

Town of Wareham



Invitation for Bids (IFB)

LED STREETLIGHT UPGRADE

March 2016

Your participation is invited with regard to the above referenced bid. In order for your submission to be considered responsive this original document must be delivered prior to the time and at the place indicated herein. The Town of Wareham assumes no liability for bids mistakenly opened due to improperly labeled envelopes and will return same to the bidder without notice. (It is strongly suggested that bid documents sent via carriers other than first class mail should be placed in properly labeled and sealed envelopes prior to being placed in the carrier packaging in order to avoid premature opening

I. Introduction

In accordance with M.G.L. c 30 sec 39M, the Town of Wareham is soliciting bids from experienced, electrical contractors to furnish all labor, materials and equipment necessary for the removal and replacement of its operating streetlights to the conversion of energy efficient streetlights. The individual streetlights that will be replaced will be on town accepted streets and will be determined by the Director or his designee. The work is expected to begin by May 1, 2016, and be completed by December 31 2016.

Notice of this IFB is published in the Central Register, which is a weekly publication of the Office of the Secretary of the Commonwealth, the Wareham Week (a newspaper of general circulation) and posted on the Town website (www.wareham.ma.us) under Bid Postings.

SEALED BIDS shall be received for a LED Streetlight Upgrade, on behalf of the Awarding Authority, the Town Administrator. Bids shall be received at the Municipal Maintenance Office, 95 Charge Pond, Wareham, MA 02571, until 1:00 p.m., April 11, 2016 at which time all submitted bids shall be taken to the Memorial Town Hall, 54 Marion Road, Wareham, MA 02571 where they will be publicly opened and read. Phone calls, telegrams, postmarks, etc. shall not be considered. Bid submissions must be made in a sealed envelope clearly marked, **“LED Streetlight Upgrade – 1:00 P.M., April 11, 2016”**. The Town of Wareham assumes no liability for bids mistakenly opened due to improperly labeled envelopes and will return same to bidder without notice.

Appropriation of monies for this project were voted and approved at the Annual Fall Town Meeting, October 29, 2014 as Article Two (2) and at the Annual Fall Town Meeting, October 26, 2015 as Article Two (2). The Invitation for Bids is valid for \$64,999.99 dollars.

Wages are subject to minimum wage rates as per M.G.L. Chapter 149, Sections 26 to 27D, inclusive.

Bidders must submit certification of OSHA training.

The successful bidder shall provide performance and payment bonds in the amount of 100% of the total cost of the contract.

All bidders are required to submit a 5% bid deposit/bond of the dollar bid total.

II. Submission Deadline and Instructions

The bid may be withdrawn or amended without prejudice between the time of submission and the time of opening. All bid amounts will be considered firm and may not be withdrawn for a period of no less than sixty (60) days from the date of opening, unless stated otherwise.

Bid submissions shall be made in a sealed envelope clearly marked

“LED Streetlight Upgrade – April 11, 2016 1:00 P.M. In the event that Town Hall is closed due to any reason, including but not limited to inclement weather, this bid will be opened at the same time and place on the next week day that Town Hall is in operation. The Town of

Wareham assumes no liability for bids mistakenly opened due to improperly labeled envelopes and will return same to bidder without notice.

Where the word "signed" appears, it refers to the hand written signature of the individual authorized to execute the contract. Bids "signed" by any way other than described here will be considered non-responsive.

Certificates of insurance must be submitted by the apparent low bidder within ten (10) business days of the request from the Town (Also see Section VII, "Insurance").

Certification of OSHA training is required (attached).

The Town reserves the right to deem as not responsible and ineligible to conduct business with the Town for a period of two (2) years if same vendor 1.) withdraws a bid proposal between the time of the bid opening and the time of an award or sixty (60) days, whichever is less, and/or 2.) fails if awarded a bid, to honor the terms of the award during the stated contract period.

Signed (and sealed when applicable) certification that the bidder has not colluded with any other party in the preparation and submission of his/her bid.

Bidder's certification regarding payment of prevailing wages (attached).

Signed (and sealed when applicable) certificate of indemnification to save harmless the Town of Wareham for all damages to life and property due to his/her negligence or that of his/her subcontractors, etc. during the term of this contract (use form attached).

Signed (and sealed when applicable) certification that the bidder has paid all State taxes due (use form attached).

