



Legal Department

December 10, 2019

Chairman Samuel Randazzo  
Public Utilities Commission of Ohio  
180 East Broad Street  
Columbus, OH 43215-3793

Re: **In the Matter of the Application of** )  
**Malone University** )  
**and Ohio Power Company** ) **Case No. 19-1625-EL-EEC**  
**for Approval of a Special Arrangement** )  
**Agreement with a Mercantile Customer** )

**Tanner Wolfram**  
Legal Fellow  
Regulatory Services  
(614) 716-2914 (T)  
[twolfram@aep.com](mailto:twolfram@aep.com)

Dear Chairman Randazzo,

Attached please find the Joint Application of Ohio Power Company (AEP Ohio) and the above-referenced mercantile customer for approval of a Special Arrangement of the commitment of energy efficiency/peak demand reduction (EE/PDR) resources toward compliance with the statutory benchmarks for 2019 (hereinafter “Joint Application”).

Amended Substitute Senate Bill 221, codified at R.C. 4928.66, sets forth EE/PDR benchmarks that electric distribution utilities are required to meet or exceed. The statute allows utilities to include EE/PDR resources committed by mercantile customers for integration into the utilities’ programs to be counted toward compliance with a utility’s EE/PDR benchmarks. The statute also enables the Commission to approve special arrangements for mercantile customers that commit EE/PDR resources to be counted toward compliance with EE/PDR benchmarks.

The Commission’s Order in Case No. 10-834-EL-EEC established a streamlined process to expedite review of these special arrangements by developing a sample application process for parties to follow for consideration of such programs implemented during the prior three calendar years. The attached Joint Application and affidavit conforms with AEP Ohio’s version of the streamlined sample application. As requested by Commission Staff, any confidential information referenced in the Joint Application has been provided confidentially to Commission Staff for filing in Commission Docket 10-1599-EL-EEC and subject to the confidentially protections of R.C. 4901.16 and OAC 4901-1-24(E). AEP Ohio respectfully requests that the Commission treat the two cases as associated dockets and that any confidential information provided to Staff for filing in connection with the Joint Application be subject to the protective order requested in Docket 10-1599-EL-EEC.

Cordially,

/s/ Tanner Wolfram  
Attachment



**Case No.: 19-1625-EL-EEC**

Mercantile Customer: MALONE UNIVERSITY

Electric Utility: Ohio Power

Program Title or Description: AEP Ohio Business Incentives for Energy Efficiency: Self Direct Program

Rule 4901:1-39-05(F), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's existing demand reduction, demand response, and energy efficiency programs for integration with the electric utility's programs. The following application form is to be used by mercantile customers, either individually or jointly with their electric utility, to apply for commitment of such programs in accordance with the Commission's pilot program established in Case No. [10-834-EL-POR](#)

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the electric utility's energy efficiency and demand reduction (EEDR) rider will be automatically approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies the application prior to that time. Completed applications requesting the exemption from the EEDR rider (Option 2) will also qualify for the 60-day automatic approval so long as the exemption period does not exceed 24 months. Rider exemptions for periods of more than 24 months will be reviewed by the Commission Staff and are only approved up the issuance of a Commission order.

Complete a separate application for each customer program. Projects undertaken by a customer as a single program at a single location or at various locations within the same service territory should be submitted together as a single program filing, when possible. Check all boxes that are applicable to your program. For each box checked, be sure to complete all subparts of the question, and provide all requested additional information. Submittal of incomplete applications may result in a suspension of the automatic approval process or denial of the application. Any confidential or trade secret information may be submitted to Staff on disc or via email at [ee-pdr@puc.state.oh.us](mailto:ee-pdr@puc.state.oh.us).

## Section 1: Company Information

Name: MALONE UNIVERSITY

Principal address: 2600 Cleveland Avenue NW, Canton OH 44709

Address of facility for which this energy efficiency program applies: 2600 Cleveland Ave, Canton OH 44709-3308

Name and telephone number for responses to questions:

Kris Vincent, Malone University, (330) 323-1677

Electricity use by the customer (check the box(es) that apply):

- ☒ The customer uses more than seven hundred thousand kilowatt hours per year at our facility. (Please attach documentation.)

See Confidential and Proprietary Attachment 4 – Calculation of Rider Exemption and UCT which provides the facility consumption for the last three years, benchmark kWh, and the last 12 months usage.

- ☐ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.) When checked, see Attachment 6 – Supporting Documentation for a listing of the customer’s name and service addresses of other accounts in the AEP Ohio service territory.

## Section 2: Application Information

A) The customer is filing this application (choose which applies):

- ☐ Individually, on our own.
- ☒ Jointly with our electric utility.

B) Our electric utility is: Ohio Power Company

The application to participate in the electric utility energy efficiency program is "Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application."

C) The customer is offering to commit (choose which applies):

- ☐ Energy savings from our energy efficiency program. (Complete Sections 3, 5, 6, and 7.)
- ☐ Capacity savings from the customer's demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)
- ☒ Both the energy savings and the demand reduction from the customer's energy efficiency program. (Complete all sections of the Application.)

### Section 3: Energy Efficiency Programs

A) The customer's energy efficiency program involves (choose whichever applies):

- ☒ Early replacement of fully functioning equipment with new equipment. (Provide the date on which the customer replaced fully functioning equipment, 12/8/2016 and the date on which the customer would have replaced your equipment if you had not replaced it early. Please include a brief explanation for how the customer determined this future replacement date (or, if not known, please explain why this is not known)).

The remaining life of the equipment varies and is not known with certainty. The future replacement date is unknown and has historically been at the end of equipment life. Replacement was completed early to achieve energy savings and to reduce future maintenance costs.

- ☐ Installation of new equipment to replace equipment that needed to be replaced. The customer installed new equipment on the following date(s):
- ☐ Installation of new equipment for new construction or facility expansion. The customer installed new equipment on the following date(s):
- ☐ Behavioral or operational improvement.

B) Energy savings achieved/to be achieved by your energy efficiency program:

- 1) If you checked the box indicating that your project involves the early replacement of fully functioning equipment replaced with new equipment, then calculate the annual savings [(kWh used by the original equipment) - (kWh used by new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Unit Quantity (watts) = Existing (watts x units) - Installed (watts x units)

kWh Reduction (Annual Savings) = Unit Quantity x (Deemed kWh/Unit)

Annual savings: 38,310 kWh

See Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation for annual energy savings calculations and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

- 2) If you checked the box indicating that you installed new equipment to replace equipment that needed to be replaced, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by the higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: kWh

Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.

- 3) If you checked the box indicating that your project involves equipment for new construction or facility expansion, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: kWh

Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.

- 4) If you checked the box indicating that the project involves behavioral or operational improvements, provide a description of how the annual savings were determined.

## Section 4: Demand Reduction/Demand Response Programs

A) The customer's program involves (check the one that applies):

- ☒ Coincident peak-demand savings from the customer's energy efficiency program.
- ☐ Actual peak-demand reduction. (Attach a description and documentation of the peak-demand reduction.)
- ☐ Potential peak-demand reduction check the one that applies):

➤ Choose one or more of the following that applies:

- ☐ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a tariff of a regional transmission organization (RTO) approved by the Federal Energy Regulatory Commission.
- ☐ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a program that is equivalent to an RTO program, which has been approved by the Public Utilities Commission of Ohio.

B) On what date did the customer initiate its demand reduction program?

The coincident peak-demand savings are permanent installations that reduce demand through energy efficiency and were installed on the date specified in Section 3 A above.

C) What is the peak demand reduction achieved or capable of being achieved (show calculations through which this was determined):

Unit Quantity (watts) = Existing (watts x units) – Installed (watts x units)

KW Demand Reduction = Unit Quantity (watts) x (Deemed KW/Unit (watts))

5.2 kW

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for peak demand reduction calculation, and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

## **Section 5: Request for Cash Rebate Reasonable Arrangement (Option 1) or Exemption from Rider (Option 2)**

Under this section, check the box that applies and fill in all blanks relating to that choice.

Note: If Option 2 is selected, the application will not qualify for the 60-day automatic approval. All applications, however, will be considered on a timely basis by the Commission.

A) The customer is applying for:

☒ Option 1: A cash rebate reasonable arrangement.

OR

☐ Option 2: An exemption from the cost recovery mechanism implemented by the electric utility.

OR

☐ Commitment payment

B) The value of the option that the customer is are seeking is:

Option 1: A cash rebate reasonable arrangement, which is the lesser of (show both amounts):

☐ A cash rebate of \$\_\_\_\_\_. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

OR

☒ A cash rebate valued at no more than 50% of the total project cost, which is equal to \$ 1,253.15. (Attach documentation and calculations showing how this payment amount was determined.)

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for incentive calculations for this mercantile program.

Option 2: An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider.



- ☐ An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for \_\_\_\_ months (not to exceed 24 months). (Attach calculations showing how this time period was determined.)

OR

- ☐ A commitment payment valued at no more than \$\_\_\_\_\_. (Attach documentation and calculations showing how this payment amount was determined.)

OR

- ☐ Ongoing exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for an initial period of 24 months because this program is part of an ongoing efficiency program that is practiced by our organization. (Attach documentation that establishes your organization's ongoing efficiency program. In order to continue the exemption beyond the initial 24 month period your organization will need to provide a future application establishing additional energy savings and the continuance of the organization's energy efficiency program.)

## Section 6: Cost Effectiveness

The program is cost effective because it has a benefit/cost ratio greater than 1 using the (choose which applies):

- ☐ Total Resource Cost (TRC) Test. The calculated TRC value is: \_\_\_\_\_  
(Continue to Subsection 1, then skip Subsection 2)
- ☒ Utility Cost Test (UCT) . The calculated UCT value is: 7.86 (Skip to Subsection 2.)

### Subsection 1: TRC Test Used (please fill in all blanks).

The TRC value of the program is calculated by dividing the value of our avoided supply costs (generation capacity, energy, and any transmission or distribution) by the sum of our program overhead and installation costs and any incremental measure costs paid by either the customer or the electric utility.

The electric utility's avoided supply costs were \_\_\_\_\_.

Our program costs were \_\_\_\_\_.

The utility's incremental measure costs were \_\_\_\_\_.

### Subsection 2: UCT Used (please fill in all blanks).

We calculated the UCT value of our program by dividing the value of our avoided supply costs (capacity and energy) by the costs to our electric utility (including administrative costs and incentives paid or rider exemption costs) to obtain our commitment.

