are Black, Dark Bronze, Light Gray, or White. Powder Coating is 2.5 mil nominal thickness over a chromate pretreatment; 2500 hour salt spray test endurance rating. Custom colors are available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

Certification: Fixture is U.L. and U.L.C. listed for wet location 1572.

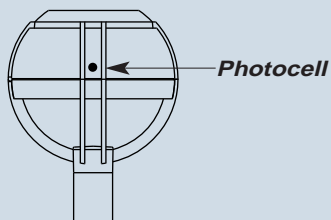




Wall Mount
Neosphere with optional
Wall Embedment Bracket



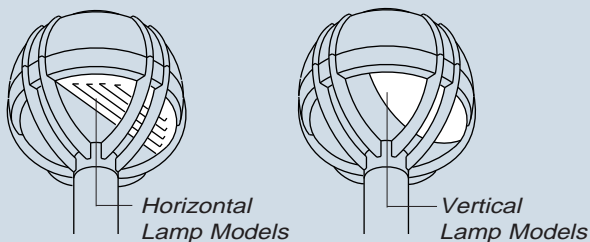
Twin Arm Mount



Polycarbonate Lens



Houseside Shields



Option Specifications

Wall Mounting: A cast aluminum mounting bracket is furnished for attachment to wall, (Attachment means and strength of wall by others). An optional WEB (Wall Embedment Bracket) is available for casting into poured-in-place concrete walls. Bracket is galvanized steel with receptacles for two $\frac{3}{8}$ " bolts provided. Extruded aluminum oval arm is factory assembled to an extruded aluminum fixture support riser and a cast aluminum wall cover plate. Fixture riser has a cast aluminum bottom cap, and wall cover plate has a removable cast aluminum cover for field splice access. Complete arm assembly can be mounted before field splices are made. All arm, cap and cover plate components are curvilinear forms to match the fixture design, and all components are mechanically attached with no visible welds or fasteners. All wall components are finished to match the fixture. For FM (Flush Mount) fixtures only.

Twin Arm Mount: Two extruded aluminum oval arms are supplied with internal concealed draw bolts for attachment to Kim 4" O.D. poles with predrilled mounting holes (see page 18 & 19). Arms are 180° apart, supplied with an internal pole reinforcing plate with wire strain relief and an extruded aluminum riser for mounting FM (Flush Mount) fixtures only. A cast aluminum pole cap and matching riser cap are included, and all components are mechanically fastened to eliminate welds and visible fasteners.

Optional Fusing: High temperature fuse holders factory installed inside the fixture housing. Single fusing (SF) for 120V, 277V, 347V or double fusing (DF) for 208V, 240V.

Optional Photocell: Photocell is factory prewired inside fixture housing with sensor located externally between two support ribs. For twin arm mount, each fixture has a photocell.

Optional Polycarbonate Lens: One piece UV stabilized $\frac{3}{16}$ " thick injection molded polycarbonate hemispherical lens replaces standard acrylic lens in NS1, NS3 or NS4. Full silicone gasketing top and bottom. CAUTION: Use only when vandalism is anticipated to be high. Useful life is limited by UV discoloration from sunlight and metal halide lamps.

Optional Houseside Shield: For horizontal lamp reflectors H2, H3, and H4 only, a louvered shield is provided in stamped clear anodized aluminum to pass streetside light while restricting houseside light. For vertical lamp reflector V3 only, a dished clear anodized aluminum shield is provided. Shields are factory installed to the reflector.

Ordering Examples:

Catalog Number Pole Finish Pole Options
PRA10-4125FM / BL-P / HB / DR

For a single FM flush mounted fixture.

POLE ORDERING & SPECIFICATIONS

Shaft: is round non-tapered extruded aluminum, alloy 6063-T6, supplied with a hand hole complete with gasketed cover & flush allen head screws. For twin mount, pole is drilled to accept two side arms at 180°, and a cast aluminum pole cap is provided.

Standard Fixed Base: Cast aluminum alloy 356 fully welded to shaft at top and bottom of base casting.

Grounding: One ¼"-20 green screw inside hand hole.

Anchorage: Four fully galvanized L-hook anchor bolts complete with eight nuts, eight washers and a rigid pressed board template.

Anchor Bolt Size: ¾" x 15" + 3"; 8' to 14' poles.
 ¾" x 30" + 4"; 16' pole.

Pole Catalog Number	Pole Height	Shaft Size	Bolt Circle Dia.	Anchor Bolt Projection	Base Cover Size	Conduit Opening
*PRA8-4125FM	8'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA10-4125FM	10'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA12-4125FM	12'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA14-4125FM	14'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA14-4188FM	14'	4" x .188	8½"	3¼"	11⅞" dia.	3" dia.
PRA16-4188FM	16'	4" x .188	8½"	3¼"	11⅞" dia.	3" dia.