Signed and sealed certification of vote (for use by Corporations). Bidders may submit their own certificate of corporate vote.

III. Addendum or Proposal Modification

If any changes are made to this IFB, an addendum will be posted on the Town's website, under Bid postings. It is the sole responsibility of the bidder to ascertain the existence of any addendum and/or modifications issued by the Town. As this IFB has been published on the Town's website (www.wareham.ma.us) all bidders are responsible for checking the website for any addendum and/or modifications that are subsequently made to this IFB.

The Town accepts no liability for and will provide no accommodations to bidders who fail to check for amendments and/or modifications to this IFB and subsequently submit inadequate or incorrect responses. Bidders may not alter (manually or electronically) the IFB language or any IFB component files. Modifications to the body of the IFB, Scope of Work, terms and conditions, or which change the intent of this IFB are prohibited and may disqualify a response.

Bidders may contact, David Menard, Director of Municipal Maintenance for this IFB in the event this IFB is incomplete or the bidder is having trouble obtaining any part of the IFB

electronically through the Town website (www.wareham.ma.us) including, and without limitation the form and attachments.

IV. Contract Document

The contract documents will consist of all bid forms as attached hereto. In addition, the following documents will be included:

1. All submissions required by Sect. I 'Submissions'
2. Any IFB addendum
3. Notification of Award
4. Contract - >sample= attached
5. Any other documents by mutual agreement of the Town and successful bidder
6. All requirements of the General Laws applicable to this contract.

V. Term of the Contract

TIME IS OF THE ESSENCE.

It is anticipated that this bid will be awarded within 30 days after the bid opening.

The Contractor agrees to commence work on the project within seven (7) days after receipt of Notice to Proceed and further agrees to complete the project by December 31, 2016.

Only one (1) bid shall be awarded.

All bids for this project are subject to applicable public bidding laws of Massachusetts, including G.L. Chapter 149, §44A-H.

The successful bidder agrees to execute a contract with the Town of Wareham and provide insurance documents and any bonds required within ten (10) days after notification of award, unless stated otherwise. Failure or refusal to comply with this requirement may result in withdrawal of the bid award. In the event of a bid award withdrawal, the Town reserves the right to issue a new Invitation to Bid or award to the second low responsive and responsible bidder.

It is the intention of this Public Agency not to award a contract for this work under this or any other bid if the bidder cannot furnish satisfactory evidence that he has the ability and experience to perform this class of work and that he has sufficient capital and equipment to enable him to perform this class of work successfully and to complete it within the time named in the contract; and the Public Agency reserves the right to reject this or any other bid or to award the contract as is deemed to be in the best interest of the Public Agency.

VI. Evaluation Criteria

The successful bid will be the bid providing the "best price" (see "Price Evaluation" below) chosen from all bids considered to be responsive and responsible. The Town retains the right to waive minor informalities.

A **Responsive** bid meets all of the following criteria:

Answers all questions as required by this bid document

Includes all forms and certifications required by Sect. I "Submission Requirements"

A **Responsible** bidder meets all of the following criteria:

Has been in the business as professional electrician under the current name for no less than five (5) years

Provides at the request of the Awarding Authority five references for professional electrical projects within the past three years

Demonstrates the ability to work within the term of the contract as described in Section 3. Above

VII. Price Evaluation

Quoted prices are guaranteed to be fixed for the term of this contract

Discounts based on time of payment shall not be considered

No additional cost shall be added for delivery

Best Price' will be based on the lowest total price offered by a responsive and responsible bidder.

VIII. Insurance

Commercial General Liability Insurance - Contractor is to maintain Casualty Insurance as follows:

Commercial General Liability Insurance with an insurance company qualified to do business in the Commonwealth of Massachusetts and acceptable to the Town, providing a limit of liability of not less than \$1,000,000 per occurrence and general aggregate. Such insurance is to include the following extension of coverage.

- 1.) Contractual Liability - \$1,000,000 per occurrence
- 2.) Premises Operation Liability - \$1,000,000 per occurrence
- 3.) Independent Contractors Liability - \$1,000,000 per occurrence
- 4.) Explosion, Collapse and Underground Property Damage - \$1,000,000 per occurrence
- 5.) Personal Liability - \$1,000,000 per occurrence
- 6.) Products Liability - \$1,000,000 per occurrence

Automobile Liability Insurance with an Insurance Company qualified to do business in the Commonwealth of Massachusetts and acceptable to the Town providing a limit of liability not less than those specified below. Such insurance is to include claims arising out of vehicles owned by contractor, hired by contractor, or owned by others acting on behalf of or under the direction of the contractor.

