



LOW PRESSURE SODIUM — FORM 10

WHY LPS?

DARK SKIES

"Have you looked up at night lately? The universe is going away, gone already for many. The universe is an important part of the environment, to astronomy and to the general public.

For most people on earth, the dark skies our ancestors had have disappeared. The problem is urban sky glow, due mostly to too much bad lighting."

— International Dark-Sky Association

Low Pressure Sodium is a monochromatic light source that can be easily filtered by astronomers allowing them to better view the heavens. It is for this reason that many local governments adjacent to observatories have legislated the use of Low Pressure Sodium in their communities.

Another surprisingly common application for LPS is along coastlines inhabited by sea turtles. Full spectrum lighting attracts these endangered animals. They often leave the safety of their ocean homes and are destroyed while moving inland. However, they do not respond in this way to the monochromatic LPS source.

HIGH EFFICACY

Low Pressure Sodium is the single most energy efficient, commercially available light source in the world. It is typically over 30% more efficient than High Pressure Sodium, over 60% more efficient than Metal Halide, over twice as efficient as Fluorescent and more than 9 times as efficient as incandescent. The savings in the life cycle costs of outdoor lighting systems utilizing low pressure sodium lamps can be significant. Actual savings will of course be dependent upon required light levels, luminaire performance, and site characteristics. Contact your Gardco representative for specific savings calculations.

LUMEN MAINTENANCE

Most high intensity discharge sources lose anywhere between 20-40% of initial light output over their life. By comparison, low pressure sodium maintains its initial lumen output for essentially the entire life of the lamp. This makes the initial efficacy comparisons described above even more dramatic. Furthermore, this feature greatly simplifies design. With LPS it is not necessary to design for "mean lumens" and worry that half the time the site may be over lit and half the time the site will be under lit.

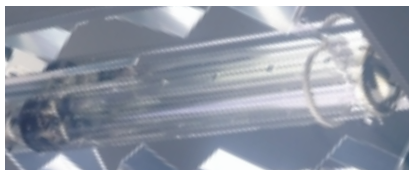
WHY GARDCO FORM 10-LPS?

The Gardco Form 10 optical system continues to set the standard for enhancing nighttime visibility by providing high light levels, uniform illumination and remarkable control of luminaire brightness. The features shown illustrate why the Gardco Form 10 – LPS is still the highest performing and most trouble free outdoor low pressure sodium luminaire.

PERFORMANCE



Positioning the lamp above the flat glass lens ensures that there can be no significant light observed above 90°. This design strictly controls disability glare, light trespass, and sky pollution.



Because of the large arc tube, LPS is traditionally a very difficult source to control. However, the highly specular Alzak aluminum reflectors in the Form 10 luminaires precisely redirect arc images at high angles below cutoff. This design provides for higher light levels, uniform illumination, and wider pole spacings.



The Gardco Form 10 LPS luminaires are offered with a rectangular "Area" (A) distribution or a forward throw "Perimeter" (P) distribution. These products utilize 55W, 90W, 135W, and 180W lamps. This combination of lamps and optical systems can accommodate varying site geometry and light level requirements.

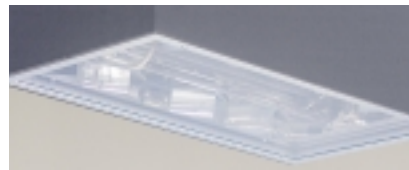
CONSTRUCTION



Use of heavy gauge aluminum extrusions in housing construction provides resistance to deforming which can often take place during shipment and installation. Unlike cast products, the extruded housing is available with Architectural Class 1 anodized finish. This truly permanent finish option will never fade or peel.

