



CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

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CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

OVERVIEW

The City of Mesa (City) has established procedures for the review and approval of products used in the street light system. All products considered for use in the street light system must be reviewed and approved by the City prior to being included in the Approved Product List (APL).

Through previous investigation, usage by the City, and industry performance history, certain types, brands and models of products and materials have established a satisfactory in-service reliability record. These products have been tabulated by manufacturer's names and identifying numbers on the APL.

Use by Design Engineers: The APL includes products that meet the needs of most street light construction projects within the City. Design engineers must however, confirm that products in the APL meet their project needs. If the project requires products of different size, material, or design than those listed in the APL, the design engineer must seek approval by the City prior to their use.

Use by Contractors: The APL, by itself does not constitute a submittal by the contractor. The contractor must submit manufacturer technical data sheets of sufficient detail to adequately describe the product or materials for each project. Submittals shall address all requirements contained in the APL data sheet as well as applicable project specifications. The corresponding APL data sheet should accompany the submittal for listed projects.

Use by Contractor Submittal Reviewers: The APL is intended to expedite reviews of product submittals made by contractors. Contractor submittal reviewers must confirm the following to ensure that products comply with the APL:

- The product meets the functional needs of the project.
- The product is of the type specified for use on the project.
- The product is in the category covered by the APL.
- The manufacturer of that product is listed on the APL.
- The product is within the size range listed on the APL.
- The model number, serial number or manufacturer designation is listed on the APL.
- The product meets all requirements in the applicable specifications, special provisions, details and construction notes in the project contract documents.

GENERAL NOTES AND REQUIREMENTS

1. Contractors shall confirm that the construction contract documents for City of Mesa allow for use of products on the APL. Project-specific Special Provisions or Technical Specifications in the project contract documents may specify other products, in which case the project specifications shall govern if approved by the City.

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2. Projects under construction shall only utilize products on the current Approved Products List. No substitutions or “approved equal” products will be allowed. Product manufacturers or representatives wishing to submit products for consideration shall follow the procedures listed in this document and furnish the requested information.
3. Standards referenced in the Approved Product List shall be the latest version of that standard, regardless of the year or date indicated.
4. After an item is approved, the product manufacturer or representative shall inform the City in writing, of any subsequent modifications in product design or material. Changes in product design or material may require further evaluation to determine continued approval of the product. Failure to inform the City of such changes may result in removal of the item from the Approved Products List.
5. The City may withdraw any approval as a result of design or material change, field observation, testing, product failure, or other factors, which, in the City’s opinion, warrant such withdrawal.
6. Projects under construction that include street light system components by private developers, or other non-CIP projects shall adhere to the APL requirements and only use listed products where applicable unless otherwise approved in writing by the City.
7. Assembled products, and the materials associated with assembled products, may be subject to testing for conformance to applicable standards and manufacturer’s specifications for that product.
8. The City may limit the number of approved products for certain items that require specialized tools, training, excessive storage or reduce the efficiency of maintenance and operations activities.

NEW PRODUCT SUBMITTAL AND REVIEW PROCESS

New Product Submittal Checklist

Product and equipment manufacturers wishing to have a product reviewed for inclusion on the APL shall submit a complete written request to the City. This should be submitted as a single package for each product and include the following:

1. Identify the product and City of Mesa APL number to which the product would be added (if applicable).
2. Identify the Maricopa Association of Governments (MAG) Standard Specification and City of Mesa MAG supplemental standard specifications that govern the product, where applicable.
3. Describe the product, providing technical specifications, dimensional drawings, product weights and catalog information.*
4. If the product is proposed as an addition to a current Approved Product sheet, demonstrate compliance with listed requirements in the corresponding sheet.*
5. Indicate compliance with applicable ASTM, ANSI, IEC, UL, NEC, FM, ISO 9001 or other related standards or specifications that govern the product.*
6. Provide an example submittal for review by the City. The example submittal shall contain the same level of detail as that provided by a contractor during construction.

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7. Indicate country of origin for all product components.**
8. Name, address and phone number of local product representative.
9. Product availability, delivery time, pricing and manufacturer's location. If both foreign and domestic options are offered, provide availability, pricing and delivery time for each.
10. Provide test results showing compliance with applicable standards, or other relevant testing information, including independent laboratory test results.
11. Provide manufacturer's installation procedures for the product.
12. List maintenance requirements, special equipment and procedures and recommended maintenance schedules.
13. List a minimum of three (3) project owners (public utilities) who have the product installed and currently in use. Include project name and location, project owner's contact name, address, and telephone number, and product application (including sizes) and number of years in use.
14. Provide a material safety data sheet (MSDS), if applicable.
15. Describe recent product revisions or improvements.
16. Explain how the product would benefit the City of Mesa in terms of prolonged service life, reduced maintenance, and reduced life-cycle cost compared to products now in use.