Bodily Injury Liability of not less than \$500,000 per accident, bodily injury and property damage combined

Workmen's Compensation Insurance - The contractor shall furnish the Town with certificates of insurance showing that all his/her employees who shall be connected with this work are protected under Workmen's Compensation Insurance Policies.

- 1.) Coverage A - Massachusetts
- 2.) Coverage B - \$500,000 per insuring agreement

Prior to the commencement of the work, contractor will cause to be delivered to the Procurement Office, Town of Wareham Certificates of Insurance evidencing the foregoing. The Certificates of Insurance are to provide that the Town of Wareham in care of its Procurement Officer shall be given at least 30 days advance notice of cancellation, intent not to renew, or material change in coverage.

Bidder hereby agrees to save and hold the Town of Wareham, its agents, servants, and employees, Harmless from any and all claims arising out of the activities of contractor, its agents, servants, employees, and invitee or subcontractors.

IX. Affirmative Action

It is understood and agreed that it shall be a material breach of any contract resulting from this bid for the contractor to engage in any practice which shall violate any provision of Massachusetts General Laws, Chapter 151B, relative to discrimination in hiring, discharge, compensation, or terms, conditions or privileges of employment because of race, color, religion, sex, national origin, ancestry, age, sexual orientation or disability

X. Prevailing Wages

Bids for any contract requiring labor such as, but not limited to, construction, repair or installation shall be made on the bases of the Minimum Wage Schedule, as determined by the Commission of Labor and Industries pursuant to the provisions of Chapter 149, Section 26 27D inclusive, of the General Laws, as amended. (If not attached, this information as well as statement of compliance will be supplied to you as soon as it is received from the State.)

In accordance with the requirements of G.L. c. 149, §27B, the Contractor shall submit, and shall require all of its subcontractors required to keep a record of hours and wages paid to laborers employed on the project to the awarding authority to submit, on a weekly basis, copies of such records. All such weekly submissions shall be accompanied by the following certification:

The undersigned contractor hereby certifies, under the pains and penalties of perjury, that the foregoing payroll records are true and accurate records of the wages paid to laborers employed on the project for the period stated and said wages are in an amount no less than the prevailing wage rates established for the project by the Massachusetts Department of Labor and Industries. The undersigned contractor agrees to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of the project work arising out of or as a result of (1) the contractor's failure to pay laborers employed on the project the said applicable prevailing wage rates; (2) the failure of the foregoing payroll records to accurately state the said applicable prevailing wage rates; or (3) the failure of the foregoing payroll records to accurately represent the wages actually paid to laborers employed on the project.

DATE: _____

CONTRACTOR: _____

NAME: _____

TITLE: _____

XI. Bonds

The successful bidder shall provide performance and payment bonds in the amount of 100% of the total cost of the contract.

XII. Bid Deposit

All bidders are required to submit a 5% bid deposit/bond of the dollar bid total.

XIII. Substitution

All specifications provided are considered to be minimum quality and/or quantity acceptable.

In the event that a proprietary specification is used, the intent is to clearly and best describes competitiveness of the bid. Where proprietary specifications are used, alternate items of 'equal to or better than' standard may be substituted unless stated otherwise.

When a substitution is made, the burden of proof shall be on the bidder to demonstrate that the substitute is in fact equal to or better than the standard used. The bidder shall submit such proof

as part of the bid document. Bids not containing said documentation may be considered non-responsive at the sole discretion of the Town.

XIV. Assignment of Contract

The contractor shall not be permitted to either assign or underlet the contract, nor assign either legally or equitable any monies hereunder, or its claim thereto without the previous written consent of the Town.

XV. Specifications Features

To remove and replace existing street lights, located within the Town of Wareham to an energy efficient LED lighting source. These specifications are based on a STREETWORKS Verdeon Street Light fixture (Refer to Appendix A).

Construction: Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy maintenance. 3G vibration rated.

Optics: Optics are precisely designed to shape the distribution maximizing efficiency and fixture spacing. Offered standard in 4000K (+/-275k).CCT and 70 CRI. Optional 5700K CCT and 3000K CCT are available.