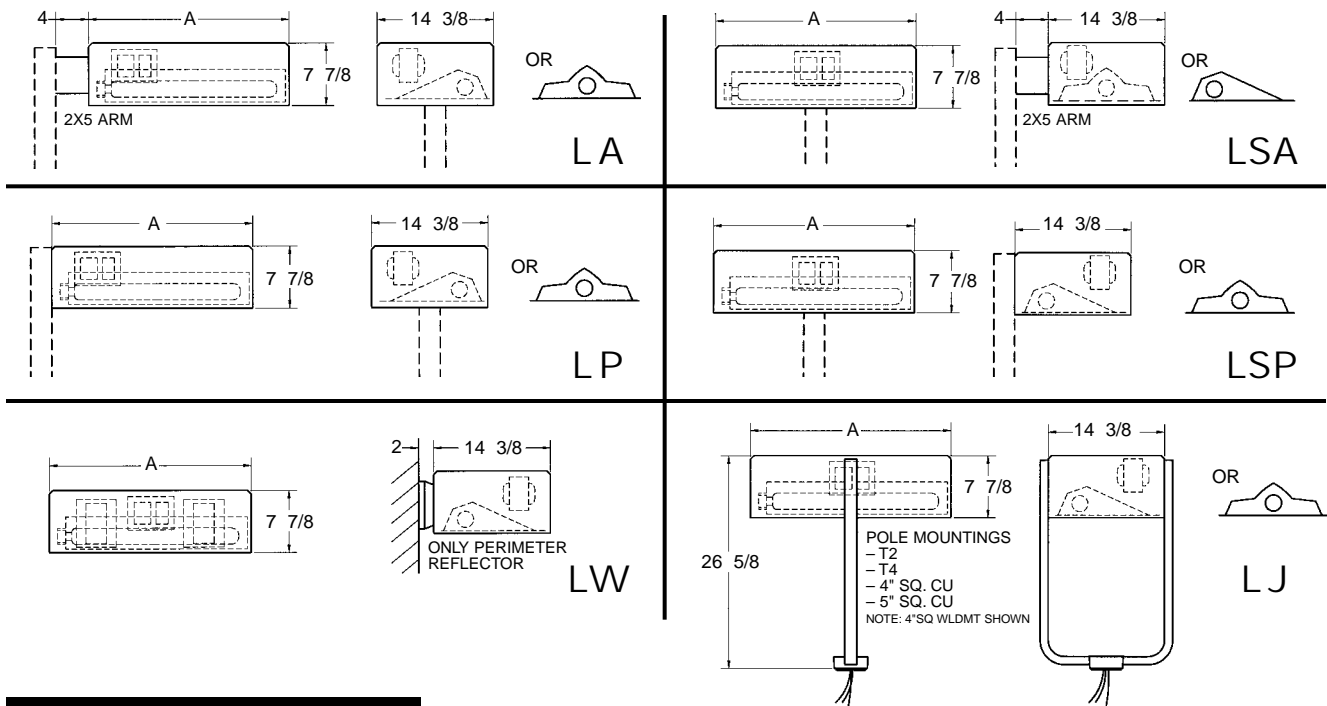


Memory retentive silicone gaskets completely reseal after every luminaire service. Unlike conventional felt type gaskets, silicone is impervious to normal corrosive elements.



The lens material for the Form-10 LPS luminaires is a specially formulated acrylic. This material provides considerably greater impact resistance than glass and yet will not discolor like polycarbonate.

DIMENSIONS

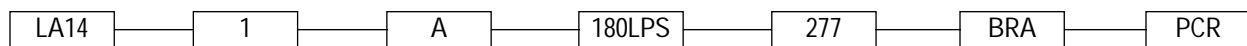


LUMINAIRE EPA'S

| Wattage | Dimension "A" | LP14 | | LA14 | | LJ14 1 Way | LSA14, LSP14 1 & 2 Way |
|---------|---------------|-------|-------|-------|-------|---------------|---------------------------|
| | | 1 Way | 2 Way | 1 Way | 2 Way | | |
| 180 | 48" | 2.90 | 5.80 | 2.97 | 5.94 | 3.03 | 2.90 |
| 135 | 34 3/8" | 2.08 | 4.16 | 2.15 | 4.30 | 2.21 | 2.08 |
| 90 | 24 5/8" | 1.49 | 2.98 | 1.56 | 3.12 | 1.62 | 1.49 |
| 55 | 24 5/8" | 1.49 | 2.98 | 1.56 | 3.12 | 1.62 | 1.49 |

ORDERING INFORMATION

Example:



| Prefix | Configuration | Optical System | Wattage | Voltage | Finish | Options |
|--------|---------------|----------------|------------------------------------|---------|--------|---------|
| LA14 | 1 or 2 | A | 180LPS 135LPS 90LPS 55LPS | 120 | BRA | F |
| LP14 | 1 or 2 | A | | 208 | BLA | PCR |
| LSA14 | 1 or 2 | P | | 240 | NA | PC |
| LSP14 | 1 or 2 | P | | 277 | BRP | POLY |
| LJ14 | 1 | A or P | | 480 | BLP | |
| LW14 | 1 | P | | | | |

KEY

Prefix

LA – Arm to pole mount
LP – Direct end pole mount
LSA – Side arm to pole mount
LSP – Direct side pole mount
LJ – Yoke Mount
LW – Wall Mount

Configuration

1 – Single luminaire
2 – Twin luminaires mounted at 180°

Optical System

A – Area
P – Perimeter

Finish

BRA – Bronze Anodized
BLA – Black Anodized
NA – Natural Anodized
BRP – Bronze Powdercoat
BLP – Black Powdercoat
NP – Natural Aluminum Powdercoat
WP – White Powdercoat
OC – Optional Color (See Color Selection Guide)
SC – Special Color (Color Chip must be provided)

Options

F – Fusing
PCR – Photocontrol Receptacle
PC – Photocontrol (480V Only)
POLY – Polycarbonate Lens

SPECIFICATIONS

GENERAL DESCRIPTION

Each Gardco Form 10 LPS unit is a rectilinear luminaire that meets all criteria of the Illuminating Engineering Society's cut-off classification.

HOUSING

Housings side sections are composed of precisely mitered and welded aluminum extrusions. Tops are press formed and internally welded to the housing sides. Pressure injected silicone provides a continuous weather-tight seal at all miters and points of material transition.

DOOR/LENS ASSEMBLY

The door frame is constructed of mitered and welded anodized aluminum sections. The optically clear, non-yellowing, impact resistant acrylic lens is secured in the doorframe. Corrosion resistant, hollow core, memory retentive silicone gaskets seal both the lens to the door frame and the door frame to the housing.

REFLECTOR ASSEMBLY

The Form 10 reflector systems are constructed of homogeneous sheet aluminum that is electrochemically

brightened, anodized and sealed. The highly specular reflector segments are precisely positioned to produce either an area distribution pattern (A) that conforms to an IES Type V or a perimeter distribution pattern that conforms to an IES Type IV. Luminaires have lamp stabilizers positioned to secure LPS lamps irrespective of lamp length that may vary by manufacturer.

ELECTRICAL

All luminaires utilize magnetic ballasts that are high power factor and designed for reliable lamp starting to -20°F. The electrical components are mounted on a unitized tray and prewired with quick electrical disconnects.

FINISH

Housings are finished with an Architectural Class 1 anodizing or TGIC polyester powdercoat.

LABELS

All fixtures bear IBEW, CSA (or CUL), and UL Wet Location Labels.

THE COMPLETE LINE OF GARDCO AREA LUMINAIRES



For information on the complete line of Gardco site luminaires, contact your Gardco representative.



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