Pole Catalog Number	Pole Height	Shaft Size	Bolt Circle Dia.	Anchor Bolt Projection	Base Cover Size	Conduit Opening
*PRA8-4125SB	8'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA10-4125SB	10'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA12-4125SB	12'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA14-4125SB	14'	4" x .125	8½"	3¼"	11⅞" dia.	3" dia.
*PRA14-4188SB	14'	4" x .188	8½"	3¼"	11⅞" dia.	3" dia.
PRA16-4188SB	16'	4" x .188	8½"	3¼"	11⅞" dia.	3" dia.

Standard Finish: Super TGIC thermoset polyester powder coat paint 2.5 mil nominal thickness applied over a chromate pretreatment. 2500 hour salt spray test endurance rating.

BL-P Black **DB-P** Dark Bronze **LG-P** Light Gray **WH-P** White

Custom colors available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

***HB Optional Hinged Base:** Available up to 14' height only. Cast aluminum alloy 356 fully welded to shaft at top and bottom of base casting. A removable hinge pin allows full 90° lowering or removal. Two piece cast aluminum base cover is provided with stainless steel screws. Uses same anchor bolt circle as standard fixed base.

For twin mount only, add **HB** and hinging direction to Conduit ordering sequence. Example: **HB-X1 (See right)**

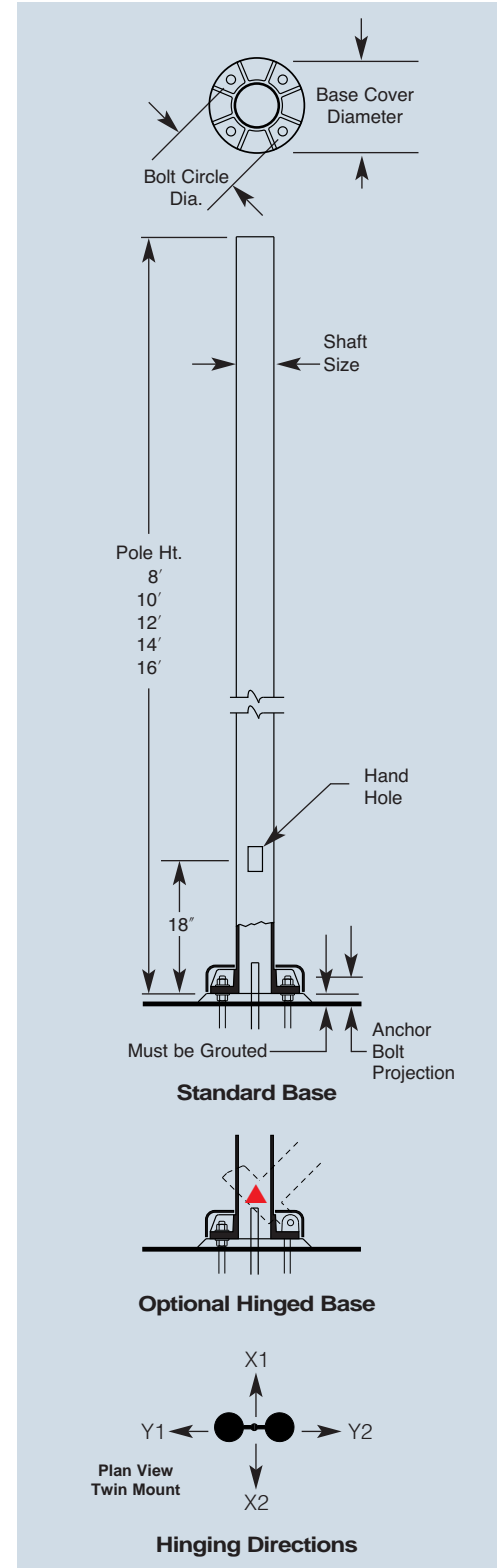
▲ Hinged Base Max. Conduit Projection Above Footing: 1⅝"

Optional Duplex Receptacles: Mounted opposite handhole in a cast aluminum box, internally welded and sealed with gasketed self-closing cover and locking bracket.

DR Duplex Receptacle rated 15A., 125V.

DR-GFI Duplex Receptacle with Ground Fault Circuit Interrupter rated 15A., 125V.

Aluminum Poles Round Non-Tapered



Ordering Examples:

Catalog Number Pole Finish Pole Option
KRS10-4120SB / BL-P / DR

For twin mount with FM flush mounted fixtures.

Shaft: is round non-tapered low carbon steel ASTM-A500 Grade B, supplied with a hand hole complete with gasketed cover & flush allen head screws. For twin mount, pole is drilled to accept two side arms at 180°, and a cast aluminum pole cap is provided.

Standard Fixed Base: Steel ASTM-36, fully welded to shaft at top and bottom of base plate. (Hinged base not available).

Grounding: One 1/4"-20 green screw inside hand hole.

Anchorage: Four fully galvanized L-hook anchor bolts complete with eight nuts, eight washers and a rigid pressed board template.

Anchor Bolt Size: 3/4" x 15" + 3"; 8' to 16' poles.

Pole Catalog Number	Pole Height	Shaft Size	Bolt Circle Dia.	Anchor Bolt Projection	Base Size	Conduit Opening
KRS8-4120FM	8'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS10-4120FM	10'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS12-4120FM	12'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS14-4120FM	14'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS16-4120FM	16'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.