Electrical: 120-277V 50/60Hz or 480V 60Hz operation. 10kV/10kA common-and differential—mode surge protection available. Thermal management transfers heat away from the LED source for optimal efficiency, light output and lumen maintenance. Operates in ambient temperatures from -40/C to +40C, 50C HA (high ambient) option available. Standard three-position tunnel type terminal block, LED modules are IP66 rated.

Mounting: Two-bolt/one-bracket slipfitter with cast-in pipe stop and 2.5” leveling steps. Four-bolt/two-clamp mounting option. Fixed-in-lace bird guard seals around 1-1/4” to 2” (1-5/8 to 2-3/8” O.D.) mounting arms. Optional 15” pole mount arm available with round pole adapter and mounting hardware included.

Finish: Housing and cast parts finished in five-state super TBIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against face and wear.

Warranty: Five year Warranty.

See **Appendix A** for further details

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this section the word 'person' shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity.

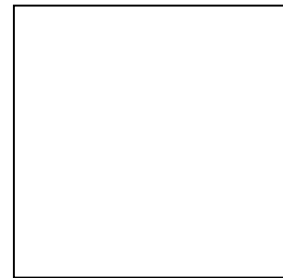
Authorized Signature

Date

Social Security Number or Federal
Identification Number

Legal Name of Business Entity (Please Print or Type)

Address: _____



Corporate Seal

All bids shall be accompanied by the Bidder's certification regarding payment of prevailing wage rates in the form set forth below.

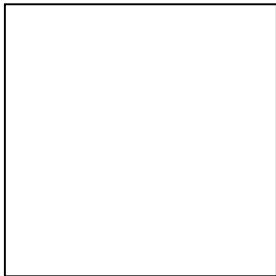
BIDDER'S CERTIFICATION REGARDING PAYMENT OF PREVAILING WAGES

The undersigned bidder hereby certifies, under the pains and penalties of perjury, that the foregoing bid is based upon the payment to laborers to be employed on the project of wages in an amount no less than the applicable prevailing wage rates established for the project by the Massachusetts Department of Labor and Industries. The undersigned bidder agrees to indemnify the awarding authority for, from and against any loss, expense, damages, actions, or claims, including any expense incurred in connection with any delay or stoppage of the project work arising out of our as a result of (1) the failure of the said bid to be based upon the payment of the said applicable prevailing wage rates or (2) the failure of the bidder, if selected as the contractor, to pay laborers employed on the project the said applicable prevailing wage rates.

Date

Signature of Authorized Representative

Name and Title (Print or Type)



Corporate Seal

**STANDARD HOLD HARMLESS AND INDEMNITY CLAUSE
FOR USE IN
LEASES, USE AGREEMENTS, PROCUREMENT CONTRACTS ETC.**

_____, its officers and members all,
Legal Name of Bidder's Business Entity

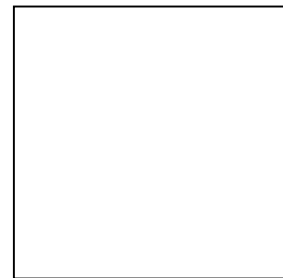
through the signing of this document by an authorized party or agent, indemnify, hold harmless and defend the Town of Wareham and its agents and employees from all suits and actions, including attorneys' fees and all costs of litigations and judgment of every name and description brought against the Town as a result of loss, damage or injury to person or property by reason of any act by _____, its agents, servants or employees.

Legal Name of bidder's Business Entity

Authorized Signature

Name and Title (Print or Type)

Date



Corporate Seal

CERTIFICATION TO PAYMENT OF TAXES BY CONTRACTOR

Pursuant to G.L. c. 62C, §49A, I hereby certify that _____
Legal Name of Bidder's Business Entity

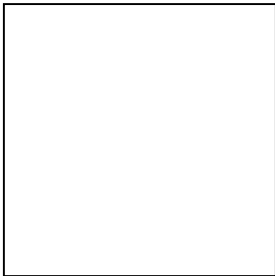
has complied with all laws of the Commonwealth of Massachusetts relating to the
payment of taxes.

Signed under the penalties of perjury.