*This information must be shown as part of the manufacturer's publicly available product literature. Separate letters or statements indicating compliance with these requirements may be rejected.

**If portions of the product are cast, manufactured or assembled outside of the U.S.A, provide specific information as required for each component. If the product is primarily non-domestic and a "Domestic" option is available, manufacturers shall indicate this. If the "Domestic" option is not 100% made-in-the U.S.A., the submittal package shall indicate which components are cast, manufactured or assembled outside of the U.S.A, and the corresponding country for each.

New Product Submittals

Electronic submittals in PDF-format or other common formats (Word, etc.) are acceptable. Electronic submittals (10 MB maximum) shall be made to the City at:


Nathan.curtis@mesaaz.gov

Hard-copy submittals, in addition to, or in lieu of electronic copies are also acceptable. Three (3) hard-copy submittals shall be sent to:

**Street Light Product and Design Review Committee
City of Mesa Transportation Department
Attention Nathan Curtis 300
E. Sixth Street
PO Box 1466
Mesa. AZ 85211**

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<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none"> • Reference: Streetlight Technical Manual SL-72 • See approved Manufacturers and Models • Additional Requirements to follow 	<p><i>Ripley 6246TF-X-1.0 (120V)</i> <i>Ripley 6372TF-X-1.0 (240V)</i></p>  <p><i>Precision EC120-AP-TD (120v)</i> <i>Precision EC240-AP-TD (240V)</i></p>  <p><i>Intermatic Night Fox EK4536K (105- 305 V)</i></p> 	
	<p>Approved Manufacturer:</p> <ol style="list-style-type: none"> 1. RIPLEY 2. PRECISION 3. INTERMATIC 	
<p>Revised 6/20/19</p>	<p>PHOTO CELLS</p>	<p>SL-2</p>



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<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none">• Reference: Streetlight Technical Manual SL-76.01• See approved Manufacturers and Models• Additional Requirements to follow	<p><u>Tyco/Raychem</u> Gel Cap SL Insulating Splice Kit (Includes Connector)</p> <p><u>Tyco/Raychem</u> Ray Volve Cap #RVC-2V-COM</p> <p><u>Tyco/Raychem</u> GHFC-1 Submersible Covers</p> <p><u>NSI Industries</u> ESSLK-2/0 Easy Splice Gel Stub</p>	
	<p>Approved Manufacturer:</p> <ol style="list-style-type: none">1. TYCO/RAYCHEM2. NSI INDUSTRIES	
<p>Revised 6/20/19</p>	<p>APPROVED SPLICE INSULATING KITS - HANDHOLES</p>	<p>SL-3</p>



CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none"> • Reference: Streetlight Technical Manual SL-76.01 • See approved Manufacturers and Models • Additional Requirements to follow 	<p align="center"><u>Homac URD</u> RAB 1/0-3 Multiseal connector part #118-24592</p> <p align="center"><u>Homac URD</u> RAB 1/0-22 Multiseal connector part #318-27258</p> <p align="center"><u>Tyco/Raychem</u> Gel Cap SL Insulating Splice Kit (Includes Connector)**</p> <p align="center"><u>Tyco/Raychem</u> GTAP 1 or 2 (includes connector)***</p> <p align="center"><u>Tyco/Raychem</u> GHFC-1 or GHFC -2 Submersible Covers****</p> <p>**Note wire size restrictions on “Hole B” of connector allows #6 maximum</p> <p>***<i>GTAP 1 and GTAP 2 connectors/covers must close completely and may restrict the conductor sizes utilized</i></p> <p>**** <i>Tyco GHFC-2 Submersible Covers Cannot be used in hand holes</i></p>	
	<p>Approved Manufacturer:</p> <ol style="list-style-type: none"> 1. HOMAC URD 2. TYCO/RAYCHEM 	
<p>Revised 6/20/19</p>	<p align="center">APPROVED SPLICE INSULATING KITS - PULL BOXES</p>	<p align="center">SL-4</p>



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<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none">• Reference: Streetlight Technical Manual SL-76.01• See approved Manufacturers and Models• Additional Requirements to follow	<p><u>BUSMANN</u> HEB-AA, installed with rubber insulating boots</p> <p><u>LITTLEFUSE</u> LEB-AA, installed with rubber insulating boots</p> <p><u>GOULD</u> GEB-11-11, installed with rubber insulating boots</p>	
	<p>Approved Manufacturer:</p> <ol style="list-style-type: none">1. BUSMANN2. LITTLEFUSE3. GOULD	
Revised 6/20/19	FUSE HOLDERS	SL-5



CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none">• Reference: Streetlight Technical Manual SL-76.01• See approved Manufacturers and Models• Additional Requirements to follow	<p style="text-align: center;">MACLEAN HIGHLINE</p> <p>#3-1/2-CHA101512</p> <p>#5- CHA132412</p> <p style="text-align: center;">NEW BASIS</p> <p>#3-1/2- FCA101512T-90006</p> <p>#5- FCA132412T-90028</p> <p style="text-align: center;">OLDCASTLE</p> <p>#3-1/2 Box-FL09T Box with FL09T LID</p> <p>#5 Box-FL30T Box with FL30T LID</p> <p style="text-align: center;">NOTE: Depths may need to be adjusted for all boxes.</p>	
	<p>Approved Manufacturer:</p> <ol style="list-style-type: none">1. HIGHLINE2. NEW BASIS3. OLDCASTLE	
Revised 6/20/19	PULL BOXES AND LIDS	SL-6



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<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none">• Reference: Streetlight Technical Manual SL-77.04, SL-77.05, SL-77.06 & SL-77.07• See approved Manufacturer & Suppliers• Additional Requirements to follow	<p><u>Southern Manufacturing Inc.:</u> Vikeland Sales, Contact Roger Essenburg (480) 837-4544</p> <p><u>Strong Box:</u> Clark Electric Sales, Contact Scott Clark (480) 347- 9765</p> <p>Magnum Companies Contact Paul Adams (602) 272-3600</p>	
	<p>Approved Manufacturer:</p> <ol style="list-style-type: none">1. Southern Manufacturing Inc.2. Strong Box	
Revised 6/20/19	STREET LIGHT CABINET MANUFACTURERS	SL-7



CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none">• Reference: Streetlight Technical Manual SL-77.08• See approved Manufacturers and Models• Additional Requirements to follow	<p>Pre-Cast Manufacturing Co.</p> <p>Utility Construction Co.</p> <p>Buehner Pre-Cast</p> <p>Jensen Pre-Cast</p>	
	<p>Approved Manufactures: See above</p>	
<p>Revised 6/20/19</p>	<p>CABINET PAD MANUFACTURERS</p>	<p>SL-8</p>



CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

**STREET LIGHT FIXTURES
LED LUMINAIRE SPECIFICATION**

HOUSING

LED FIXTURE SHALL HAVE A 10 YEAR WARRANTY ON LED MODULES, DRIVERS AND FINISH.

HOUSING SHALL BE PRIMARILY CONSTRUCTED OF ALUMINUM WITH POWDER COAT GRAY FINISH. ALL MOUNTING HARDWARE SHALL BE NON-CORROSIVE OR SUITABLE PROTECTED METAL.

THE HOUSING SHALL BE ABLE TO WITHSTAND 1000 HOUR SALT SPRAY TEST ASTM 117.

LUMINAIRE SHALL MOUNT TO A HORIZONTAL 2.375" O.D. TENON, WITH NO MORE THAN 4 BOLTS, WITH NO REARRANGEMENT OF PARTS OR SEPARATE PARTS NEEDED TO INSTALL, AND HAVE STEP TYPE LEVELING.

WEIGHT SHALL NOT EXCEED 28 LBS. WITH AN EPA OF LESS THAN 1.2 SQ. FT.

COOLING SHALL BE DONE WITH HEAT SINKS. NO FANS, PUMPS, OR LIQUIDS SHALL BE USED.

OPTICS

LUMINAIRE SHALL MEET THE IESNA FULL CUTOFF CLASSIFICATION (BUG RATING OF U0) AND HAVE IESNA TYPE II, TYPE III, OR TYPE IV DISTRIBUTION.

LUMINAIRE SHALL HAVE AN OPTION FOR A FIELD INSTALLABLE HOUSE SIDE SHIELD FROM THE MANUFACTURER.

CORRELATED COLOR TEMPERATURE (CCT) SHALL BE 3000K ±300K. COLOR RENDERING INDEX (CRI) OF 70 OR GREATER.

LUMEN MAINTENANCE AT 50,000 HRS AND 25°C BASED ON TM-21 TESTING SHALL BE 92% OR GREATER.

LUMINAIRE IES FILES MUST BE GENERATED IN ACCORDANCE WITH IESNA STANDARD LM-79-08 FOR ABSOLUTE PHOTOMETRY, BY A NVLAP ACCREDITED LAB.

TERMINAL BOARD

THE TERMINAL SCREWS SHALL BE OF THE CAPTIVE TYPE AND EACH SCREW SHALL BE EQUIPPED WITH WIRE GRIPS WHICH WILL AUTOMATICALLY BE RAISED AND LOWERED AS THE TERMINAL SCREW IS OPERATED.

THE TERMINALS SHALL BE CAPABLE OF ACCEPTING #8 TO #14 AWG CONDUCTORS.