Pole Catalog Number	Pole Height	Shaft Size	Bolt Circle Dia.	Anchor Bolt Projection	Base Size	Conduit Opening
KRS8-4120SB	8'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS10-4120SB	10'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS12-4120SB	12'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS14-4120SB	14'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.
KRS16-4120SB	16'	4" x .11 ga.	7-8 1/2"	3 3/8"	3/4" x 9" sq.	3" dia.

Standard Finish: Super TGIC thermoset polyester powder coat paint 2.5 mil nominal thickness applied. 1000 hour salt spray test endurance rating.

BL-P Black **DB-P** Dark Bronze **LG-P** Light Gray **WH-P** White

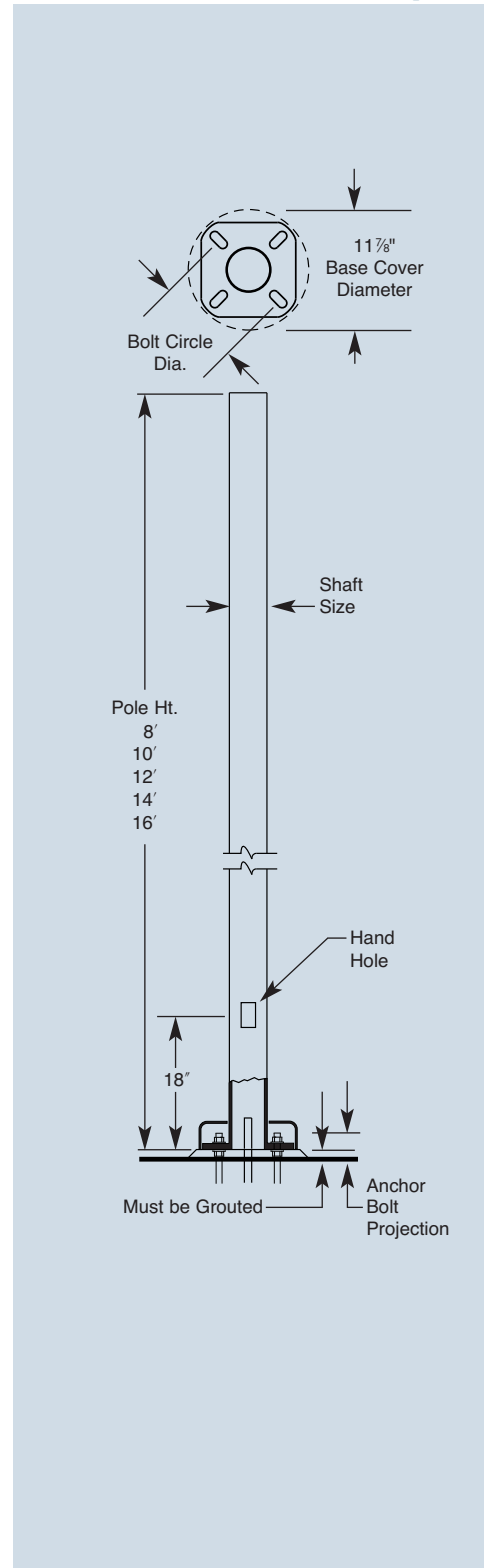
Custom colors available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

Optional Duplex Receptacles: Mounted opposite handhole in a cast aluminum box, internally welded and sealed with gasketed self-closing cover and locking bracket.

DR Duplex Receptacle rated 15A., 125V.

DR-GFI Duplex Receptacle with Ground Fault Circuit Interrupter rated 15A., 125V.

Steel Poles Round Non-Tapered



ALLOWABLE POLE EPA

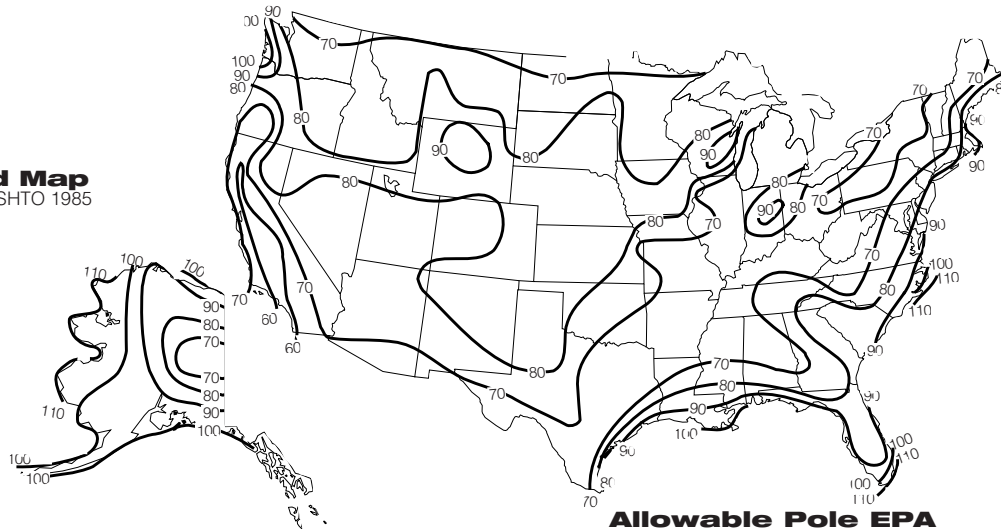
Notes:

- Values are based on *50 year mean recurrence interval*, 30' above grade.
- **Hawaii** has an *80 mph* wind velocity.
- **Puerto Rico** has a *95 mph* wind velocity.
- **Caution** must be exercised in determining wind velocities in special wind areas such as:
 - Mountainous Regions
 - Areas surrounding the Great Lakes or other large bodies of water or open land.
 - Areas subject to extreme wind conditions, such as hurricanes, typhoons, cyclones, and tornadoes.
 - Areas adjacent to airports.
 - Any specific area with a known or suspected abnormally high intermittent wind condition caused by geography, adjacent structures, or other specific local conditions that may not be recorded in National Weather Service records.
- The Wind Map is intended only as a general guide. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application.

Allowable pole EPA for jobsite wind conditions must be equal to or greater than fixture EPA. Responsibility lies with the specifier for correct pole selection based on AASHTO wind map and job location.

- **Caution:** Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide. Consult AASHTO standards.
- **Extreme Wind Events:** Hurricanes, Typhoons, Cyclones, or Tornadoes expose poles to flying debris, wind shear, and other unpredictable aerodynamic forces not indicated by the wind velocity ratings. Consult factory for special pole requirements where risk of exposure to extreme wind conditions exists.
- **Pole Strength Limited Warranty:** Standard, unmodified Kim lighting Poles installed as recommended, undamaged by corrosion, or lack of maintenance, shall withstand steady wind conditions as provided in the Kim Pole Specification Sheets (allowable Pole EPA). Installation of poles without luminaires, or attachment of any unauthorized accessories to poles shall void this warranty.
- Please see the Kim Poles Catalog for more information on pole mounting NeoSphere™ fixtures.

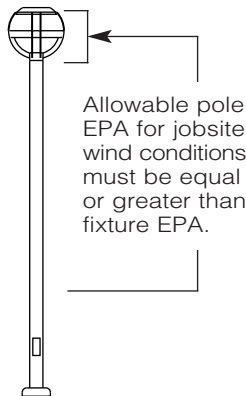
Wind Map
Ref: AASHTO 1985



Allowable Pole EPA

EPA ratings are for wind map steady wind x 1.3 standard gust factor.

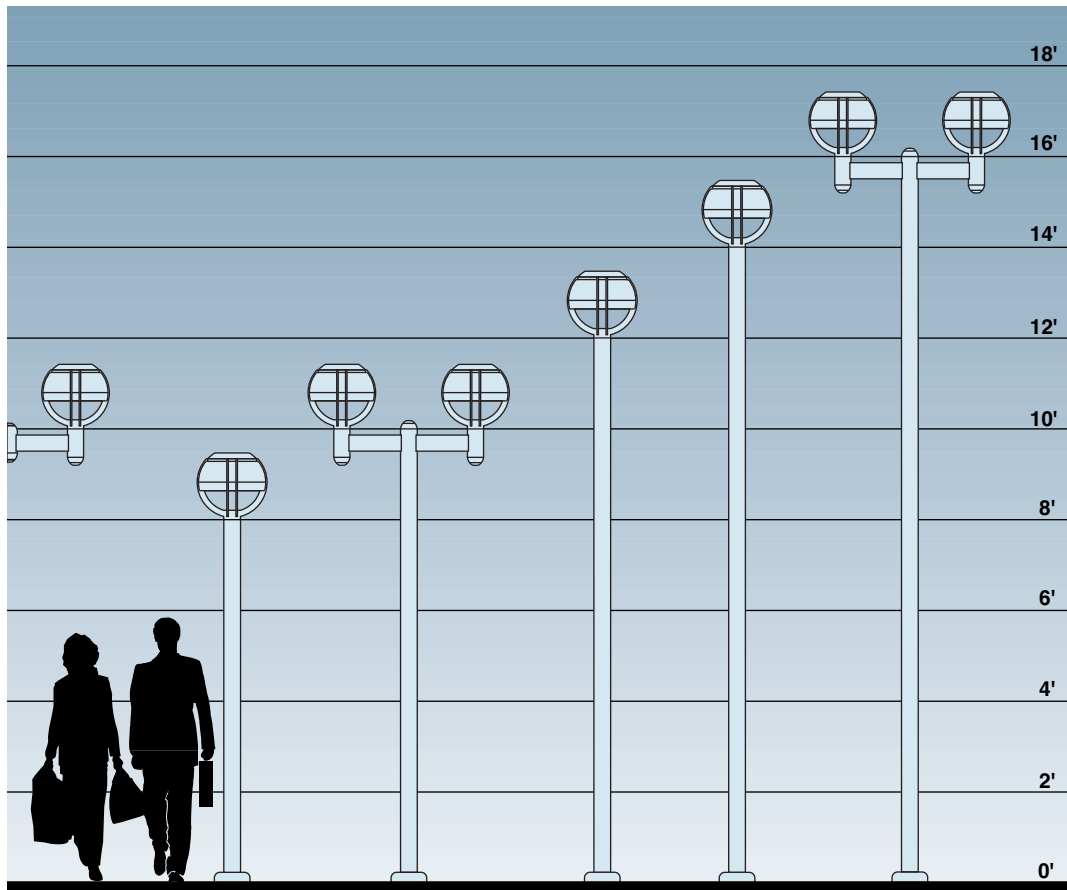
EPA ratings are based on AASHTO standards.