Authorized Signature

Name and Title (Print or Type)

Date



Corporate Seal

CERTIFICATE OF VOTE
(Corporations Only)

At a duly authorized meeting of the Board of Directors of the _____
(Name of Corporation)

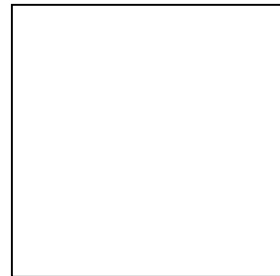
held on _____ it was voted, that _____
(Date) (Name)

_____ of this company, be and hereby is
(Officer)

authorized to execute contracts and bonds in the name and on behalf of said company, and affix its corporate seal hereto; and such execution of any contract or obligation in this company's name on its behalf by such officer under seal of the company, shall be valid and binding upon this company. I hereby certify that I am the clerk of the above named corporation and that _____ is the duly elected officer as above of said company, and that the above vote has not been amended or rescinded and remains in full force and effect as the date of this contract.

Clerk

Date



OSHA CERTIFICATION

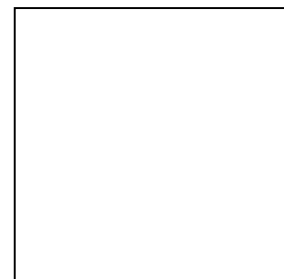
Pursuant to G.L. c. 149, §44A, the undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten (10) hours in duration at the time the employee begins worked and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee? And that he will comply fully with all laws and regulations applicable to awards made subject to section 44A.

Signed under the penalties of perjury.

Authorized Signature

Name and Title (Print or Type)

Date



Corporate Seal

CONTRACT PRICES

The bidder above-mentioned declares and certifies:

That said bidder has carefully examined the instructions to bidders, schedules, and specifications prepared under the direction of the Town Administrator, and will, if successful in the bid, furnish and deliver at the prices bid and within the time stated, all the materials, services or labor for which this bid is made.

No plead of mistake in an accepted bid shall be available to the undersigned bidder.

All bidders are required to answer the following survey questions. Bids not answering the following questions may be deemed non-responsive.

- | | Yes | No |
|--|-----|-------|
| a. Is the bidder a Minority Business Enterprise (MBE)? | [] | [] |
| b. Is the bidder a Women Business Enterprise (WBE)? | [] | [] |
| c. Does the bidder possess a business certificate in the Town of Wareham? | [] | [] |
| d. Has the bidder provided services or goods to the Town of Wareham at any time during the past 24 months? | [] | [] |
| e. Has the bidder ever forfeited a bid or performance bond relating to a bid with the Town of Wareham? | [] | [] |
| f. Is this bid for contracted services? | [] | [] |
| 1. If yes, will any portion be sub-contracted? | [] | [] |
| 2. Approximately how many people in total will work on this contract? | | _____ |

Price as specified in the IFB for an individual streetlight LED replacement from a 45 watt fixture to a 35 watt fixture, according to the attached specifications:

\$ _____

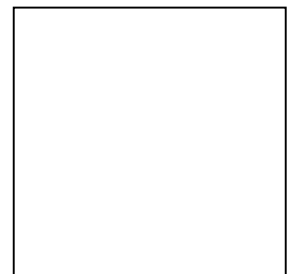
(Written amount in Words)

Authorized Signature

Name and Title (Print or Type)

Telephone Number

Fax Number



**TOWN OF WAREHAM
CONTRACT FOR
LED Streetlight Upgrade**

This Agreement is made on this _____, between the Town of Wareham, acting by and through its duly authorized Board of Selectmen (hereinafter, the "Town"), with a principal place of business at 54 Marion Road, Wareham, Ma. 02571 and _____ with a principal place of business at _____ (hereinafter, the Contractor). The Town and _____ contract for services under the terms and conditions set forth herein.

I. SERVICES

_____ will provide the following goods or services:

The Contractor shall furnish experienced, electrical contactors to furnish all labor, materials and equipment necessary for the removal and replacement of its operating streetlights to the conversion of energy efficient streetlights. The individual streetlights that will be replaced will be on town accepted streets and will be determined by the Director or his designee. For a period commencing _____ in accordance with the IFB submitted to the Town of Wareham and is now attached as part of this contract.

II. COMPENSATION

Upon completion of the services described in Paragraph I above, _____ shall submit an invoice to the Town with any reasonable supporting documentation requested by the Town, reflecting the services performed. Upon satisfactory review of said invoices and documentation, the Town shall remit payment. Total compensation to be paid to pursuant to this contract shall not exceed \$_____ per LED light fixture and the total contract price of \$64,999.99.