Our avoided supply costs were \$ 11,657.42

The utility's program costs were \$ 229.86

The utility's incentive costs/rebate costs were \$ 1,253.15.

## Section 7: Additional Information

Please attach the following supporting documentation to this application:

- Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment.

See Attachment 1 - Self Direct Project Overview and Commitment for a description of the project. See Attachment 6 - Supporting Documentation, for the specifications of the replacement equipment 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed. Due to the length of time since the equipment replacement, the make, model and year of the replaced equipment is not available.

- A copy of the formal declaration or agreement that commits your program to the electric utility, including:

- 1) any confidentiality requirements associated with the agreement;

See Attachment 2 - Self Direct Program Project Blank Application including Rules and Requirements. All confidentiality requirements are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.)

- 2) a description of any consequences of noncompliance with the terms of the commitment;

See Attachment 2 - Self Direct Program Project Blank Application including Rules and Requirements. All consequences of noncompliance are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.

- 3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;

None required because the resources committed are permanent installations that reduce demand through increased efficiency during the Company's peak summer demand period generally defined as May through September and do not require specific coordination and communication to provide demand reduction capabilities to the Company.

- 4) permission by the customer to the electric utility and Commission staff and consultants to measure and verify energy savings and/or peak-demand reductions resulting from your program; and,

See Attachment 2 - Self Direct Program Blank Application including Rules and Requirements granting such permission pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.

- 5) a commitment by you to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

See Attachment 1 - Self Direct Project Overview and Commitment for the commitment to comply with any information and compliance reporting requirements imposed by rule or as part of the approval of this arrangement by the Public Utilities Commission of Ohio.

- A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. Additionally, identify and explain all deviations from any program measurement and verification guidelines that may be published by the Commission.

The Company applies the same methodologies, protocols, and practices to Self Direct Program retrospective projects that are screened and submitted for approval as it does to prospective projects submitted through its Prescriptive and Custom Programs. The Commission has not published a technical reference manual for use by the Company so deviations can not be identified. The project submitted is a prescriptive project and energy savings are determined as described in Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation, and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.



# Public Utilities Commission

Project # 19-26005  
Docket # 19-1625

## Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

Case No.: 19-1625-EL-EEC

State of Ohio :

Zaid Sheikh, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:  
  
DNV GL Energy Services USA Inc. agent of Ohio Power
2. I have personally examined all the information contained in the foregoing application, including any exhibits and attachments. Based upon my examination and inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

[Signature] Energy Engineer  
Signature of Affiant & Title

Sworn and subscribed before me this 11 day of October, 2019 Month/Year

Linda M. Schmidt  
Signature of official administering oath

LINDA M. SCHMIDT  
Print Name and Title

My commission expires on 7-31-2022



LINDA M. SCHMIDT  
Notary Public, State of Ohio  
My Commission Expires 7-31-2022



A unit of American Electric Power

Attachment I  
Self Direct Project Overview & Commitment  
Page 1 of 1

### Self Direct Project Overview & Commitment

The Public Utility Commission of Ohio (PUCO) will soon review your application for participation in AEP Ohio's Energy Efficiency/Peak Demand Response program. Based on your submitted project, please select by initialing one of the two options below, sign and fax to 877-607-0740.

Customer Name	MALONE UNIVERSITY	
Project Number	AEP-19-26005	
Customer Premise Address	2600 CLEVELAND AVE, CANTON, OH 44709-3308	
Customer Mailing Address	2600 Cleveland Avenue NW, CANTON, OH 44709	
Date Received	7/2/2019	
Project Installation Date	12/8/2016	
Annual kWh Reduction	38,310	
Total Project Cost	\$3,341.74	
Unadjusted Energy Efficiency Credit (EEC) Calculation	\$1,670.87	
Simple Payback (yrs)	1.7	
Utility Cost Test (UCT) for EEC	7.86	
Utility Cost Test (UCT) for Exemption	0.06	
<i>Please Choose One Option Below and Initial</i>		
Self Direct EEC: 75%	\$1,253.15	<input checked="" type="checkbox"/> Initial: <i>KJV</i>
EE/PDR Rider Exemption	12 Months (with possible extension up to 28 months after PUCO Approval)	<input type="checkbox"/> Initial:

Note: This is a one time selection. By selecting EEC, the customer will receive payment in the amount stated above. Selection of EE/PDR rider exemption, will result in the customer not being eligible to participate in any other energy efficiency programs offered by AEP Ohio during the period of exemption. In addition, the term of EE/PDR rider exemption is subject to ongoing review for compliance and could be changed by the PUCO.

If EEC has been selected, will the Energy Efficiency Funds selected help you move forward with other energy efficiency projects? ☒ YES ☐ NO

Note: Exemptions for periods beyond 24 months are subject to look-back or true-up adjustments every year to ensure that the exemption accurately reflects the EEDR savings. Applicants must file for renewal for any exemption beyond 12 months.

### Project Overview:

The Self Direct (Prescriptive) project that the above has completed and applied is as follows.

Replaced (4) 400W MH with (4) S9394  
Replaced (5) 2L T8 U LAMP with (5) PHIL 16.5 T8  
Replaced (8) 250W MH with (8) MAX SKPT  
(159) ES SCREW IN  
(86) OTHER SCREW IN

The documentation that was included with the application proved that the energy measures applied for were purchased and installed.

By signing this document, the Mercantile customer affirms its intention to commit and integrate the above listed energy efficiency resources into the utility's peak demand reduction, demand response, and energy efficiency programs. By signing, the Mercantile customer also agrees to serve as a joint applicant in any filings necessary to secure approval of this arrangement by the Public Utilities Commission of Ohio, and comply with any information and compliance reporting requirements imposed by rule or as part of that approval.

Ohio Power Company

By: *John J. Will*

Title: Manager

Date: 09/04/2019

MALONE UNIVERSITY

By: *Kevin M. Vincent*

Title: FACILITIES MANAGER

Date: 9/2/19





# Application Guidelines

Final Applications must be submitted before November 15, 2019 in order to qualify for incentives identified in this application. Please read and follow all the steps below to ensure your application is accepted and processed in a timely manner.

## Step 1. Verify Eligibility

- Customer must have a valid AEP Ohio account.
- Equipment/measure must be installed at facilities served by the AEP Ohio account.
- Project must produce permanent reduction in electrical energy use (kWh).
- All installed equipment must meet or exceed the specifications in the application.
- Please see [Efficient Products for Business, Process Efficiency and New Construction Terms and Conditions](#) or [Self-Direct Terms and Conditions](#) for program rules and regulations.

## Step 2. Complete Applicant Information

- All fields in customer and project information sections must be completed.
- Contractor information must be completed if project is not self-performed.

## Step 3. Complete the Incentive Worksheet(s)

- Find and read specifications related to the project.
- Choose the incentive category on the worksheet based on installed equipment and specifications.
- Complete all fields (fixture description, operating hours, etc.) on the related worksheet.

## Step 4. Sign Customer Agreement

- Read the Terms and Conditions before signing and submitting the application.
- Sign Pre-Approval Agreement and submit the application to reserve funds.
- Sign Final Application Agreement and submit the application after the project is completed to receive funds.
- Complete Third Party Payment Release Authorization ONLY if incentive payment is to be paid to an entity other than AEP Ohio customer listed on the Applicant Information page.

## Step 5. Submit Pre-Approval Application<sup>1</sup>

(For Self-Direct applications, skip to Step 6)

- Submitting a Pre-Approval Application to determine qualification and reserve program funds for a project is strongly recommended.
- All process efficiency projects require pre-approval.
- Complete all fields in Pre-Approval Agreement.
- Pre-Approval Application must be submitted with:
  - Proposed scope of work (type and quantity of old and new equipment must be listed)
  - Specification sheets for all proposed equipment
  - W-9 form
- Submit application via email, fax or mail.
- An inspection may be required during application review; applicants requiring inspection will be contacted for scheduling.

## Step 6. Submit Final Application

- Complete all fields for Final Application Agreement.
- Update the application if measures/equipment differs from pre-application.
- Final Application must be submitted with:
  - Dated and itemized material invoice
  - External labor invoice (if applicable)
  - If Pre-Approval Application was not submitted, include the documents listed on Step 5
  - If the project has a pre-approval, add the project ID number on the top left field on page 2 as the AEP Application Number
- Submit application via email, fax or mail.
- An inspection may be required during application review; applicants requiring inspection will be contacted for scheduling.
- Self-Direct applications require additional steps. Please see the [Self-Direct Terms and Conditions](#) for details.

### AEP Ohio Business Incentives Program

700 Morrison Road  
Gahanna, OH 43230  
877-541-3048 | [aepohiosolutions@aep.com](mailto:aepohiosolutions@aep.com)  
Visit our website at [AEPohio.com/solutions](http://AEPohio.com/solutions)

<sup>1</sup>A Pre-Approval Application is not a guarantee of an incentive; the actual incentive will be based on the energy savings and equipment installed as determined in the Final Application. Funds are reserved for 90 days, unless an applicant is granted an extension. The program team reserves the right to contact the customer before the reservation expiration date to ensure that the project is moving forward. If the project is not underway, the reservation may be cancelled. Reserved funds are not transferable to other projects, facilities and/or customers. A waiting list will be established when funds become fully subscribed.



## Applicant Information

AEP Application Number AEP - \_ \_ - \_ \_ \_ \_

Application Type \_\_\_\_\_

### CUSTOMER INFORMATION

Business Name \_\_\_\_\_

Taxpayer ID \_\_\_\_\_ - \_\_\_\_\_ W-9 Tax Status \_\_\_\_\_

### CUSTOMER MAILING ADDRESS

Contact Name \_\_\_\_\_ Contact Title \_\_\_\_\_

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Contact Email \_\_\_\_\_

How Did You Hear About the Program? \_\_\_\_\_ AEP OH Energy Advisor \_\_\_\_\_

### PROJECT INFORMATION

Project Name (if applicable) \_\_\_\_\_

Name as It Appears on Utility Bill \_\_\_\_\_

AEP Ohio Account Numbers for this Project \_\_\_\_\_

☐ Check if mailing address and project site address are the same.

