

HPV Luminaire

High Performance Vertical Lamp Luminaire Featuring
CosmoPolis™ and MasterColor® Elite Electronic Systems

PHILIPS



The Philips Gardco HPV High Performance Vertical Luminaire is the latest in high-wattage, high-performance, large area lighting. The luminaire is available in two sizes – HPV23, a pole-mounted 23" housing that accepts pulse start metal halide lamps up to 1000 watts and high pressure sodium lamps up to 750 watts; and HPV19, a smaller 19" housing that mounts on pole or wall and accepts lamps of up to 400 watts. For the ultimate in energy and operational savings, both sizes also accept the new high performance, energy-saving CosmoPolis™ and MasterColor® Elite electronic systems.



High-Performance Optics

The Philips Gardco HPV Series features the XV optical system, which applies the technology of Gardco's revolutionary Form 10X optics to vertical lamp luminaires. The HPV Series is available in IES Types III, IV and V. No matter the configuration, the result is excellent performance in any conditions.

Dark Sky Friendly

Utilizing a flat glass lens, Philips Gardco XVF optics provide excellent full cutoff performance to economically cover large outdoor areas, while improving site visibility and minimizing light trespass and pollution. XVF optics are the ideal choice for large areas such as retail shopping centers.

If glare is less of a concern, the HPV Series can include the XVS or XVP optics, with the socket placed in the sag lens cutoff position. These sag lens versions feature a minimal depth of just 2-3" below the housing, provide cutoff performance, and deliver maximum area coverage.

HPV is the latest
in high-wattage,
high-performance,
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Energy-Saving CosmoPolis™ and MasterColor® Elite Systems

CosmoPolis™ and MasterColor Elite systems combine a revolutionary white light ceramic metal halide lamp and an optimized electronic ballast that maximizes performance – including improved visibility, long life and low power consumption. By reducing energy use up to 50%, these systems are the clear green solution... all without spending a lot of “green.”

Energy efficient systems are attractive for both environmental and economical reasons, and only CosmoPolis™ and MasterColor Elite satisfies both of these metrics. While LED, CosmoPolis™ and MasterColor Elite all offer substantially lower operating costs than comparable HID systems, CosmoPolis™ and MasterColor Elite come with a price tag at about half that of LED, providing payback in energy savings in half the time.



Quality construction, classic Gardco features

HPV luminaires include all of the classic features and benefits you've come to expect from Philips Gardco luminaires.

Toolless Access

The door frame on the HPV Series is natural anodized extruded aluminum with the memory-retentive extruded silicone gasket system that has kept Philips Gardco products securely sealed for more than 30 years. HPV has a stainless steel hinge to provide complete access to the housing without the need for tools. The fully rotatable optical system hinges down to provide complete access to the unitized ballast tray.

Easy Conversion in the Field

Gardco HPV Series luminaires are converted from full-cutoff to cutoff by simply changing the lens and socket position. For a full-cutoff luminaire, a flat glass lens assembly is needed, with the lamp socket placed in the full cutoff position.

For maximum performance in a cutoff luminaire, HPV uses a sag lens combined with the socket placed in the sag lens cutoff position. Conversion does not require replacement of the reflector assembly or housing, ensuring that it can be done quickly and easily right in the field.





Quality Construction

The housing of the HPV Series is constructed from high-quality die formed aluminum. The finish is a fade- and abrasion- resistant TGIC powdercoat designed to withstand even the harshest conditions. All points of entry are fully sealed and gasketed to prevent intrusion from dirt, insects and other contaminants.

External House Side Shield

If site requirements dictate that light be severely restricted at the property line, specify the new Philips Gardco External House Side Shield (EHSS) for the HPV Series. This innovative shield follows the luminaire aperture, rather than the pole, to provide a minimized shield profile and Effective Projected Area (EPA) while providing maximum rear light cutoff.

The design ensures that maximum lateral throw is not compromised so that luminaire spacing along the perimeter can be as wide as possible. Best of all, the External House Side Shield can be installed on either a sag lens or a flat glass lens door frame, and can easily be added in the field, if necessary. It's just another way that the Philips Gardco HPV Series stands apart.