III. TIME FOR PERFORMANCE

All services pursuant to this contract shall be performed beginning _____ and will be completed no later than December 31, 2016.

IV. SUBJECT TO APPROPRIATION

Notwithstanding anything in the contract documents to the contrary, any and all payments which the Town is required to make under this contract shall be subject to appropriation or other availability of funds, as certified by the Town Accountant.

V. ASSIGNMENT

_____ shall not delegate, assign or transfer its duties or interest in this Contract without the express written consent of the Town. If approved by the Town, this contract shall be binding upon _____ assigns, transferees and/or successors in interest.

VI. PREVAILING STATUTORY AUTHORITY

The validity, interpretation and performance of this Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts.

VII. INSURANCE

See section VIII of the LED Streetlight Upgrade IFB for requirements pertaining to insurance and attached herein as part of the contract.

VIII. INDEMNIFICATION

_____ hereby indemnifies and agrees to hold harmless the Town against any liability including all claims for bodily injury or property damage that may arise out of the performance of its obligations under this contract by itself or a subcontractor, officer, agent or employee.

IX. TERMINATION

This contract may be terminated by either party upon receipt of ten (10) days advance written notice by certified mail to the signatories of the Town Department and _____ noted below. In case of such written notice of termination, all services under this contract shall cease with the exception of such work as may be necessary to bring the work in progress to a reasonable and safe condition. _____ shall then submit a final bill based on work actually performed. There shall be no penalty for termination for the convenience of the Town.

For _____,

For the Town of Wareham,

Name
Title: President
Date: _____

Derek Sullivan,
Wareham Town Administrator
Date: _____

Recommended By:

David Menard
Director of Municipal Maintenance

Approved as to form:

Approved As to Available Funds:

Richard Bowen
Town Solicitor

Judith Lauzon
Town Accountant

Account to be Charged: _____

Appendix A

STREETWORKS™

DESCRIPTION

The Verdeon LED roadway luminaire combines optical performance, energy efficiency, and outstanding versatility to meet the requirements of any roadway application. Advanced optical technology delivers unparalleled uniformity, scalability, and budget-beating operating costs for municipal streets and highways. UL/cUL listed for wet locations with an optional IP66 enclosure rating available.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy maintenance. 3G vibration rated.

Optics

Optics are precisely designed to shape the distribution maximizing efficiency and fixture spacing. Offered standard in 4000K (+/- 275K) CCT and 70 CRI. Optional 5700K CCT and 3000K CCT are available.

Electrical

120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 10kV/10kA common- and differential-mode surge protection available. Thermal management transfers heat away

from the LED source for optimal efficiency, light output and lumen maintenance. Operates in ambient temperatures from -40°C to 40°C. 50°C HA (high ambient) option available. Standard three-position tunnel type terminal block. LED modules are IP66 rated.

Mounting

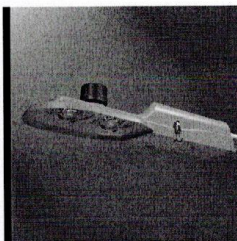
Two-bolt/one-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps. Four-bolt/two-clamp mounting option. Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms. Optional 15" pole mount arm available with round pole adapter and mounting hardware included.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Consult your Eaton's Cooper Lighting business representative for a complete selection of standard colors.

Warranty

Five-year warranty.

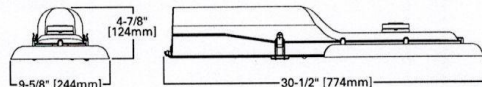


VERD VERDEON

LED

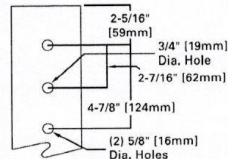
ROADWAY LUMINAIRE

DIMENSIONS



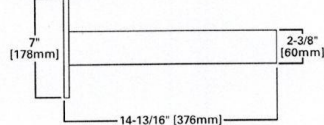
ARM DRILLING

TYPE "M"



OPTIONAL ARM

15" Straight Arm



CERTIFICATION DATA

UL and cUL Wet Location Listed
IP66-Rated Optics
3G Vibration Rated
ISO 9001
DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 and 60Hz,
347V/60Hz, 480V/60Hz
-40°C Minimum Temperature Rating
+40°C Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 0.5

SHIPPING DATA

Approximate Net Weight:
20 lbs. (9.1 kgs.)