THE TERMINAL BOARD SHALL HAVE THREE TERMINALS; ONE OF THESE TERMINALS SHALL BE FOR THE SYSTEM GROUND AND SHALL BE CONNECTED TO THE LUMINAIRE HOUSING.

ALL LUMINAIRES SHALL HAVE PHOTO CELL RECEPTACLE. THREE ADDITIONAL TERMINALS SHALL BE PROVIDED FOR EXCLUSIVE PHOTO CELL OPERATIONS.

ALL UNITS ARE TO BE PREWIRED TO A SINGLE TERMINAL BOARD REQUIRING ONLY CUSTOMER CONNECTIONS TO CLEARLY IDENTIFIED TERMINALS.

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LED STREET LIGHT MANUFACTURERS

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DRIVER

DRIVER & LED MODULES SHALL BE REPLACEABLE AS SEPARATE UNITS, & HAVE PLUG CONNECTIONS.

LED DRIVER SHALL ACCEPT 120V THRU 277V 60 HZ INPUT, AND SHALL HAVE POWER FACTOR OF 0.90 MINIMUM.

LED DRIVER SHALL BE CAPABLE OF 0-10V DIMMING. DIMMING LEADS SHALL BE WIRED TO PINS 4 AND 5 OF PHOTOCELL RECEPTACLE.

POWER SUPPLIES SHALL MEET APPLICABLE FCC GUIDELINES FOR INTERFERENCE, WITH TOTAL HARMONIC DISTORTION LESS THAN 20%.

LUMINAIRE SHALL HAVE SURGE PROTECTION DEVICE (SPD) TO WITHSTAND HIGH REPETITION NOISE TRANSIENTS AS A RESULT OF UTILITY LINE SWITCHING, NEARBY LIGHTNING STRIKES, AND OTHER INTERFERENCE. THE SPD SHALL PROTECT FROM DAMAGE AND FAILURE FOR COMMON AND DIFFERENTIAL MODE TRANSIENT PEAK CURRENTS UP TO 10 KA (MINIMUM). SPD CONFORMS TO UL 1449. SPD PERFORMANCE HAS BEEN TESTED PER PROCEDURES IN ANSI/IEEE C62.41-2:2002 CATEGORY C HIGH EXPOSURE AND ANSI C136.2 10KV BIL. THE SPD SHALL FAIL IN SUCH A WAY AS THE LUMINAIRE WILL NO LONGER OPERATE. THE SPD SHALL BE FIELD REPLACEABLE.

GENERAL

UNIT SHALL BE UL1598 TESTED AND HAVE APPROVED REPORT SHOWING FIXTURE CAPABLE OF OPERATING IN AMBIENT TEMPERATURES OF -7°C TO 50°C.

LUMINAIRE HOUSING SHALL BE UL OR ETL LISTED FOR WET LOCATIONS. OPTICS/OPTICAL ENCLOSURE SHALL BE IP65 RATED.

LUMINAIRE SHALL HAVE BEEN TESTED FOR L70 LUMEN DEPRECIATION, EFFICACY AND CCT PER IESNA STANDARD LM-80-08.

ELECTRONIC IES FILES MUST BE READILY AVAILABLE FOR DOWNLOAD ON MANUFACTURER WEBSITE.

LUMINAIRE SHALL HAVE A 7-PIN LOCKING PHOTOCELL RECEPTACLE MEETING ANSI C136.41-2013. PROVIDE A 30 AMP LOW PROFILE SHORTING CAP FOR LUMINAIRES THAT DO NOT REQUIRE PHOTOCELL, PRECISION JP-275 OR EQUAL.

LUMINAIRE SHALL HAVE A MINIMUM EFFICACY OF 102 LUMENS PER WATT AT 3000K.

LUMINAIRE SHALL HAVE LUMEN OUTPUTS AT CCT OF 3000 KELVIN AS SHOWN IN THE TABLE BELOW.

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Type	Nominal Lumens	Tolerance
3KL	3300	±15%
5KL	5300	±15%
9KL	9100	±10%
13KL	13000	±10%
16KL	16500	±10%
21KL	21000	±10%
27KL	27000	±10%

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LED STREET LIGHT MANUFACTURERS

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CITY OF MESA APPROVED PRODUCTS LIST – Street Lights

<p><u>DESIGN/MATERIALS:</u></p> <ul style="list-style-type: none">• Reference: Streetlight Technical Manual SL-71.01 & 71.02• See approved Manufacturers and Models	<p>GE EVOLVE ROADWAY LIGHT 3000K</p> <p>PHILIPS ROADFOCUS 3000K</p>	
	<p>Approved Manufactures: See above</p>	
<p>Revised 6/20/19</p>	<p>LED STREET LIGHT MANUFACTURERS</p>	<p>SL-9</p>