HPV Specifications

GENERAL: Each Gardco HPV luminaire is a cutoff luminaire for high intensity discharge lamps. Internal components are totally enclosed, rain-tight, dust-tight, and corrosion resistant. No venting of the optical system or electrical components is required or permitted. Lamping requires no lifting or hinging of the luminaire housing, disturbing wiring or exposing uninsulated live parts.

HOUSING: The housing wrapper is one-piece dieformed aluminum with an integral reinforcing spline and no welded corners. Silicone seals provide a weathertight seal at all points of material transition.

ARM: Extruded aluminum arm is secured to luminaire by contractor.

LENS: A mitered, extruded anodized aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. A flat glass lens is provided on vertical lamp full cutoff luminaires. A sag glass lens or sag polycarbonate lens (HPV19 only) is provided on vertical lamp cutoff luminaires. Stainless Steel spring hinge pins permits access to the luminaire without tools.

OPTICAL SYSTEMS: The segmented reflector system consists of highly specular aluminum facets precisely aligned to achieve specified photometric distributions. The entire optical system is field rotatable in 90° increments. Optical systems feature a field adjustable 2 or 3 position mogul base lamp socket, as indicated by the tables below. Luminaires ordered with the 5XVF and 3/4XVF optical systems ship from the factory with a standard flat glass lens and door frame.

Luminaires ordered with the 5XVS and 3/4XVS optical systems ship from the factory with a standard sag glass lens and door frame. Luminaires ordered with the 5XVP and 3/4XVP optical systems (HPV19 only) ship from the factory with a standard sag polycarbonate glass lens and door frame.

ELECTRICAL: All electrical components are UL recognized and factory tested. Electronic and magnetic HID ballasts are high power factor and mounted on a unitized tray with quick electrical disconnects. Magnetic HID ballasts are the separate component type. Electronic and magnetic HID ballasts are capable of providing reliable lamp starting down to -20°F / -29°C.

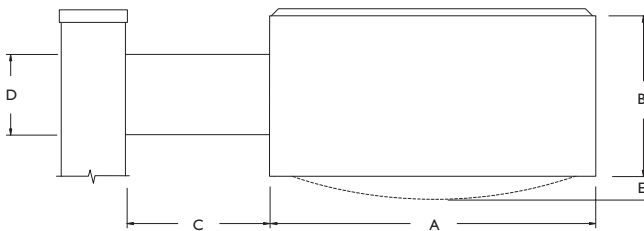
Luminaires provided with the CosmoPolis™ or MasterColor® Elite high performance ceramic metal halide electronic systems include high power factor electronic ballasts, designed specifically for the system selected.

FINISH: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidic isocyanurate (TGIC) powdercoat finish.

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Gardco luminaires feature a 5 year limited warranty. See Warranty Information on sitelighting.com for complete details and exclusions. Polycarbonate lenses carry a 1 year warranty only.

DIMENSIONS



| | A | B | C | D | E |
|--------------|----------|----------|----------|----------|---------|
| HPV19 | 19.5 | 12 | 9 | 5 | 3 |
| | 48.26 cm | 30.48 cm | 22.86 cm | 12.70 cm | 7.62 cm |
| HPV23 | 23 | 14.5 | 12 | 8 | 2 |
| | 58.42 cm | 36.83 cm | 30.48 cm | 20.32 cm | 5.08 cm |

| HPV19 | EPAs (ft ²) | | | Approximate Weight (lbs) |
|-------------------|-------------------------|---------------------|----------------------|--------------------------|
| | Single | Twin | 3/4 | Single |
| Sag Lens | 2.5 ft ² | 4.8 ft ² | 7.1 ft ² | 75 lbs |
| | 0.24 m ² | 0.45 m ² | 0.66 m ² | 34.2 kg |
| Flat Lens | 2.2 ft ² | 4.3 ft ² | 6.4 ft ² | 65 lbs |
| | 0.21 m ² | 0.40 m ² | 0.60 m ² | 29.5 kg |
| Flat Lens w/EHSS | 3.5 ft ² | 6.9 ft ² | 10.1 ft ² | 93 lbs |
| House Side Shield | 0.52 m ² | 0.65 m ² | 1.94 m ² | 72 kg |