Project Site Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Building Type \_\_\_\_\_ Shift \_\_\_\_\_

Annual Operating Hours \_\_\_\_\_ Building Area (sq. ft.) \_\_\_\_\_

Construction Type \_\_\_\_\_ Does the facility have a data center? \_\_\_\_\_





## Applicant Information

### CONTRACTOR INFORMATION

Company Name \_\_\_\_\_

Contact Name \_\_\_\_\_ Title of Contact \_\_\_\_\_

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Contact Email \_\_\_\_\_

### PRIMARY CUSTOMER CONTACT INFORMATION

Contact Name \_\_\_\_\_ Title of Contact \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Contact Email \_\_\_\_\_

Who should we contact with questions about the application? ☐ Customer ☐ Contractor ☐ Energy Advisor

### Incentive Summary Table

INCENTIVE CATEGORY	TOTAL INCENTIVES
LIGHTING	
HVAC	
MOTORS & DRIVES	
COMPRESSED AIR	
REFRIGERATION/FOOD SERVICE	
MISCELLANEOUS	
PROCESS EFFICIENCY	
NC LIGHTING (SELF-DIRECT ONLY)	
<b>TOTAL INCENTIVES</b>	

AEP Application Number AEP - \_ \_ - \_ \_ \_ \_ \_



## Customer Agreement

### APPLICATION AGREEMENT

By signing this document, I agree to program requirements outlined in the measure specifications, Terms and Conditions for the applicable program and Final Application Agreement. As an eligible customer, I verify the information is correct and request consideration for participation under this program. Furthermore, I concur that I meet all eligibility criteria in order to receive payment under this program.

[Link to Efficient Products for Business/Process Efficiency Terms and Conditions, and Final Application Agreement](#)

[Link to Self-Direct Terms and Conditions, and Final Application Agreement](#)

☐ Pre-Application ☐ Final-Application

Project Completion Year \_\_\_\_\_

Self-Direct \_\_\_\_\_

Project Completion Date \_\_\_\_\_

Total Project Cost \_\_\_\_\_

Total Requested Incentive<sup>1</sup> \_\_\_\_\_

Total Self-Direct Requested Incentive<sup>2</sup> \_\_\_\_\_

Print Name

Date

AEP Ohio Customer Signature

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PRINT APPLICATION

<sup>1</sup>Incentives have a threshold of 50% of the project cost and total incentives paid to a threshold of \$25,000 and Bid4Efficiency above that.

<sup>2</sup>Self-Direct incentives are 75% of Total Requested Incentive, after 50% of the project cost threshold and tiering is applied.



## Third Party Payment Release

### THIRD PARTY PAYMENT RELEASE AUTHORIZATION (NOT APPLICABLE TO SELF-DIRECT)

Complete this section **ONLY** if incentives check should be made out in any way other than to the AEP Ohio customer exactly as their name appears on the AEP Ohio account.

**Make checks payable to:** Company/Individual \_\_\_\_\_

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_

Taxpayer ID of 3rd Party \_\_\_\_\_ - \_\_\_\_\_ W-9 Tax Status \_\_\_\_\_

By signing this document, I authorize the payment of the incentive to the third party named above and understand that I will not receive the incentive payment from AEP Ohio. I also understand that my release of the payment to a third party does not exempt me from the program requirements outlined in the measure specifications, Terms and Conditions, and Final Application Agreement.

**Print Name**

**Date**

**AEP Ohio Customer Signature**



**APPROVED**

TYPE

ES



## Accent your merchandise without distraction

### PAR38 LED

Philips PAR38 LED Single Optic Lamps with AirFlux Technology improves shopping experience with superior lighting aesthetics and optimal thermal efficiency in a sleek, lightweight design.

#### Benefits

- Will not fade colors, avoids inventory spoilage
- Lowers maintenance costs by reducing re-lamp frequency
- 5-year limited warranty†
- ‡ For details, please visit [http://www.usa.lighting.philips.com/connect/tools\\_literature/warranties.wpd](http://www.usa.lighting.philips.com/connect/tools_literature/warranties.wpd)

#### Features

- Single Optic reduces glare to improve shopper experience
- 25,000-hour rated average life\*
- 19W PAR38 saves 101W watts when compared to a 120W halogen PAR38
- 83 CRI for excellent color rendering
- Virtually UV/IR free in the beam
- Smooth dimming to 5% of full light levels†
- Contains no mercury
- † Dimmable when using leading and trailing edge dimmers. (See <http://www.philips.com/ledtechguide> for more details.)

#### Application

- Ideal for general and accent lighting in retail and hospitality spaces.

## PAR38 LED

<b>Operating and Electrical</b>	
Voltage (Nom)	120 V
Starting Time (Nom)	0.5 s
<b>General Information</b>	
Cap-Base	E26
<b>Light Technical</b>	
Llmf At End Of Nominal Lifetime (Nom)	70 %
<b>Mechanical and Housing</b>	
Bulb Shape	PAR38

### Approval and Application

Order Code	Full Product Name	Energy Efficiency Label (EEL)
457993	11PAR38/F25/830 ND 120V 6/1	Not applicable
470996	17PAR38/EC RETAIL/S8/930/DIM 6/1	-
471003	17PAR38/EC RETAIL/F25/930/DIM 6/1	-
471011	17PAR38/EC RETAIL/F40/930/DIM 6/1	-
470823	17PAR38/EC/S8/927/DIM/120V 10/1	-
470831	17PAR38/EC/F25/927/DIM/120V 6/1	-
470849	17PAR38/EC/F40/927/DIM/120V 6/1	-
471797	17PAR38/EXPERTCOLOR/S8/940/DIM/120V 6/1	-
471029	17PAR38/EC RETAIL/F25/930/DIM 6/1	-
470864	17PAR38/EC/F25/927/DIM/120V B 6/1	-
467712	16PAR38/AMB/F25/840/DIM ULW	-
467761	13.5PAR38/AMB/F25/830/DIM ULW	-
467779	13.5PAR38/AMB/F25/840/DIM ULW	-
529503	14PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	-
529529	14PAR38/LED/830/F25/DIM/ULW/120V FB 6/1	-
529537	14PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	-
529545	14PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	-
529552	14PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	-
529594	14PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	-
529602	14PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	-
529610	14PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	-
529628	12PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	-
529636	12PAR38/LED/830/F25/DIM/ULW/120V 6/1FB	-

Order Code	Full Product Name	Energy Efficiency Label (EEL)
529644	12PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	-
529651	12PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	-
529669	12PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	-
529677	12PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	-
529685	12PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	-
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	-
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	-
474684	14PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	-
474692	12PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	-
474700	12PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	-
470872	17PAR38/EC/F25/940/DIM/120V 6/1	-
470880	17PAR38/EC/F40/940/DIM/120V 6/1	-
534859	16.5PAR38/PER/930/F25/DIM/120V 6/1FB T20	-
534867	16.5PAR38/PER/930/F40/DIM/120V 6/1FB T20	-
534875	16.5PAR38/PER/927/F25/DIM/120V 6/1FB T20	-
534883	16.5PAR38/PER/927/F40/DIM/120V 6/1FB T20	-
534586	36PAR38/PER/830/S15/ND/120V 6/1FB	-
534594	36PAR38/PER/830/F25/ND/120V 6/1FB	-
534602	33PAR38/PER/830/S15/DIM/120V 6/1FB	-
534610	33PAR38/PER/830/F25/DIM/120V 6/1FB	-
534628	33PAR38/PER/830/S15/DIM/120V B 6/1FB	-
534636	33PAR38/PER/830/F25/DIM/120V B 6/1FB	-

### Controls and Dimming

Order Code	Full Product Name	Dimmable
457993	11PAR38/F25/830 ND 120V 6/1	No
470996	17PAR38/EC RETAIL/S8/930/DIM 6/1	Yes
471003	17PAR38/EC RETAIL/F25/930/DIM 6/1	Yes
471011	17PAR38/EC RETAIL/F40/930/DIM 6/1	Yes
470823	17PAR38/EC/S8/927/DIM/120V 10/1	Yes
470831	17PAR38/EC/F25/927/DIM/120V 6/1	Yes
470849	17PAR38/EC/F40/927/DIM/120V 6/1	Yes

Order Code	Full Product Name	Dimmable
471797	17PAR38/EXPERTCOLOR/S8/940/DIM/120V 6/1	Yes
471029	17PAR38/EC RETAIL/F25/930/DIM 6/1	Yes
470864	17PAR38/EC/F25/927/DIM/120V B 6/1	Yes
467712	16PAR38/AMB/F25/840/DIM ULW	Yes
467761	13.5PAR38/AMB/F25/830/DIM ULW	Yes
467779	13.5PAR38/AMB/F25/840/DIM ULW	Yes
529503	14PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	Yes

## PAR38 LED

Order Code	Full Product Name	Dimmable
529529	14PAR38/LED/830/F25/DIM/ULW/120V FB 6/1	Yes
529537	14PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	Yes
529545	14PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	Yes
529552	14PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	Yes
529594	14PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	Yes
529602	14PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	Yes
529610	14PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	Yes
529628	12PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	Yes
529636	12PAR38/LED/830/F25/DIM/ULW/120V 6/1FB	Yes
529644	12PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	Yes
529651	12PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	Yes
529669	12PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	Yes
529677	12PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	Yes
529685	12PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	Yes
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	Yes
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	Yes

Order Code	Full Product Name	Dimmable
474684	14PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	Yes
474692	12PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	Yes
474700	12PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	Yes
470872	17PAR38/EC/F25/940/DIM/120V 6/1	Yes
470880	17PAR38/EC/F40/940/DIM/120V 6/1	Yes
534859	16.5PAR38/PER/930/F25/DIM/120V 6/1FB T20	Yes
534867	16.5PAR38/PER/930/F40/DIM/120V 6/1FB T20	Yes
534875	16.5PAR38/PER/927/F25/DIM/120V 6/1FB T20	Yes
534883	16.5PAR38/PER/927/F40/DIM/120V 6/1FB T20	Yes
534586	36PAR38/PER/830/S15/ND/120V 6/1FB	No
534594	36PAR38/PER/830/F25/ND/120V 6/1FB	No
534602	33PAR38/PER/830/S15/DIM/120V 6/1FB	Yes
534610	33PAR38/PER/830/F25/DIM/120V 6/1FB	Yes
534628	33PAR38/PER/830/S15/DIM/120V B 6/1FB	Yes
534636	33PAR38/PER/830/F25/DIM/120V B 6/1FB	Yes