Cooper Lighting
by E.T.N

*www.designlights.org



ADW132057
2015-01-19 08:10:24

POWER AND LUMENS

Light Engine	A016	A018	A01	A028	A02	
Nominal Power (Watts)	36W	51W	64W	72W	92W	
Input Current @ 120V (A) ¹	0.30A	0.42A	0.53A	0.60A	0.77A	
Input Current @ 277V (A) ¹	0.15A	0.19A	0.24A	0.28A	0.34A	
Type II	Lumens ²	3,855	4,937	5,839	7,858	9,294
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
Type III	Lumens ²	3,775	4,833	5,716	7,693	9,099
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
Type V	Lumens ²	3,864	4,948	5,852	7,876	9,315
	BUG Rating	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3

NOTE: 1 Power and current values are nominal based on 120-277V input. Consult factory for values at 347V and 480V. 2 Lumen output is for 4000K CCT and AP Grey finish.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 hours)	Theoretical L70 (Hours)
A01*		
25°C	>88%	>127,000
40°C	>82%	>87,000
A018, A016, A02 & A028		
25°C	>92%	>200,000
40°C	>90%	>145,000

* Not available in 347V or 480V.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

ORDERING INFORMATION

Sample Number: VERD-A01-D-U-T2-4N7-AP

Product Family ¹	Light Engine ²	Driver ³	Voltage	Distribution
VERD=Verdeon	A01=1 LED, Full Output A018=1 LED, Approximately 80% Output A016=1 LED, Approximately 60% Output A02=2 LEDs, Full Output A028=2 LEDs, Approximately 80% Output	E=Non-Dimming D=Dimming (0-10V) ⁴	U=Universal (120-277V) 8=480V ⁵ 9=347V ⁵	T2=Type II T3=Type III T5=Type V
Options (Add as Suffix)		Color		Accessories (Order Separately)
7030=70 CRI / 3000K CCT ⁶ 7060=70 CRI / 5700K CCT ⁶ 4=NEMA Twistlock Photocontrol Receptacle 4N7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁷ 10K=10kV UL 1449 Surge Protective Device IP66=IP66 Rated Housing HA=50°C High Ambient Temperature MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{8,9} MS/DIM-L20=Motion Sensor for Dimming Operation, Maximum 9' - 20' Mounting Height ^{8,9} MS/DIM-L40=Motion Sensor for Dimming Operation, Maximum 21' - 40' Mounting Height ^{8,9} DIMRF-LN=Factory Installed LumaWatt RF Dimming Control System (Mounting Height 16' and Up) ^{10,11} DIMRF-LW=Factory Installed LumaWatt RF Dimming Control System (Mounting Height below 16') ^{10,11} K=Level Indicator 4B=Four-bolt, Two-clamp Mounting A15=Arm Included (15" Straight Arm) ¹²		AP=Grey (Standard) BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White		OA1223=10kV/10kA UL 1449 Surge Module Replacement OA/RA1013=Photocontrol Shorting Cap OA/RA1014=NEMA Photocontrol - 120V OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V FSIR-100=Wireless Configuration Tool for Motion Sensor ¹³ HS-VERD=Verdeon House Side Shield

- NOTES:
- DesignLights Consortium¹ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
 - Standard 4000K CCT and 70 CRI.
 - Consult factory for driver surge protection values.
 - Must specify 4N7 option.
 - Not recommended for use with ungrounded, delta configured systems. Not available with color option "A" raw aluminum.
 - Extended lead times apply. Use dedicated IES files for 3000K and 5700K when performing layouts. These files are published on the Verdeon luminaire product page on the website.
 - Must specify dimming driver.
 - Not available with 4B option. Sensor mounted externally. Consult factory for more information.
 - The FSIR-100 accessory is required to adjust parameters.
 - LumaWatt wireless sensors are factory installed and require network components RF-EM1, RF-GW1 and RF-ROUT1 in appropriate quantities. See website for LumaWatt application information.
 - LumaWatt wireless system is not available with photocontrol receptacle (not needed).
 - Round pole adapter and mounting hardware included. "M" drill pattern.
 - This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your Eaton's Cooper Lighting business representative for additional details.