| HPV23 | EPAs (ft ²) | | | Approximate Weight (lbs) |
|-------------------|-------------------------|---------------------|----------------------|--------------------------|
| | Single | Twin | 3/4 | Single |
| Sag Lens | 3.9 ft ² | 7.8 ft ² | 9.5 ft ² | 104 lbs |
| | 0.36 m ² | 0.72 m ² | 0.88 m ² | 47 kg |
| Flat Lens | 3.6 ft ² | 7.3 ft ² | 8.8 ft ² | 90 lbs |
| | 0.33 m ² | 0.68 m ² | 0.82 m ² | 41 kg |
| Flat Lens w/EHSS | 4.9 ft ² | 9.9 ft ² | 12.5 ft ² | 93 lbs |
| House Side Shield | 0.46 m ² | 0.92 m ² | 1.16 m ² | 72 kg |

HPV Ordering

| Example | PREFIX | MOUNTING | DISTRIBUTION | WATTAGE | VOLTAGE | PAINTED FINISH | OPTIONS | |
|---------|--------------|--------------|---------------------|--|-----------------|-------------------------------------|---|------------------------|
| | HPV19 | I | | 5XVF | 315MCE | 480 | BRP | F |
| | HPV19 | 1 | Single | Flat Glass Lens (Full Cutoff) | See Chart Below | 120 | BRP Bronze | F PTF3 |
| | HPV23 | 2 | Twin | 3/4XVF ¹ Type III/Type IV | | 208 | BLP Black | LF PTF4 |
| | | 2@90 | Twin at 90° | 5XVF Type V | | 240 | WP ³ White | PC MF |
| | | 3 | Triple | Sag Glass Lens (Cutoff) | | 277 | NP ³ Natural Aluminum | PCR MU |
| | | 3@120 | Triple at 120° | 3/4XVS ¹ Type III/Type IV | | 347 | OC ³ Optional Color Specify RAL designation. ex: OC-RAL7024 | EHSS AP |
| | | 4 | Quad | 5XVS Type V | | 480 | | QS AT |
| | | W | Wall Mount | Sag Polycarbonate Lens (Cutoff) ² | | 200-277 | SC ³ Special Color Specify. Must supply color chip. | QST GMR |
| | | WA | Wall Mount with Arm | 3/4XVP ¹ Type III/Type IV | | <i>CMPE, MCE and PSE Types only</i> | | Q924 L6 |
| | | | | 5XVP Type V | | | | QT924 L8 |
| | | | | | | | | PTF2 L10 |

WATTAGE

| | HPV19 | | HPV23 | |
|---|--|--|--|---|
| Pulse Start Metal Halide <i>Magnetic Ballast</i> | 250PSMH [ⓔ] 320PSMH [ⓔ] | 350PSMH [ⓔ] 400PSMH [ⓔ] | 400PSMH [ⓔ] 450PSMH [ⓔ] 750PSMH | 775PSMH 875PSMH 1000PSMH |
| CosmoPolis™ <i>Electronic System</i> | 140CMPE ⁵ | | | |
| MasterColor® Elite <i>Electronic System</i> | 210MCE [ⓔ] | 315MCE [ⓔ] | 210MCE [ⓔ] | 315MCE [ⓔ] |
| Pulse Start Metal Halide <i>Electronic Ballast</i> | 250PSE ^{ⓔ,6} | 320PSE ^{ⓔ,6} | | |
| Standard Metal Halide <i>Magnetic Ballast</i> | 175MH * 250MH * | 400MH * ⁴ | 400MH * | 1000MH ⁷ |
| High Pressure Sodium <i>Magnetic Ballast</i> | 250HPS | 400HPS | 750HPS | |

* 175MH, 250MH and 400MH not available for sale in the United States.



Wattages marked with circle "E" meet federal energy efficiency standards applicable to 150 watt through 500 watt metal halide luminaires only.