## Operating and Electrical

Order Code	Full Product Name	Input Frequency	Wattage Equivalent	Power (Rated) (Nom)
457993	11PAR38/F25/830 ND 120V 6/1	60 Hz	90 W	11 W
470996	17PAR38/EC RETAIL/S8/930/DIM 6/1	60 Hz	100 W	17 W
471003	17PAR38/EC RETAIL/F25/930/DIM 6/1	60 Hz	120 W	17 W
471011	17PAR38/EC RETAIL/F40/930/DIM 6/1	60 Hz	120 W	17 W
470823	17PAR38/EC/S8/927/DIM/120V 10/1	60 Hz	100 W	17 W
470831	17PAR38/EC/F25/927/DIM/120V 6/1	60 Hz	120 W	17 W
470849	17PAR38/EC/F40/927/DIM/120V 6/1	60 Hz	120 W	17 W
471797	17PAR38/EXPERTCOLOR/S8/940/DIM/120V 6/1	60 Hz	100 W	17 W
471029	17PAR38/EC RETAIL/F25/930/DIM 6/1	60 Hz	120 W	17 W
470864	17PAR38/EC/F25/927/DIM/120V B 6/1	60 Hz	120 W	17 W
467712	16PAR38/AMB/F25/840/DIM ULW	50 to 60 Hz	120 W	16 W
467761	13.5PAR38/AMB/F25/830/DIM ULW	50 to 60 Hz	90 W	13.5 W
467779	13.5PAR38/AMB/F25/840/DIM ULW	50 to 60 Hz	90 W	13.5 W
529503	14PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529529	14PAR38/LED/830/F25/DIM/ULW/120V FB 6/1	50 to 60 Hz	120 W	14 W

Order Code	Full Product Name	Input Frequency	Wattage Equivalent	Power (Rated) (Nom)
529537	14PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529545	14PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529552	14PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529594	14PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529602	14PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529610	14PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	120 W	14 W
529628	12PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529636	12PAR38/LED/830/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529644	12PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529651	12PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529669	12PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529677	12PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529685	12PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	50 to 60 Hz	90 W	12 W
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	50 to 60 Hz	120 W	14 W

## PAR38 LED

Order Code	Full Product Name	Input Frequency	Wattage Equivalent	Power (Rated) (Nom)
474684	14PAR38/LED/835/F40/GL/D IM FB 1PK 6/1	50 to 60 Hz	120 W	14 W
474692	12PAR38/LED/835/F25/GL/D IM FB 1PK 6/1	50 to 60 Hz	90 W	12 W
474700	12PAR38/LED/835/F40/GL/D IM FB 1PK 6/1	50 to 60 Hz	90 W	12 W
470872	17PAR38/EC/F25/940/DIM/ 120V 6/1	60 Hz	120 W	17 W
470880	17PAR38/EC/F40/940/DIM/ 120V 6/1	60 Hz	120 W	17 W
534859	16.5PAR38/PER/930/F25/DI M/120V 6/1FB T20	60 Hz	120 W	16.5 W
534867	16.5PAR38/PER/930/F40/DI M/120V 6/1FB T20	60 Hz	120 W	16.5 W
534875	16.5PAR38/PER/927/F25/DI M/120V 6/1FB T20	60 Hz	120 W	16.5 W

Order Code	Full Product Name	Input Frequency	Wattage Equivalent	Power (Rated) (Nom)
534883	16.5PAR38/PER/927/F40/DI M/120V 6/1FB T20	60 Hz	120 W	16.5 W
534586	36PAR38/PER/830/S15/ND/ 120V 6/1FB	50 to 60 Hz	250 W	36 W
534594	36PAR38/PER/830/F25/ND/ 120V 6/1FB	50 to 60 Hz	250 W	36 W
534602	33PAR38/PER/830/S15/DIM/ 120V 6/1FB	50 to 60 Hz	250 W	33 W
534610	33PAR38/PER/830/F25/DIM /120V 6/1FB	50 to 60 Hz	250 W	33 W
534628	33PAR38/PER/830/S15/DIM/ 120V B 6/1FB	50 to 60 Hz	250 W	33 W
534636	33PAR38/PER/830/F25/DIM /120V B 6/1FB	50 to 60 Hz	250 W	33 W

## General Information

Order Code	Full Product Name	Nominal Lifetime (Nom)	Rated Lifetime (Hours)	Switching Cycle
457993	11PAR38/F25/830 ND 120V 6/1	10000 h	10000 h	50000X
470996	17PAR38/EC RETAIL/ S8/930/DIM 6/1	25000 h	25000 h	50000X
471003	17PAR38/EC RETAIL/ F25/930/DIM 6/1	25000 h	25000 h	50000X
471011	17PAR38/EC RETAIL/ F40/930/DIM 6/1	25000 h	25000 h	50000X
470823	17PAR38/EC/S8/927/DIM/120V 10/1	40000 h	40000 h	50000X
470831	17PAR38/EC/F25/927/DIM/120V 6/1	40000 h	40000 h	50000X
470849	17PAR38/EC/F40/927/DIM/120V 6/1	40000 h	40000 h	50000X
471797	17PAR38/EXPERTCOLOR/ S8/940/DIM/120V 6/1	40000 h	40000 h	50000X
471029	17PAR38/EC RETAIL/ F25/930/DIM 6/1	25000 h	25000 h	50000X
470864	17PAR38/EC/F25/927/DIM/120V B 6/1	40000 h	40000 h	50000X
467712	16PAR38/AMB/F25/840/DIM ULW	25000 h	25000 h	50000X
467761	13.5PAR38/AMB/F25/830/DIM ULW	25000 h	25000 h	50000X
467779	13.5PAR38/AMB/F25/840/DIM ULW	25000 h	25000 h	50000X
529503	14PAR38/LED/827/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X

Order Code	Full Product Name	Nominal Lifetime (Nom)	Rated Lifetime (Hours)	Switching Cycle
529529	14PAR38/LED/830/F25/DIM/UL W/120V FB 6/1	25000 h	25000 h	25000X
529537	14PAR38/LED/840/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529545	14PAR38/LED/850/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529552	14PAR38/LED/827/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529594	14PAR38/LED/830/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529602	14PAR38/LED/840/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529610	14PAR38/LED/850/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529628	12PAR38/LED/827/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529636	12PAR38/LED/830/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529644	12PAR38/LED/840/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529651	12PAR38/LED/850/F25/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529669	12PAR38/LED/827/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529677	12PAR38/LED/830/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X
529685	12PAR38/LED/840/F40/DIM/UL W/120V 6/1FB	25000 h	25000 h	25000X

## PAR38 LED

Order Code	Full Product Name	Nominal Lifetime (Nom)	Rated Lifetime (Hours)	Switching Cycle	Order Code	Full Product Name	Nominal Lifetime (Nom)	Rated Lifetime (Hours)	Switching Cycle
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	25000 h	25000 h	25000X	534875	16.5PAR38/PER/927/F25/DIM/120V 6/1FB T20	25000 h	25000 h	50000X
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	25000 h	25000 h	25000X	534883	16.5PAR38/PER/927/F40/DIM/120V 6/1FB T20	25000 h	25000 h	50000X
474684	14PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	25000 h	25000 h	25000X	534586	36PAR38/PER/830/S15/ND/120V 6/1FB	25000 h	25000 h	50000X
474692	12PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	25000 h	25000 h	25000X	534594	36PAR38/PER/830/F25/ND/120V 6/1FB	25000 h	25000 h	50000X
474700	12PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	25000 h	25000 h	25000X	534602	33PAR38/PER/830/S15/DIM/120V 6/1FB	25000 h	25000 h	50000X
470872	17PAR38/EC/F25/940/DIM/120V 6/1	40000 h	40000 h	50000X	534610	33PAR38/PER/830/F25/DIM/120V 6/1FB	25000 h	25000 h	50000X
470880	17PAR38/EC/F40/940/DIM/120V 6/1	40000 h	40000 h	50000X	534628	33PAR38/PER/830/S15/DIM/120V B 6/1FB	25000 h	25000 h	50000X
534859	16.5PAR38/PER/930/F25/DIM/120V 6/1FB T20	25000 h	25000 h	50000X	534636	33PAR38/PER/830/F25/DIM/120V B 6/1FB	25000 h	25000 h	50000X
534867	16.5PAR38/PER/930/F40/DIM/120V 6/1FB T20	25000 h	25000 h	50000X					

## Light Technical (1/2)

Order Code	Full Product Name	Beam Angle (Nom)	Color Code	Correlated Color Temperature (Nom)	Color Rendering Index (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)	Luminous Intensity (Nom)
457993	11PAR38/F25/830 ND 120V 6/1	25 °	830	3000 K	80	950 lm	950 lm	4085 cd
470996	17PAR38/EC RETAIL/S8/930/DIM 6/1	8 °	930	3000 K	90	1200 lm	1200 lm	22000 cd
471003	17PAR38/EC RETAIL/F25/930/DIM 6/1	25 °	930	3000 K	90	1200 lm	1200 lm	6000 cd
471011	17PAR38/EC RETAIL/F40/930/DIM 6/1	40 °	930	3000 K	90	1200 lm	1200 lm	2700 cd
470823	17PAR38/EC/S8/927/DIM/120V 10/1	8 °	927	2700 K	95	1150 lm	1150 lm	21000 cd
470831	17PAR38/EC/F25/927/DIM/120V 6/1	25 °	927	2700 K	95	1150 lm	1150 lm	5800 cd
470849	17PAR38/EC/F40/927/DIM/120V 6/1	40 °	927	2700 K	95	1150 lm	1150 lm	2600 cd
471797	17PAR38/EXPERTCOLOR/S8/940/DIM/120V 6/1	8 °	940	4000 K	95	1300 lm	1300 lm	25000 cd
471029	17PAR38/EC RETAIL/F25/930/DIM 6/1	25 °	930	3000 K	90	1200 lm	1200 lm	6000 cd
470864	17PAR38/EC/F25/927/DIM/120V B 6/1	25 °	927	2700 K	95	1150 lm	1150 lm	5800 cd
467712	16PAR38/AMB/F25/840/DIM ULW	25 °	841	4000 K	80	1200 lm	1200 lm	6000 cd
467761	13.5PAR38/AMB/F25/830/DIM ULW	25 °	830	3000 K	80	950 lm	950 lm	4100 cd
467779	13.5PAR38/AMB/F25/840/DIM ULW	25 °	841	4000 K	80	950 lm	950 lm	4100 cd
529503	14PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	25 °	827	2700 K	80	1150 lm	1150 lm	5700 cd
529529	14PAR38/LED/830/F25/DIM/ULW/120V FB 6/1	25 °	830	3000 K	80	1200 lm	1200 lm	6000 cd
529537	14PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	25 °	841	4000 K	80	1200 lm	1200 lm	6000 cd
529545	14PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	25 °	850	5000 K	80	1200 lm	1200 lm	6000 cd
529552	14PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	40 °	827	2700 K	80	1150 lm	1150 lm	2450 cd
529594	14PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	40 °	830	3000 K	80	1200 lm	1200 lm	2500 cd