Pole Cat. No.	Wind Speeds				
	Wind Map Steady Wind		Gusting Wind Equivalent		
	70/91	80/104	90/117	100/130	110/143
PRA8-4125FM	11.0	8.3	6.2	4.8	3.9
PRA10-4125FM	8.3	6.0	4.3	3.2	2.6
PRA12-4125FM	6.3	4.3	3.0	2.0	1.2
PRA14-4125FM	4.7	3.0	1.8	1.1	—
PRA14-4188FM	8.9	6.2	4.4	3.2	2.5
PRA16-4188FM	6.9	4.6	3.1	2.1	1.6
PRA8-4125SB	11	8.3	6.2	4.8	3.9
PRA10-4125SB	8.3	6.0	4.3	3.2	—
PRA12-4125SB	6.3	4.3	3.0	—	—
PRA14-4125SB	4.7	3.0	—	—	—
PRA14-4188SB	8.9	6.2	4.4	3.2	—
PRA14-5188SB	15.0	11.0	8.6	6.8	5.5
PRA16-4188SB	6.9	4.6	3.1	—	—
PRA16-5188SB	12.0	8.6	6.6	5.2	4.1
KRS8-4120FM	21.6	16.5	12.7	10.1	8.3
KRS10-4120FM	16.9	12.5	9.5	7.4	6.0
KRS12-4120FM	13.4	9.8	7.2	5.6	4.5
KRS14-4120FM	10.8	7.7	5.5	4.1	3.3
KRS16-4120FM	8.5	5.9	4.0	2.9	2.2
KRS8-4120SB	21.6	16.5	12.7	10.1	8.3
KRS10-4120SB	16.9	12.5	9.5	7.4	6.0
KRS12-4120SB	13.4	9.8	7.2	5.6	4.5
KRS14-4120SB	10.8	7.7	5.5	4.1	3.3
KRS16-4120SB	8.5	5.9	4.0	—	—

Fixture EPAs: Single 1.0 • Twin 3.0

PROPORTIONAL AID



Mounting Height

As a pedestrian scale luminaire, the NeoSphere is most commonly mounted on 8' to 16' poles. Within this height range, the 16 $\frac{7}{8}$ " fixture diameter coupled with the standard 4" pole diameter provides pleasing proportions. Because some cities have mounting height restrictions, the NeoSphere is an

ideal luminaire. Wide throw light distributions also provide outstanding uniformity of illumination. This translates to maximum pole spacing ratios and economy in terms of initial cost plus long term energy conservation.



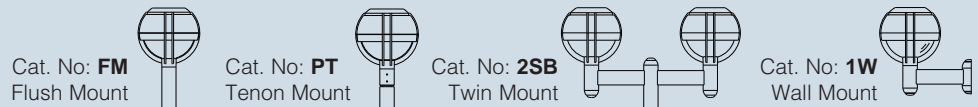


ORDERING

INFORMATION & GUIDE

NS1

1 Mounting Configuration:



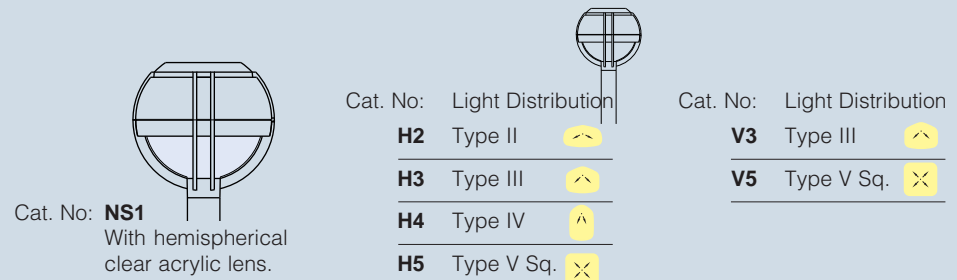
2 Fixture:

Catalog number designates fixture and lens type.

Reflector:

Catalog number designates lamp orientation and light distribution.

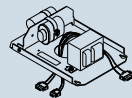
H = Horizontal Lamp
V = Vertical Lamp



3 Electrical Module:

Lamp Watts	Lamp Type	Line Volts
175	MH	120

MH = Metal Halide
HPS = High Pressure Sodium
Coated lamp by others.



Catalog numbers for Electrical Modules available for the NS1 fixture only.