NOTES:

- Luminaire is Type III, but with forward throw performance more typical of a Type IV. Internal house side shield included standard on HPV19.
- Polycarbonate lenses carry a 1 year warranty only.
- Contact factory for availability of White (WP), Natural Aluminum (NP), Optional (OC) and Special (SC) colors with HPV23.
- Requires E28 / BT28 mogul based reduced jacket lamp.
- 120V, 200-277V only.
- 120V, 200-277V, 347V or 480V only.
- 1000W luminaires Require E-37 or BT-37 reduced jacket lamp.
- Available with HPV19 only. Not Available with HPV23.

- Not available in 480V. Provide specific input voltage.
- See QS/Q924 Table at right.
- Requires 2 3/8" OD mast arm.
- Only available with 1 way and 2 @ 180° mounting.
- Fits 2 3/8" tenon.
- Available only with HPV19 - 250PSMH, 400PSMH, 250HPS or 400HPS and HPV23 - 400PSMH or 400HPS. Includes dual-level capacitor and wiring to connect to Gardco Motion Response System.
- Available with CosmoPolis™ system only. See submittal sheet GE200-005 for complete information on Lumistep™ ballasts.

OPTIONS

| | |
|------------------------------|--|
| F ⁸ | Fusing In Head |
| LF | In-Line/In-Pole Fusing |
| PC ^{8,9} | Photocontrol and Receptacle |
| PCR ⁸ | Photocontrol Receptacle only |
| EHSS | External House Side Shield |
| QS ^{8,10} | Quartz Standby |
| QST ^{8,10} | Quartz Standby - Timed Delay |
| Q924 ^{8,10} | Quartz Emergency |
| QT924 ^{8,10} | Quartz Emergency - Timed Delay |
| PTF2 | Pole Top Fitter - 2 3/8" - 3" Dia. Tenon |
| PTF3 | Pole Top Fitter - 3" - 3 1/2" Dia. Tenon |
| PTF4 | Pole Top Fitter - 3 1/2" - 4" Dia. Tenon |
| MF ^{8,11} | Mast Arm Fitter |
| MU ⁸ | 10° Uptilt Bracket |
| AP ^{8,12} | Adjustable Knuckle - Pole Mount |
| AT ^{8,13} | Adjustable Knuckle - Tenon Mount |
| GMR ¹⁴ | Provision for Philips Gardco Motion Response |
| L6 ¹⁵ | LumiStep™ Ballast - 6 hour |
| L8 ¹⁵ | LumiStep™ Ballast - 8 hour |
| L10 ¹⁵ | LumiStep™ Ballast - 10 hour |

NOTE 7 - QS / Q924 TABLE

| HID Lamp Watts | Maximum Quartz Lamp Watts |
|---------------------------------|---------------------------|
| 175 watts or less | 100 watts |
| Above 175 watts up to 400 watts | 150 watts |

QS, QST, Q924 and QT924 options are not available in luminaires above 400 watt HID.

| HPV19 Socket | Socket Position by Source | |
|----------------------|--------------------------------------|--------------------------------------|
| | HPS | MH / PSMH |
| (1) Upper Position | Flat Lens Full Cutoff Performance | Not Utilized |
| (2) Middle Position* | Sag Lens Cutoff Performance | Flat Lens Full Cutoff Performance |
| (3) Lower Position | Not Utilized | Sag Lens Cutoff Performance |

* HPV19 luminaires ship from the factory with the socket mounted in the (2) Middle Position.

| HPV23 Socket | Socket Position by Source | |
|----------------------|--------------------------------------|--------------------------------------|
| | HPS | MH / PSMH |
| (a) Upper Position** | Flat Lens Full Cutoff Performance | Flat Lens Full Cutoff Performance |
| (b) Lower Position | Sag Lens Cutoff Performance | Flat Lens Full Cutoff Performance |

** HPV19 luminaires ship from the factory with the socket mounted in the (a) Upper Position.

FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle of 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

CUTOFF PERFORMANCE: Cutoff performance means a luminaire distribution where the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle at or above 90° above nadir, and 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

Prior to ordering, consult Submittal Data Sheet on sitelighting.com for the most current information, notes and exclusions.

Philips Gardco reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.



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Philips Gardco Warranty

Gardco luminaires feature a 5 year limited warranty. See Warranty Information on sitelighting.com for complete details and exclusions.



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