## PAR38 LED

Order Code	Full Product Name	Beam Angle (Nom)	Color Code	Correlated Color Temperature (Nom)	Color Rendering Index (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)	Luminous Intensity (Nom)
529602	14PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	40 °	841	4000 K	80	1200 lm	1200 lm	2500 cd
529610	14PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	40 °	850	5000 K	80	1200 lm	1200 lm	2500 cd
529628	12PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	25 °	827	2700 K	80	850 lm	850 lm	4100 cd
529636	12PAR38/LED/830/F25/DIM/ULW/120V 6/1FB	25 °	830	3000 K	80	900 lm	900 lm	4100 cd
529644	12PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	25 °	841	4000 K	80	900 lm	900 lm	4100 cd
529651	12PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	25 °	850	5000 K	80	900 lm	900 lm	4100 cd
529669	12PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	40 °	827	2700 K	80	850 lm	850 lm	1800 cd
529677	12PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	40 °	830	3000 K	80	900 lm	900 lm	1900 cd
529685	12PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	40 °	841	4000 K	80	900 lm	900 lm	1900 cd
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	40 °	850	5000 K	80	900 lm	900 lm	1900 cd
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	25 °	835	3500 K	80	1200 lm	1200 lm	6000 cd
474684	14PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	40 °	835	3500 K	80	1200 lm	1200 lm	2500 cd
474692	12PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	25 °	835	3500 K	80	900 lm	900 lm	4100 cd
474700	12PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	40 °	835	3500 K	80	900 lm	900 lm	1900 cd
470872	17PAR38/EC/F25/940/DIM/120V 6/1	25 °	940	4000 K	95	1300 lm	1300 lm	6500 cd
470880	17PAR38/EC/F40/940/DIM/120V 6/1	40 °	940	4000 K	95	1300 lm	1300 lm	3000 cd
534859	16.5PAR38/PER/930/F25/DIM/120V 6/1FB T20	25 °	930	3000 K	90	1250 lm	1250 lm	6000 cd
534867	16.5PAR38/PER/930/F40/DIM/120V 6/1FB T20	40 °	930	3000 K	90	1250 lm	1250 lm	2700 cd
534875	16.5PAR38/PER/927/F25/DIM/120V 6/1FB T20	25 °	927	2700 K	95	1150 lm	1150 lm	5800 cd
534883	16.5PAR38/PER/927/F40/DIM/120V 6/1FB T20	40 °	927	2700 K	95	1150 lm	1150 lm	2600 cd
534586	36PAR38/PER/830/S15/ND/120V 6/1FB	15 °	830	3000 K	80	3800 lm	3800 lm	31000 cd
534594	36PAR38/PER/830/F25/ND/120V 6/1FB	25 °	830	3000 K	80	3800 lm	3800 lm	11000 cd
534602	33PAR38/PER/830/S15/DIM/120V 6/1FB	15 °	830	3000 K	80	3000 lm	3000 lm	35000 cd
534610	33PAR38/PER/830/F25/DIM/120V 6/1FB	25 °	830	3000 K	80	3000 lm	3000 lm	10000 cd
534628	33PAR38/PER/830/S15/DIM/120V B 6/1FB	15 °	830	3000 K	80	3000 lm	3000 lm	35000 cd
534636	33PAR38/PER/830/F25/DIM/120V B 6/1FB	25 °	830	3000 K	80	3000 lm	3000 lm	10000 cd

### Light Technical (2/2)

Order Code	Full Product Name	Rated Beam Angle	Order Code	Full Product Name	Rated Beam Angle
457993	11PAR38/F25/830 ND 120V 6/1	25 °	470849	17PAR38/EC/F40/927/DIM/120V 6/1	40 °
470996	17PAR38/EC RETAIL/S8/930/DIM 6/1	8 °	471797	17PAR38/EXPERTCOLOR/S8/940/DIM/120V 6/1	8 °
471003	17PAR38/EC RETAIL/F25/930/DIM 6/1	25 °	471029	17PAR38/EC RETAIL/F25/930/DIM 6/1	25 °
471011	17PAR38/EC RETAIL/F40/930/DIM 6/1	40 °	470864	17PAR38/EC/F25/927/DIM/120V B 6/1	25 °
470823	17PAR38/EC/S8/927/DIM/120V 10/1	8 °	467712	16PAR38/AMB/F25/840/DIM ULW	25 °
470831	17PAR38/EC/F25/927/DIM/120V 6/1	25 °	467761	13.5PAR38/AMB/F25/830/DIM ULW	25 °

## PAR38 LED

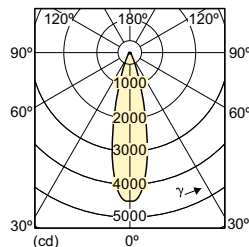
Order Code	Full Product Name	Rated Beam Angle
467779	13.5PAR38/AMB/F25/840/DIM ULW	25 °
529503	14PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	25 °
529529	14PAR38/LED/830/F25/DIM/ULW/120V FB 6/1	25 °
529537	14PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	25 °
529545	14PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	25 °
529552	14PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	40 °
529594	14PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	40 °
529602	14PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	40 °
529610	14PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	40 °
529628	12PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	25 °
529636	12PAR38/LED/830/F25/DIM/ULW/120V 6/1FB	25 °
529644	12PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	25 °
529651	12PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	25 °
529669	12PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	40 °
529677	12PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	40 °
529685	12PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	40 °
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	40 °

Order Code	Full Product Name	Rated Beam Angle
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	25 °
474684	14PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	40 °
474692	12PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	25 °
474700	12PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	40 °
470872	17PAR38/EC/F25/940/DIM/120V 6/1	25 °
470880	17PAR38/EC/F40/940/DIM/120V 6/1	40 °
534859	16.5PAR38/PER/930/F25/DIM/120V 6/1FB T20	25 °
534867	16.5PAR38/PER/930/F40/DIM/120V 6/1FB T20	40 °
534875	16.5PAR38/PER/927/F25/DIM/120V 6/1FB T20	25 °
534883	16.5PAR38/PER/927/F40/DIM/120V 6/1FB T20	40 °
534586	36PAR38/PER/830/S15/ND/120V 6/1FB	15 °
534594	36PAR38/PER/830/F25/ND/120V 6/1FB	25 °
534602	33PAR38/PER/830/S15/DIM/120V 6/1FB	15 °
534610	33PAR38/PER/830/F25/DIM/120V 6/1FB	25 °
534628	33PAR38/PER/830/S15/DIM/120V B 6/1FB	15 °
534636	33PAR38/PER/830/F25/DIM/120V B 6/1FB	25 °

## Temperature

Order Code	Full Product Name	T-Case Maximum (Nom)
457993	11PAR38/F25/830 ND 120V 6/1	75 °C
470996	17PAR38/EC RETAIL/S8/930/DIM 6/1	90 °C
471003	17PAR38/EC RETAIL/F25/930/DIM 6/1	90 °C
471011	17PAR38/EC RETAIL/F40/930/DIM 6/1	90 °C
470823	17PAR38/EC/S8/927/DIM/120V 10/1	90 °C
470831	17PAR38/EC/F25/927/DIM/120V 6/1	90 °C
470849	17PAR38/EC/F40/927/DIM/120V 6/1	90 °C
471797	17PAR38/EXPERTCOLOR/S8/940/DIM/120V 6/1	90 °C
471029	17PAR38/EC RETAIL/F25/930/DIM 6/1	90 °C
470864	17PAR38/EC/F25/927/DIM/120V B 6/1	90 °C
467712	16PAR38/AMB/F25/840/DIM ULW	70 °C
467761	13.5PAR38/AMB/F25/830/DIM ULW	65 °C
467779	13.5PAR38/AMB/F25/840/DIM ULW	65 °C
529503	14PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	70 °C
529529	14PAR38/LED/830/F25/DIM/ULW/120V FB 6/1	70 °C
529537	14PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	70 °C
529545	14PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	70 °C
529552	14PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	70 °C
529594	14PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	70 °C
529602	14PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	70 °C
529610	14PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	70 °C
529628	12PAR38/LED/827/F25/DIM/ULW/120V 6/1FB	66 °C
529636	12PAR38/LED/830/F25/DIM/ULW/120V 6/1FB	66 °C
529644	12PAR38/LED/840/F25/DIM/ULW/120V 6/1FB	66 °C
529651	12PAR38/LED/850/F25/DIM/ULW/120V 6/1FB	66 °C
529669	12PAR38/LED/827/F40/DIM/ULW/120V 6/1FB	66 °C
529677	12PAR38/LED/830/F40/DIM/ULW/120V 6/1FB	66 °C
529685	12PAR38/LED/840/F40/DIM/ULW/120V 6/1FB	66 °C
529693	12PAR38/LED/850/F40/DIM/ULW/120V 6/1FB	66 °C
474676	14PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	80 °C
474684	14PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	80 °C

Order Code	Full Product Name	T-Case Maximum (Nom)
474692	12PAR38/LED/835/F25/GL/DIM FB 1PK 6/1	75 °C
474700	12PAR38/LED/835/F40/GL/DIM FB 1PK 6/1	75 °C
470872	17PAR38/EC/F25/940/DIM/120V 6/1	90 °C
470880	17PAR38/EC/F40/940/DIM/120V 6/1	90 °C
534859	16.5PAR38/PER/930/F25/DIM/120V 6/1FB T20	90 °C
534867	16.5PAR38/PER/930/F40/DIM/120V 6/1FB T20	90 °C
534875	16.5PAR38/PER/927/F25/DIM/120V 6/1FB T20	90 °C
534883	16.5PAR38/PER/927/F40/DIM/120V 6/1FB T20	90 °C
534586	36PAR38/PER/830/S15/ND/120V 6/1FB	90 °C
534594	36PAR38/PER/830/F25/ND/120V 6/1FB	90 °C
534602	33PAR38/PER/830/S15/DIM/120V 6/1FB	90 °C
534610	33PAR38/PER/830/F25/DIM/120V 6/1FB	90 °C
534628	33PAR38/PER/830/S15/DIM/120V B 6/1FB	90 °C
534636	33PAR38/PER/830/F25/DIM/120V B 6/1FB	90 °C





ES



## Attractive, dimmable LED alternative to popular incandescents.

### A-Shape LED

Philips A-shape Dimmable LED lamps are the smart LED alternative to standard incandescents. The unique lamp design provides omi-directional light with excellent dimming performance.