MH				HPS		
70MH120	100MH120	150MH120	175MH120	70HPS120	100HPS120	150HPS120
70MH208	100MH208	150MH208	175MH208	70HPS208	100HPS208	150HPS208
70MH240	100MH240	150MH240	175MH240	70HPS240	100HPS240	150HPS240
70MH277	100MH277	150MH277	175MH277	70HPS277	100HPS277	150HPS277
70MH347	100MH347	150MH347	175MH347	70HPS347	100HPS347	150HPS347

4 Finish:

Super TGIC powder coat paint.

Cat. No:	Color	Cat. No:	Color	Custom colors subject to charges, minimum quantities and extended lead times. Consult representative.
BL-P	Black	DB-P	Dark Bronze	
LG-P	Light Gray	WH-P	White	

5 Fusing:

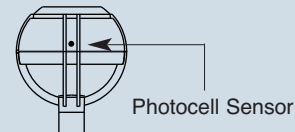
Fuse holder inside housing.

Cat. No: SF	Single fuse 120V, 277V, 347V
Cat. No: DF	Double fuse 208V, 240V

6 Optional Photocell:

Factory installed inside housing. One photocell per fixture.

Cat No.	Line Volts	Cat No.	Line Volts
A-30	120	A-33	277
A-31	208	A-35	347
A-32	240		



7 Optional Clear Polycarbonate Lens:

Cat No. CP (clear)		Replaces standard acrylic lens.
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8 Optional Houseside Shield:

Cat No. HS			Available on type II, III & IV reflectors only.
	Horizontal Lamp	Vertical Lamp	

9 Optional Wall Embedment Bracket:

For 1W Wall Mount.

Cat No. WEB		For poured concrete walls only.
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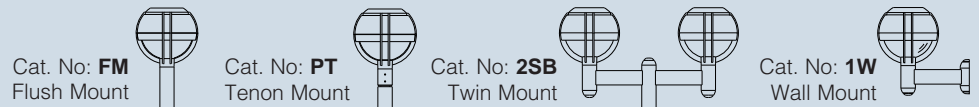
Ordering Guide NS1 & NS2

	Mounting Configuration	Fixture/Reflector	Electrical Module	Finish	Fusing	Options	Pole
Single Fixture	FM	NS1H2	70HPS120	BL-P	SF	A-30	PRA12-4125FM / BL-P
	1	2	3	4	5	6-9	10
Twin Mount	2SB						
	1						
Wall Mount	1W						
	1						

See pages 18 & 20 for Pole Ordering & Specifications.
Omit for 1W Wall Mount.

NS2

1 Mounting Configuration:



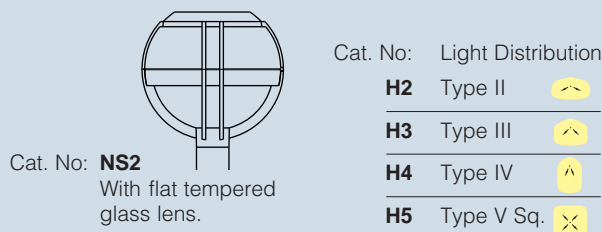
2 Fixture:

Catalog number designates fixture and lens type.

Reflector:

Catalog number designates lamp orientation and light distribution.

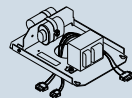
H = Horizontal Lamp



3 Electrical Module:

Lamp Watts	Lamp Type	Line Volts
175	MH	120

MH = Metal Halide
HPS = High Pressure Sodium
Coated lamp by others.



Catalog numbers for Electrical Modules available for the NS2 fixture only.

MH				HPS		
70MH120	100MH120	150MH120	175MH120	70HPS120	100HPS120	150HPS120
70MH208	100MH208	150MH208	175MH208	70HPS208	100HPS208	150HPS208
70MH240	100MH240	150MH240	175MH240	70HPS240	100HPS240	150HPS240
70MH277	100MH277	150MH277	175MH277	70HPS277	100HPS277	150HPS277
70MH347	100MH347	150MH347	175MH347	70HPS347	100HPS347	150HPS347

4 Finish:

Super TGIC powder coat paint.

Cat. No:	Color	Cat. No:	Color
BL-P	Black	DB-P	Dark Bronze
LG-P	Light Gray	WH-P	White

Custom colors subject to charges, minimum quantities and extended lead times. Consult representative.

5 Fusing:

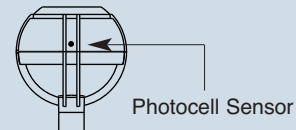
Fuse holder inside housing.

Cat. No: SF	Single fuse 120V, 277V, 347V
Cat. No: DF	Double fuse 208V, 240V

6 Optional Photocell:

Factory installed inside housing. One photocell per fixture.

Cat No.	Line Volts	Cat No.	Line Volts
A-30	120	A-33	277
A-31	208	A-35	347
A-32	240		



7 Optional Polycarbonate Lens:

Not available for NS2. Use NS1 if polycarbonate lens is desired. See page 24.

8 Optional Houseside Shield:

Cat No. **HS**



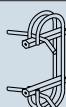
Horizontal Lamp

Available on type II, III & IV reflectors only.

