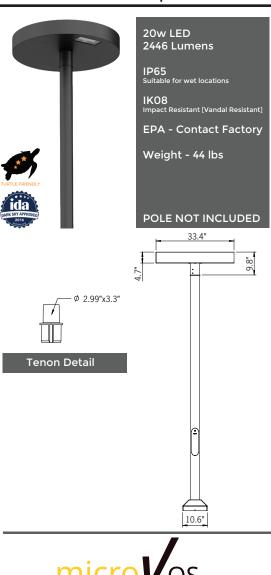
ULAN-90001

Lunar 1 Post Top

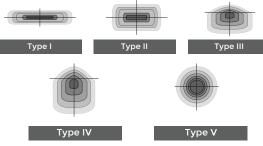




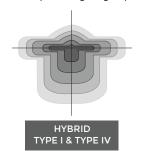


Ligman's micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.

TECHNOLOGY



The variable optic system allows for the designer to create hybrid distrubtions for precise lighting requirements.



Construction

<u>Aluminum</u>

Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management

LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression

Standard 10kv surge suppressor provided with all fixtures.

BUG Rating

Contact Factory

<u>Finishing</u>

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

<u>Paint</u>

UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C.

This process ensures that Ligman products can withstand harsh environments.
Rated for use in natatoriums.

Hardware

Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

<u>Crystal Clear Low Iron Glass Lens</u> Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life

L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Infinitely flexible, unobtrusive post top family. Clean, simple lines, sophisitcated optical options with flexibility to suit all project area lighting requirements.

A modern post top luminaire for downward light distribution. High performance LED light engine. The precision optical system gives very low glare rating, while reducing light pollution. Designed for lighting entrances, footpaths, parking lots and town centers. Color temperatures 2700K, 3000K, 3500K and 4000K, LED CRI >80.

Low copper content die-cast aluminium housing with high corrosion resistance. Stainless steel fasteners in grade 316. Durable silicone rubber gasket and clear toughened glass. Housing is treated with a chemical chromatized protection before powder coating, ensuring high corrosion resistance.

The Lunar has been IDA Dark Sky certified for cct's of 3000K or lower.

ULAN-90001

Lunar 1 Post Top





PROJECT					DATE	
QUANTITY		TYPE	NOTE			
ORDERING EXAMPLE ULAN - 90001 - 20w - W30 - 02 - 120/277v - Options						
ULAN-90001						
	LAMP	BEAM	LED COLOR	FINISH COLOR	VO	LTAGE
	20w LED 2446 Lumens	T1 - Type I Distribution T2 - Type II Distribution T3 - Type III Distribution T4- Type IV Distribution M - Medium Beam 30° W - Wide Beam 56° EW - Extra Wide Beam 56°	W27 - 2700K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	120/277 Other -	

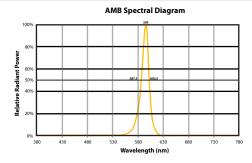


DIM - 0-10v Dimming

NAT - Natatorium Rated

AMB - Turtle Friendly Amber LED

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT



Narrow-Spectrum Amber LEDs

Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.



Ligman Poles

Ligman LIGHTING

Aluminum poles are available in five diameter sizes in round or square options & various standard and custom heights. All aluminum poles are fabricated from extruded marine grade low copper content aluminum alloy with internal support ribbing, which provides additional strength to the pole. After fabrication, the pole is finished with an additional nickel and zinc phosphate coating before finishing with a UV stabilized outdoor epoxy powder coat finish.

Steel poles are available in two diameter sizes in round or square & various standard and custom heights as well as a stepped pole option. The steel poles are fabricated from extruded carbon steel. These poles have a dipped galvanized coating applied after fabrication. Thereafter an additional nickel and zinc phosphate is applied before finishing with a UV stabilized outdoor epoxy powder coat finish.

Quality Through Technology

Ligman Lighting utilizes state of the art CNC controlled machines to ensure that the highest quality standards are provided on a consistent basis throughout our pole range. To maintain these high standards, Ligman has invested in robotic welders, as well as robotic cutting machines to perform the various manufacturing procedures required in fabricating poles. Emphasis is placed on providing an aestheticallly pleasing, clean product that is free from unneccessary visual weld marks and protrusions





Pole Pre-Treatment

Each pole is cut to size and then goes through a series of treatment setting it into the anchor bolt base processes. The first step being sanding down the entire pole to remove surface impurities. The result is a brushed finish that helps the phosphate and paint adhesion.

Setup

The next step is aligning the pole and both to the anchor bolt base piate. This process includes installing alter. This process includes installing and welf of the pole in the pole is traight and set into the anchor bolt base plate.



Welding
The base and pole are welded together using a robotic welding process that is CNC controlled. This provides a flush, generous sized shand hole that facilitates easy access for consistent and identical well from pole to pole. CNC welding eliminates the errors that can be experienced from hand welding processes. The result of this welding processes. The result of this welding processes is a clean, smooth continual weld with no weld splatters, which means that grinding and fettling is not required. is not required.





system for securing the cover.

Ligman handholes are generously sized rated in accordance with AASHTO for easy maintenance and wiring in the specifications.







Wire Access & Hand Hole
Wire Access & Hole
Wire Hole
Wire Hole
Winniare Mounting
Tenon assemblies, arms and other
appropriate means of attaching
adularies to pole are re-engineered
adularies to pole are re-engineered
adularies to pole are re-engineered
and furnished with the order.

These items are designed to complement the pole. Lignan
base Covers also Feature regressed holes
wire Access the Wall results of the State of the Mall winder and base covers also Feature regressed holes
with stainless to pole a pre-engineered
adularies to pole are thated appropriate was a pre-engineered
adularies to pole are thated appropriate was a pre-engineered
adularies to pole are thated appropriate was a precomplement Ligman products and are base covers together, thus improving on finished to match luminaires and poles. the visual appeal of the pole and base



Anchor Bolts & Templates

Each pole is supplied with matching galvanized steel anchor bolts, hex nuts and leveling washers. Anchor bolts are fully galvanized to prevent corrosion after installation.

For anchor bolt installation, Ligman provides a laser cut metal anchor bolt templates as standard with every pole order. This template eliminates errors and uncertainties regarding incorrect and misaligned anchor bolts. Advance shipment of template & anchor bolts to the jobsite is provided when requested.





CFCI Provisions
Ligman can provide, upon request, GFCI receptacle boxes & covers. The receptacle box location(s) can be provided in one or more locations along the pole, based on customer requirements. These boxes are partially recessed into the pole and are seamlessly welded to provide a smooth and clean appearance, that meets high quality and aesthetic requirements of our customer's. GFCI receptacles are supplied by the installine contractor. installing contractor.

Standard Color Options Ligman offers a line of 6 standard finish color options and options for custom RAL colors.

- 03 WHITE RAL 9003 04 METALLIC SILVER RAL 9006 05 MATTE SILVER RAL 9006
- 06 BRONZE RAL 6014 07 CUSTOM RAL

Inspired by Nature [Woodland & Urban]

The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.



Standard Pole Diameters

Aluminum: 4" | 4.5" | 5" | 5.5" | 6.3" | 4" x 4" Square Steel: 4.5" | 5.5" | 4" x 4" Square