#### Benefits

- 12.5W and 8W A19 lamps are ENERGY STAR<sup>®</sup> qualified
- Long life properties-- lowers maintenance costs by reducing re-lamp frequency
- Will not fade colors, avoids inventory spoilage
- Contains no mercury
- Emits virtually no UV/IR light in the beam
- 3-year or 5-year limited warranty depending upon operating hours

#### Features

- 12.5W A19, 8W A19 and 17W A21 versions available
- Smooth dimming to 10% of full light levels\*
- Remote phosphor (yellow) disappears when energized to create even, soft white light
- 25,000-hour rated average life<sup>+</sup>
- Instant-on light
- <sup>+</sup>Dimmable when using leading edge dimmers (see Philips Website: [www.philips.com/ledtechguide](http://www.philips.com/ledtechguide) for compatible leading edge dimmers.)
- <sup>+</sup>Rated average life based on engineering testing and probability analysis.

## A-Shape LED

### Application

- Ideal for decorative and ambient lighting in retail outlets, hotels, restaurants, multi-unit residences and government buildings.

### Versions



E26 A21 Frosted



E26 A19 Frosted



E26 A19 Frosted



E26 A19 Frosted



E26 A19 Frosted



E26 A19



E26 A21



Single Contact Medium Screw A19  
(A19) Frosted

## A-Shape LED

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Energy Efficiency Label (EEL)
479899	16A21/PER/830/P/E26/DIM 6/1FB	-	-
531756	18A21/LED/950/P/E26/ND 4/6FFP T20	-	-
479997	18A21/LED/950/P/E26/ND 6/1FB T20	-	-
531764	18A21/LED/950/P/E26/ND 4/2FB T20	-	-
479469		-	-
479485		-	-
479576	9.5A19/PER/827-22/P/E26/WG 4/4BB	-	-
532985	5.5A19/PER/830/P/E26/DIM 6/1FB	-	-
479428		-	-
479444		-	-
478644	8.5A19/PER/850/CL/G/DIM 6/1CT	-	-
478883	6G25/PER/850/FR/G/DIM 6/1CT	-	-
548214	6.5A19/LED/827/FR/P/ND 4/2FB	-	-
461145	6.5A19/LED/827/FR/P/ND 4/4FB	-	-
548222	10A19/LED/827/FR/P/ND 4/2FB	-	-

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Energy Efficiency Label (EEL)
461129	10A19/LED/827/FR/P/ND 4/4FB	-	-
469205	10A19/LED/827/FR/P/ND 4/6FB	-	-
462184	5.5A19/LED/850/FR/P/ND 4/2FB	-	-
461160	5.5A19/LED/850/FR/P/ND 4/4FB	-	-
548230	9A19/LED/850/FR/P/ND 4/2FB	-	-
461137	9A19/LED/850/FR/P/ND 4/4FB	-	-
543033	9A19/LED/850/FR/P/ND 4/6FB	-	-
462969	11A19/LED/827/FR/P/ND 4/2FB	-	-
542944	11A19/LED/827/FR/P/ND 4/4FB	-	-
461961	14A19/LED/827/FR/P/ND 4/2FB	-	-
542950	14A19/LED/827/FR/P/ND 4/4FB	-	-
463000	10A19/LED/850/FR/P/ND 4/2FB	-	-
542968	10A19/LED/850/FR/P/ND 4/4FB	-	-
548248	12.5A19/LED/850/FR/P/ND 4/2FB	-	-
542976	12.5A19/LED/850/FR/P/ND 4/4FB	-	-

## Controls and Dimming

Order Code	Full Product Name	Dimmable
455600	8A19/LED/850 ND 120V	No
459164	18A21/LED/827 3WAY ND 120V 6/1	No
463307	BC8A19/LED/BLUE/ND 120V 6/1	No
464965	9A19/LED/827-25-22/ND SSWG 120V 6/1	No
464973	9A19/LED/850/ND SSDL 120V 6/1	No
464957	9.5A19/LED/827-50-22/ND SSCC 120V 6/1	No
479963	9A19/LED/927/P/E26/ND 6/1FB T20	No
531798	9A19/LED/927/P/E26/ND 4/4FB T20	No
531822	9A19/LED/927/P/E26/ND 4/6FFP T20	No
479971	9A19/LED/950/P/E26/ND 6/1FB T20	No
531806	9A19/LED/950/P/E26/ND 4/4FB T20	No
479989	18A21/LED/927/P/E26/ND 6/1FB T20	No
531772	18A21/LED/927/P/E26/ND 4/2FB T20	No
531848	18A21/LED/927/P/E26/ND 4/6FFP T20	No
479881	16A21/PER/827/P/E26/DIM 6/1FB	Yes
479899	16A21/PER/830/P/E26/DIM 6/1FB	Yes
531756	18A21/LED/950/P/E26/ND 4/6FFP T20	No
479997	18A21/LED/950/P/E26/ND 6/1FB T20	No
531764	18A21/LED/950/P/E26/ND 4/2FB T20	No
479469		Yes
479485		Yes
479576	9.5A19/PER/827-22/P/E26/WG 4/4BB	Yes
532985	5.5A19/PER/830/P/E26/DIM 6/1FB	Yes

Order Code	Full Product Name	Dimmable
479428		Yes
479444		Yes
478644	8.5A19/PER/850/CL/G/DIM 6/1CT	Yes
478883	6G25/PER/850/FR/G/DIM 6/1CT	Yes
548214	6.5A19/LED/827/FR/P/ND 4/2FB	No
461145	6.5A19/LED/827/FR/P/ND 4/4FB	No
548222	10A19/LED/827/FR/P/ND 4/2FB	No
461129	10A19/LED/827/FR/P/ND 4/4FB	No
469205	10A19/LED/827/FR/P/ND 4/6FB	No
462184	5.5A19/LED/850/FR/P/ND 4/2FB	No
461160	5.5A19/LED/850/FR/P/ND 4/4FB	No
548230	9A19/LED/850/FR/P/ND 4/2FB	No
461137	9A19/LED/850/FR/P/ND 4/4FB	No
543033	9A19/LED/850/FR/P/ND 4/6FB	No
462969	11A19/LED/827/FR/P/ND 4/2FB	No
542944	11A19/LED/827/FR/P/ND 4/4FB	No
461961	14A19/LED/827/FR/P/ND 4/2FB	No
542950	14A19/LED/827/FR/P/ND 4/4FB	No
463000	10A19/LED/850/FR/P/ND 4/2FB	No
542968	10A19/LED/850/FR/P/ND 4/4FB	No
548248	12.5A19/LED/850/FR/P/ND 4/2FB	No
542976	12.5A19/LED/850/FR/P/ND 4/4FB	No

## Operating and Electrical

## A-Shape LED

Order Code	Full Product Name	Input Frequency	Wattage Equivalent	Power (Rated) (Nom)
455600	8A19/LED/850 ND 120V	60 Hz	60 W	8 W
459164	18A21/LED/827 3WAY ND 120V 6/1	60 Hz	100 W	18 W
463307	BC8A19/LED/BLUE/ND 120V 6/1	60 Hz	60 W	8 W
464965	9A19/LED/827-25-22/ND SSWG 120V 6/1	50 to 60 Hz	60 W	-
464973	9A19/LED/850/ND SSDL 120V 6/1	50 to 60 Hz	60 W	-
464957	9.5A19/LED/827-50-22/ND SSSC 120V 6/1	60 Hz	60 W	9.5 W
479963	9A19/LED/927/P/E26/ND 6/1FB T20	60 Hz	60 W	9 W
531798	9A19/LED/927/P/E26/ND 4/4FB T20	60 Hz	60 W	9 W
531822	9A19/LED/927/P/E26/ND 4/6FFP T20	60 Hz	60 W	9 W
479971	9A19/LED/950/P/E26/ND 6/1FB T20	60 Hz	60 W	9 W
531806	9A19/LED/950/P/E26/ND 4/4FB T20	60 Hz	60 W	9 W
479989	18A21/LED/927/P/E26/ND 6/1FB T20	60 Hz	100 W	18 W
531772	18A21/LED/927/P/E26/ND 4/2FB T20	60 Hz	100 W	18 W
531848	18A21/LED/927/P/E26/ND 4/6FFP T20	60 Hz	100 W	18 W
479881	16A21/PER/827/P/E26/DI M 6/1FB	60 Hz	100 W	16 W
479899	16A21/PER/830/P/E26/DI M 6/1FB	60 Hz	100 W	16 W
531756	18A21/LED/950/P/E26/ND 4/6FFP T20	60 Hz	100 W	18 W
479997	18A21/LED/950/P/E26/ND 6/1FB T20	60 Hz	100 W	18 W
531764	18A21/LED/950/P/E26/ND 4/2FB T20	60 Hz	100 W	18 W
479469		60 Hz	75 W	12.2 W
479485		60 Hz	100 W	16 W
479576	9.5A19/PER/827-22/P/E26/WG 4/4BB	60 Hz	60 W	9.5 W
532985	5.5A19/PER/830/P/E26/DI M 6/1FB	60 Hz	40 W	5.5 W