9 Optional Wall Embedment Bracket:

For 1W Wall Mount.

Cat No. **WEB**



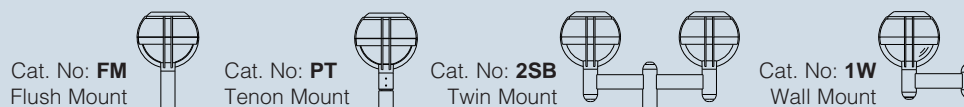
For poured concrete walls only.

ORDERING

INFORMATION & GUIDE

NS3

1 Mounting Configuration:



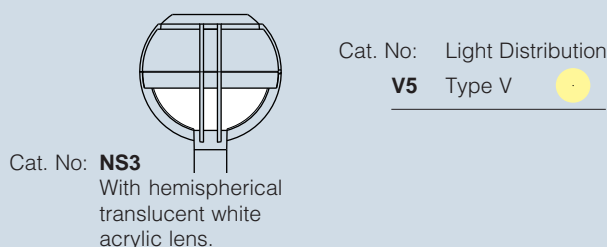
2 Fixture:

Catalog number designates fixture and lens type.

Reflector:

Catalog number designates lamp orientation and light distribution.

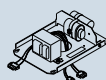
V = Vertical Lamp



3 Electrical Module:

Lamp Watts	Lamp Type	Line Volts
175	MH	120

MH = Metal Halide
HPS = High Pressure Sodium
Coated lamp by others.



Catalog numbers for Electrical Modules available for the NS1 fixture only.

MH				HPS		
70MH120	100MH120	150MH120	175MH120	70HPS120	100HPS120	150HPS120
70MH208	100MH208	150MH208	175MH208	70HPS208	100HPS208	150HPS208
70MH240	100MH240	150MH240	175MH240	70HPS240	100HPS240	150HPS240
70MH277	100MH277	150MH277	175MH277	70HPS277	100HPS277	150HPS277
70MH347	100MH347	150MH347	175MH347	70HPS347	100HPS347	150HPS347

4 Finish:

Super TGIC powder coat paint.

Cat. No:	Color	Cat. No:	Color	Custom colors subject to charges, minimum quantities and extended lead times. Consult representative.
BL-P	Black	DB-P	Dark Bronze	
LG-P	Light Gray	WH-P	White	

5 Fusing:

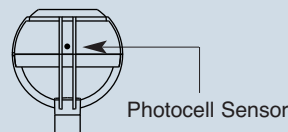
Fuse holder inside housing.

Cat. No: SF	Single fuse 120V, 277V, 347V
Cat. No: DF	Double fuse 208V, 240V

6 Optional Photocell:

Factory installed inside housing. One photocell per fixture.

Cat No.	Line Volts	Cat No.	Line Volts
A-30	120	A-33	277
A-31	208	A-35	347
A-32	240		



7 Optional White Polycarbonate Lens:

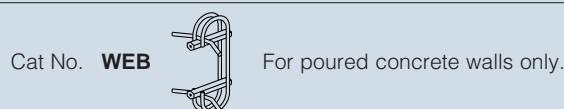
Cat No. WP (white)		Replaces standard acrylic lens.
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8 Optional Houseside Shield:

Not available for NS3.

9 Optional Wall Embedment Bracket:

For 1W Wall Mount.



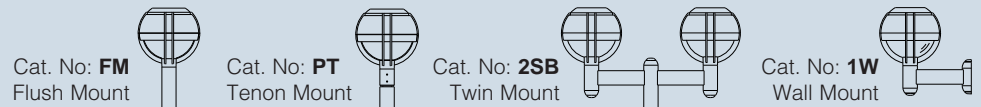
Ordering Guide NS3 & NS4

	Mounting Configuration	Fixture/Reflector	Electrical Module	Finish	Fusing	Options	Pole
Single Fixture	FM	NS3V5	70HPS120	BL-P	SF	A-30	PRA10-4125FM / BL-P
	1	2	3	4	5	6-9	10
Twin Mount	2SB						
	1						
Wall Mount	1W						
	1						

See pages 18 & 20 for Pole Ordering & Specifications.
Omit for 1W Wall Mount.

NS4

1 Mounting Configuration:



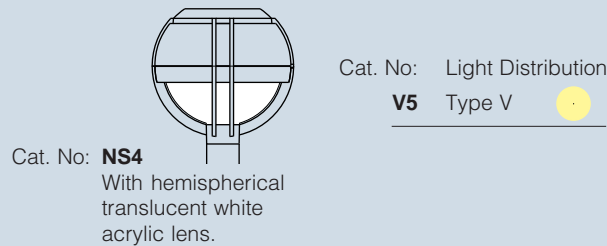
2 Fixture:

Catalog number designates fixture and lens type.

Reflector:

Catalog number designates lamp orientation and light distribution.

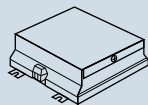
V = Vertical Lamp



3 Electrical Module:

Lamp Watts	Lamp Type	Line Volts
85	IF	120

IF = Induction Lamp
Lamp included.