Order Code	Full Product Name	Input Frequency	Wattage Equivalent	Power (Rated) (Nom)
479428		60 Hz	40 W	5 W
479444		60 Hz	60 W	8.8 W
478644	8.5A19/PER/850/CL/G/DI M 6/1CT	50 to 60 Hz	60 W	8.5 W
478883	6G25/PER/850/FR/G/DIM 6/1CT	50 to 60 Hz	60 W	6 W
548214	6.5A19/LED/827/FR/P/ND 4/2FB	60 Hz	40 W	6.5 W
461145	6.5A19/LED/827/FR/P/ND 4/4FB	60 Hz	40 W	6.5 W
548222	10A19/LED/827/FR/P/ND 4/2FB	60 Hz	60 W	10 W
461129	10A19/LED/827/FR/P/ND 4/4FB	60 Hz	60 W	10 W
469205	10A19/LED/827/FR/P/ND 4/6FB	60 Hz	60 W	10 W
462184	5.5A19/LED/850/FR/P/ND 4/2FB	60 Hz	40 W	5.5 W
461160	5.5A19/LED/850/FR/P/ND 4/4FB	60 Hz	40 W	5.5 W
548230	9A19/LED/850/FR/P/ND 4/2FB	60 Hz	60 W	9 W
461137	9A19/LED/850/FR/P/ND 4/4FB	60 Hz	60 W	9 W
543033	9A19/LED/850/FR/P/ND 4/6FB	60 Hz	60 W	9 W
462969	11A19/LED/827/FR/P/ND 4/2FB	60 Hz	75 W	11 W
542944	11A19/LED/827/FR/P/ND 4/4FB	60 Hz	75 W	11 W
461961	14A19/LED/827/FR/P/ND 4/2FB	60 Hz	100 W	14 W
542950	14A19/LED/827/FR/P/ND 4/4FB	60 Hz	100 W	14 W
463000	10A19/LED/850/FR/P/ND 4/2FB	60 Hz	75 W	10 W
542968	10A19/LED/850/FR/P/ND 4/4FB	60 Hz	75 W	10 W
548248	12.5A19/LED/850/FR/P/N D 4/2FB	60 Hz	100 W	12.5 W
542976	12.5A19/LED/850/FR/P/N D 4/4FB	60 Hz	100 W	12.5 W

## General Information



Job Name/Title: \_\_\_\_\_ Catalog Number \_\_\_\_\_  
Contractor: \_\_\_\_\_ Notes: \_\_\_\_\_

dnq - as invoice dated back to 2015

TYPE

## HID Replacement LED Retrofits POST TOP LIGHTS



### Featuring the Latest Technology in Thermal Management, Optics and LEDs

Topaz's post top lights are an advanced alternative to traditional acorn, globe or bollard HID lighting. Designed to the highest standard, these lamps offer maximum efficiency while providing the uppermost quality of light. Suitable for both outdoor and indoor applications, they offer improved quality of light compared to high pressure sodium and metal halide light sources and greatly reduce the cost of ownership through minimal maintenance, lower utility costs and disposal issues.

### FEATURES

- Ballast bypass model
- Transient/surge protection, 6kV
- Suitable for enclosed fixture\*\*\*
- Lamps designed to produce at least 70% of initial light output after 50,000 hours
- Mercury and UV free, RoHS compliant
- Base up or base down, horizontal and universal operating positions

### APPLICATIONS

- For use in commercial indoor and outdoor settings such as acorns, post tops and high bay fixtures







## MR16 LED

6.6MR16/F25/3000 DIM 12V 10/1

Philips MR16 Dimmable LED Lamps provide ambient level light to illuminate hard to maintain applications. Increased transformer compatability allows for operation on a wider range of transformers. Available in dimmable and non-dimmable versions, these lamps are ideal for track and open recessed fixtures in retail, hospitality and residential spaces.

**APPROVED**

OTHER

TYPI

### Product data

#### • General Information

Cap-Base	GU5.3 [ GU5.3]
Bulb Shape	MR16 [ 2inch/50mm]
Nominal Lifetime (Nom)	25000 h
Switching Cycle	50000X
Technical Type	6.6-35W

#### • Light Technical

Color Code	830 [ CCT of 3000K]
Beam Angle (Nom)	25 °
Light Distribution	25D [ Medium beam]
Initial lumen (Nom)	395 lm
Luminous Flux (Rated) (Nom)	395 lm
Luminous Intensity (Nom)	1800 cd
Color Designation	White (WH)
Rated Beam Angle	25 °
Correlated Color	3000 K
Temperature (Nom)	
Luminous Efficacy (rated) (Nom)	64 lm/W
Color Consistency	<6
Color Rendering Index (Nom)	80
LLMF At End Of Nominal Lifetime (Nom)	70 %
Luminous Flux In 90° Cone (Rated)	395 lm

#### • Operating and Electrical

Input Frequency	60 Hz
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Power (Rated) (Nom)	6.6 W
Lamp Current (Nom)	800 mA
Wattage Equivalent	35 W
Starting Time (Max)	0.5 s
Warm Up Time To 60% Light (Nom)	0.5 s
Power Factor (Nom)	0.7
Voltage (Nom)	12 V

#### • Temperature

T-Case Maximum (Nom)	100 °C
----------------------	--------

#### • Controls and Dimming

Dimmable	Yes
----------	-----

#### • Approval and Application

Suitable For Accent Lighting	Yes
Energy Efficiency Label (EEL)	Not applicable
Energy Consumption kWh/1000 h	7 kWh

#### • Product Data

Order product name	6.6MR16/F25/3000 DIM 12V
Order code	454785
Numerator - Quantity Per Pack	1
Numerator - Packs per outer box	10
Material Nr. (12NC)	929001151804

**PHILIPS**





The comfort of **softer  
and more appealing  
light** with warm glow



## Philips LED Lamps with warm glow effect

---

Create a warm, relaxing ambiance using Philips LED lamps with warm glow effect. Cutting-edge technology reduces the lamp's color temperature to a warm glow when dimmed, taking LED lamp dimming to new levels. The A19 and G25 feature a new omni-directional prism that creates the look and feel of a filament, with a uniform lighting effect for use in most lighting fixtures.

### LED benefits with the ambiance of incandescent

- Select A19 and Reflector lamps are suitable for use in enclosed fixtures
- Traditional lamp shape with smooth dimming to <10%
- A19, R20, BR30 and BR40 are ENERGY STAR® certified
- Color temperature ranges from 2700K to 2200K as the lamps are dimmed
- 25,000 hour ENERGY STAR® qualified life
- A19 and G25 clear lamps feature all-around light<sup>1</sup>
- For warranty information visit [www.philips.com/warranties](http://www.philips.com/warranties)

1. This lamp provides a measured light distribution of 300°. In use, this lamp gives the appearance of light all-around (360°).
2. Dims from 2700K to 2200K along the black body line, while maintaining CRI.
3. Dimmable when using leading and trailing edge dimmers. (See <http://www.philips.com/ledtechguide> for compatible dimmers.)

### Easy to experience

- Incandescent-like dimming experience<sup>2</sup>
- Long Life, can reduce maintenance costs
- Enjoy the energy-savings of LEDs without sacrificing light quality
- Dims to a smooth, even glow<sup>3</sup>
- Maintains CRI throughout dimming range



**APPROVED**OTHE  
TYPI

# Philips LED Lamps with warm glow effect

## Ordering, Electrical and Technical Data Subject to change without notice

Light dims to a warm glow, similar to incandescent.

Product Number	Model Number	Order Code	Lamp Watts <sup>1</sup>	Volts	Description	Enclosed Fixture	Lamp Type	Base	Life (Hrs.) <sup>2</sup>	Approx. Lumens	CRI	Color Temp. (K)	MOL (in.)
<b>Standard Incandescent A19 40W ENERGY STAR® Equivalent<sup>3</sup></b>													
■ 45331-6	9290011176	6.5A19/2200-2700 DIM	6.5	120V	A19 Dimmable	Yes	A19	Med.	25,000	450	80	2700-2200	4.3
<b>Standard Incandescent A19 60W ENERGY STAR® Equivalent<sup>3</sup></b>													
■ 45582-4	9290011345	9.5A19/LED/827-22 DIM	9.5	120V	A19 Dimmable	Yes	A19	Med.	25,000	800	80	2700-2200	4.3
<b>Standard incandescent 75W ENERGY STAR® Equivalent<sup>3</sup></b>													
□ 45907-3	9290011839	14A21/LED/827-22 DIM 120V	14	120V	A21 Dimmable	No	A21	Med.	25,000	1100	80	2700	5.2
<b>Standard Incandescent 100W ENERGY STAR® Equivalent<sup>3</sup></b>													
□ 45911-5	9290011741	18A21/LED/827-22 DIM 120V	18	120V	A21 Dimmable	No	A21	Med.	25,000	1600	80	2700	5.2
<b>Standard Incandescent BR/R 65W/45W ENERGY STAR® Equivalent<sup>3</sup></b>													
■ 45697-9	9290011557	6R20/LED/827-22/DIM	6	120V	R20 Flood Dimmable	Yes	R20	Med.	25,000	450	80	2700-2200	3.97
■ 45704-4	9290011555	9BR30/LED/827-22/DIM	9	120V	BR30 Flood Dimmable	Yes	BR30	Med.	25,000	650	80	2700-2200	5.20
■ 45701-0	9290011558	9BR40/LED/827-22/DIM	9	120V	BR40 Flood Dimmable	Yes	BR40	Med.	25,000	650	80	2700-2200	6.38
<b>Standard Halogen MR16 35W ENERGY STAR® Equivalent<sup>3</sup></b>													
45453-8	9290011278	6.5MR16/F25/2700-2200 DIM	6.5	12V	MR16 Flood 25° Dimmable	No	MR16	GU5.3	25,000	410	80	2700-2200	1.9
45454-6	9290011279	6.5MR16/F35/2700-2200 DIM	6.5	12V	MR16 Flood 35° Dimmable	No	MR16	GU5.3	25,000	410	80	2700-2200	1.9
<b>Standard Halogen PAR16 50W ENERGY STAR® Equivalent<sup>3</sup></b>													
■ 45765-5	9290011565	5GU10/LED/827-22/F25 DIM	5	120V	PAR16 Flood 25° Dimmable	No	PAR16	GU10	25,000	400	80	2700-2200	2.3
<b>Decoratives</b>													
<b>Standard Incandescent 25W Equivalent<sup>3</sup></b>													
■ 45723-4	9290011668	3.5B12/LED/827-22/E12/DIM	3.5	120V	Dimmable Blunt tip	No	B12	Cand.	15,000	180	80	2700	4.4
<b>Standard Incandescent 40W Equivalent<sup>3</sup></b>													
■ 45712-7	9290011670	4.5B12/LED/827-22/E12/DIM	4.5	120V	Dimmable Blunt tip	No	B12	Cand.	15,000	330	80	2700	4.4
■ 45719-2	9290011673	4.5B12/LED/827-22/E26/DIM	4.5	120V	Dimmable Blunt tip	No	B12	Med.	15,000	330	80	2700	4.4
■ 45721-8	9290011671	4.5BA12/LED/827-22/E12/DIM	4.5	120V	Dimmable Bent tip	No	BA12	Cand.	15,000	330	80	2700	4.4
■ 45818-2	9290011791	4.5BA12/LED/827-22/E26/DIM	4.5	120V	Dimmable Bent tip	No	BA12	Med.	15,000	330	80	2700	4.4
<b>Standard Incandescent 60W Equivalent<sup>3</sup></b>													
■ 45863-8	9290011822	7F15/LED/827-22/E26/DIM	7	120V	Dimmable Flame tip	No	F15	Med.	25,000	500	80	2700	4.4
■ 45866-1	9290011821	7B12/LED/827-22/E26/DIM	7	120V	Dimmable Blunt tip	No	B12	Med.	25,000	500	80	2700	4.4
□ 45869-5	9290011820	7B12/LED/827-22/E12/DIM	7	120V	Dimmable Blunt tip	No	B12	Cand.	25,000	500	80	2700	4.4
<b>Standard Incandescent 40W Equivalent<sup>3</sup></b>													
■ 45874-5	9290011815	7A19/LED/827-22/E26/DIM	7	120V	Dimmable Clear A19	No	A19	Med.	25,000	450	80	2700	4.5
□ 45877-8	9290011818	7A15/LED/827-22/E26/DIM	7	120V	Dimmable Clear A15	No	A15	Med.	25,000	450	80	2700	4.5
■ 45880-2	9290011817	7G25/LED/827-22/E26/DIM	7	120V	Dimmable Clear Globe	No	G25	Med.	25,000	450	80	2700	4.5
<b>Standard Incandescent 60W Equivalent<sup>3</sup></b>													
■ 45883-6	9290011816	10A19/LED/827-22/E26/DIM	10	120V	Dimmable Clear A19	No	A19	Med.	25,000	800	80	2700	4.5
■ 45934-7	9290011898	10G25/LED/827-22/E26/DIM	10	120V	Dimmable Clear Globe	No	G25	Med.	25,000	800	80	2700	4.5