Catalog numbers for Electrical Modules available for the NS4 fixture only.

85IF120
85IF208
85IF240
85IF277

4 Finish:

Super TGIC powder coat paint.

Cat. No:	Color	Cat. No:	Color
BL-P	Black	DB-P	Dark Bronze
LG-P	Light Gray	WH-P	White

Custom colors subject to charges, minimum quantities and extended lead times. Consult representative.

5 Fusing:

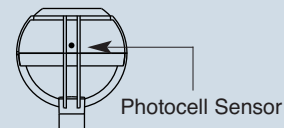
Fuse holder inside housing.

Cat. No: SF	Single fuse 120V, 277V
Cat. No: DF	Double fuse 208V, 240V

6 Optional Photocell:

Factory installed inside housing. One photocell per fixture.

Cat No.	Line Volts	Cat No.	Line Volts
A-30	120	A-32	240
A-31	208	A-33	277



7 Optional White Polycarbonate Lens:

Cat No. **WP** (white)



Replaces standard acrylic lens.

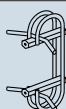
8 Optional Houseside Shield:

Not available for NS4.

9 Optional Wall Embedment Bracket:

For 1W Wall Mount.



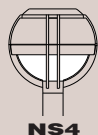
Cat No. **WEB**



For poured concrete walls only.

Lamp Notice: All NeoSphere optical systems are designed for **Coated Lamps**. The use of clear lamps will cause shadows from the support arms.

LAMP & ELECTRICAL DATA

LAMP TYPE		LAMP/ WATTS	ANSI CODE	BALLAST TYPE	LINE VOLTS	LINE WATTS	MAX AMPS
<p>METAL HALIDE</p>  <p>NS1 NS2 NS3</p>	ED17 70W Coated Medium Base	M98	HX-HPF	120	90	1.90	
		M98	HX-HPF	208	90	1.00	
		M98	HX-HPF	240	90	0.90	
		M98	HX-HPF	277	90	0.80	
		M98	HX-HPF	347	90	0.65	
	ED17 100W Coated Medium Base	M90	HX-HPF	120	129	2.60	
		M90	HX-HPF	208	129	1.50	
		M90	HX-HPF	240	129	1.30	
		M90	HX-HPF	277	129	1.15	
		M90	HX-HPF	347	129	1.00	
	ED17 150W Coated Medium Base	M102	HX-HPF	120	185	3.65	
		M102	HX-HPF	208	185	2.10	
		M102	HX-HPF	240	185	1.80	
		M102	HX-HPF	277	185	1.58	
		M102	HX-HPF	347	185	1.25	
ED17 175W Coated Medium Base	M57	CWA	120	210	1.80		
	M57	CWA	208	210	1.04		
	M57	CWA	240	210	0.90		
	M57	CWA	277	210	0.80		
	M57	CWA	347	210	0.65		
<p>HIGH PRESSURE SODIUM</p>  <p>NS1 NS2 NS3</p>	ED17 70W Coated Medium Base	S62	R-HPF	120	91	1.45	
		S62	HX-HPF	208	91	0.85	
		S62	HX-HPF	240	91	0.75	
		S62	HX-HPF	277	91	0.65	
		S62	HX-HPF	347	91	0.55	
	ED17 100W Coated Medium Base	S54	R-HPF	120	130	2.20	
		S54	HX-HPF	208	130	1.25	
		S54	HX-HPF	240	130	1.10	
		S54	HX-HPF	277	130	0.85	
		S54	HX-HPF	347	130	0.70	
	ED17 150W Coated Medium Base	S55	R-HPF	120	188	2.80	
		S55	HX-HPF	208	188	1.60	
		S55	HX-HPF	240	188	1.40	
		S55	HX-HPF	277	188	1.25	
		S55	HX-HPF	347	188	0.92	
<p>INDUCTION LAMP</p>  <p>NS4</p>	85W Induction Lamp	-	Electronic	120	86	0.72	
				208	86	0.42	
				240	86	0.36	
				277	90	0.35	

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.

APPLICATION ENGINEERING SERVICES



Applications Assistance

Kim Lighting utilizes the latest computer technology and software to provide specifiers with reliable evaluations of lighting system performance.

Kim can analyze a proposed luminaire layout or provide recommendations based on performance criteria.

Hard copies of plans can be sent directly to the Kim Applications Department via fax, express or regular mail. Any .dwg or .dxf file can be transmitted via modem or email (kimapps@kimlighting.com), or placed on diskette, CD ROM or Zip disk, and forwarded to Kim Lighting c/o Kim Apps.



Photometric Files

Kim photometric files are available free in both electronic and hard copy format.

Electronic photometric files include .pdf file format pages for printing and .ies files for use in lighting calculation software. The complete .ies / .pdf library is available on CD ROM and on the internet at www.kimlighting.com.

NeoSphere™

CLASSIC SPHERICAL LUMINAIRE



Because of a continuing product improvement program, Kim Lighting reserves the right to change specifications without notice.



KIM LIGHTING