1. This wattage should be used to determine the maximum number of LED lamps for a given transformer, not the Lamp Watts.
  2. Life based on engineering testing and probability analysis.
  3. All Philips LED Lamp equivalencies for light output are based upon the ENERGY STAR® guidelines as detailed in the ENERGY STAR Lamps V1.1 September 2014 specification.
- This lamp is ENERGY STAR® Certified.  
□ ENERGY STAR® Test in progress.

**Notes**

These lamps comply with Part 15 of the FCC Rules. Operation is subject to the following 2 conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This class B digital apparatus complies with Canadian ICES-003.

**Warnings and Cautions**

- Suitable for use in damp locations.
- Do not use in outdoor fixtures.
- Not for use in totally enclosed luminaires.
- Before replacing, turn off power and let lamp cool to avoid electrical shock or burn.

**Caution**

Risk of electric shock—do not use where directly exposed to water.

# Philips LED Lamps with warm glow effect

## Shipping Data (Subject to change without notice)

Light dims to a warm glow, similar to incandescent.

Product Number	SKU UPC (0-46677)	Outer Bar Code (5-00-46677)	Case Qty.	Case Weight (lbs.)	Case Cube (cu. Ft.)	Pallet Qty	SKUs per Layer	Layers High	SKU Dimensions (W x D x H) (in.)	Case Dimensions (W x D x H) (in.)	Pallet Dimensions (W x D x H) (in.)
<b>Standard Incandescent A19 40W ENERGY STAR® Equivalent</b>											
45331-6	45331-2	45331-7	6	1.19	0.13	1584	264	6	2.4 x 2.4 x 4.9	7.7 x 5.3 x 5.5	47.2 x 39.4 x 38.8
<b>Standard Incandescent A19 60W ENERGY STAR® Equivalent</b>											
45332-4	45332-9	45332-4	6	1.19	0.13	1584	264	6	2.4 x 2.4 x 4.9	7.7 x 5.3 x 5.5	47.2 x 39.4 x 38.8
<b>Standard incandescent 75W ENERGY STAR® Equivalent</b>											
45907-3	45907-9	45907-4	6	2.82	0.179	1224	204	6	2.7 x 2.7 x 5.4	8.6 x 5.9 x 6.1	47.2 x 39.4 x 42.6
<b>Standard Incandescent 100W ENERGY STAR® Equivalent</b>											
45911-5	45911-6	45911-1	6	2.82	0.179	1224	204	6	2.7 x 2.7 x 5.4	8.6 x 5.9 x 6.1	47.2 x 39.4 x 42.6
<b>Standard Incandescent BR/R 65W/45W ENERGY STAR® Equivalent</b>											
45697-9	45697-9	45697-4	6	0.82	0.114	2340	234	10	2.4 x 2.4 x 3.9	8.1 x 5.4 x 4.5	48 x 40 x 45.9
45704-4	45704-4	45704-9	6	2.79	0.31	840	120	7	3.6 x 3.6 x 5.2	11.4 x 7.8 x 6	48 x 40 x 42.8
45701-0	45701-3	45701-8	6	3.26	0.57	432	72	6	4.6 x 4.6 x 6.3	14.4 x 9.8 x 7	48 x 40 x 42.8
<b>Standard Halogen MR16 35W ENERGY STAR® Equivalent</b>											
45453-8	45453-1	45453-6	10	0.61	0.104	6110	470	13	1.77 x 1.77 x 2.17	9.3 x 4.0 x 2.8	47.2 x 39.4 x 42.6
45454-6	45454-8	45454-3	10	0.61	0.104	6110	470	13	1.77 x 1.77 x 2.17	9.3 x 4.0 x 2.8	47.2 x 39.4 x 42.6
<b>Standard Halogen PAR16 50W ENERGY STAR® Equivalent</b>											
45765-5	45765-5	45765-0	10	1.5	0.08	4560	380	12	2.0 x 2.0 x 2.4	10.5 x 4.4 x 3.0	47.2 x 39.4 x 42.3

## Decoratives

<b>Standard Incandescent 25W Equivalent</b>											
45723-4	45723-5	45723-0	10	1.7	0.133	2730	390	7	2.0 x 2.0 x 4.5	10.5 x 4.3 x 5.1	47.2 x 39.4 x 41.7
<b>Standard Incandescent 40W Equivalent</b>											
45712-7	45712-9	45712-4	10	1.7	0.133	2730	390	7	2.0 x 2.0 x 4.5	10.5 x 4.3 x 5.1	47.2 x 39.4 x 41.7
45719-2	45719-8	45719-3	10	1.7	0.133	2730	390	7	2.0 x 2.0 x 4.5	10.5 x 4.3 x 5.1	47.2 x 39.4 x 41.7
45721-8	45721-1	45721-6	10	1.92	0.110	2900	580	5	1.6 x 1.6 x 5.7	8.4 x 3.6 x 6.3	47.2 x 39.4 x 37.4
45818-2	45818-8	45818-3	10	1.92	0.110	2900	580	5	1.6 x 1.6 x 5.7	8.4 x 3.6 x 6.3	47.2 x 39.4 x 37.4
<b>Standard Incandescent 60W Equivalent</b>											
45863-8	45863-8	45863-3	8	2.4	0.225	1440	240	6	2.0 x 2.0 x 4.8	12.2 x 5.8 x 5.5	47.4 x 39.4 x 39.0
45866-1	45866-9	45866-4	10	2.2	0.133	2730	390	7	2.0 x 2.0 x 4.5	10.5 x 4.3 x 5.1	47.2 x 39.4 x 41.7
45869-5	45869-0	45869-5	10	2.2	0.133	2730	390	7	2.0 x 2.0 x 4.5	10.5 x 4.3 x 5.1	47.2 x 39.4 x 41.7
<b>Standard Incandescent 40W Equivalent</b>											
45874-5	45874-4	45874-9	10	3.4	0.324	1050	150	7	2.4 x 2.4 x 4.7	14.8 x 7.0 x 5.4	47.2 x 39.4 x 43.2
45877-8	45877-5	45877-0	10	2.31	0.207	1680	210	8	2.0 x 2.0 x 3.9	12.8 x 6.2 x 4.5	47.2 x 39.4 x 41.7
45880-2	45883-6	45883-1	10	1.8	0.260	840	120	7	2.8 x 2.8 x 4.7	10.8 x 7.7 x 5.4	47.2 x 39.4 x 43.2
<b>Standard Incandescent 60W Equivalent</b>											
45883-6	45880-5	45880-0	10	3.4	0.324	1050	150	7	2.4 x 2.4 x 4.7	14.8 x 7.0 x 5.4	47.2 x 39.4 x 43.2
45934-7	45934-5	45934-0	6	2.5	0.324	612	102	6	3.1 x 3.1 x 5.1	11.7 x 8.4 x 5.7	47.2 x 39.4 x 40.2

See notes on previous page.



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Philips Lighting, North America Corporation  
200 Franklin Square Drive, Somerset, NJ 08873  
Tel. 855-486-2216

Philips Lighting Canada Ltd.  
281 Hillmount Rd, Markham, ON, Canada L6C 2S3  
Tel. 800-668-9008





# LED BOLLARD/ POST TOP RETROFIT LAMP

12W & 20W

The post top retrofit lamp is a convenient, easy to install LED solution for acorn fixtures, globe fixtures and some bollards. MaxLED's retrofit lamp utilizes premium components to ensure reliable performance in a variety of applications. The Post Top retrofit lamp offers improved quality of light compared to traditional high pressure sodium and metal halide lamps.

PROJECT NAME

CATALOG NUMBER

NOTES

FIXTURE  
TYPE

## FEATURES:

**APPROVED**

TYPE

OTH

- 12 watts, 20 watts
- 50,000 hour life
- Universal voltage
- CRI: >80
- Non-dimming
- 5 year limited warranty
- Operates in ambient temperature of -4°F to 140°F
- Saves more than 73 percent in energy and operating costs
- UL listed for dry locations & damp locations
- Universal burn position
- Suitable for use in enclosed luminaires
- E26 base

## APPLICATIONS:

- Bollard lights
- Post top lights



**BALLAST MUST BYPASS IN THE  
FIXTURE BEFORE INSTALLING THE  
LAMP**

Lamp Ordering Information:

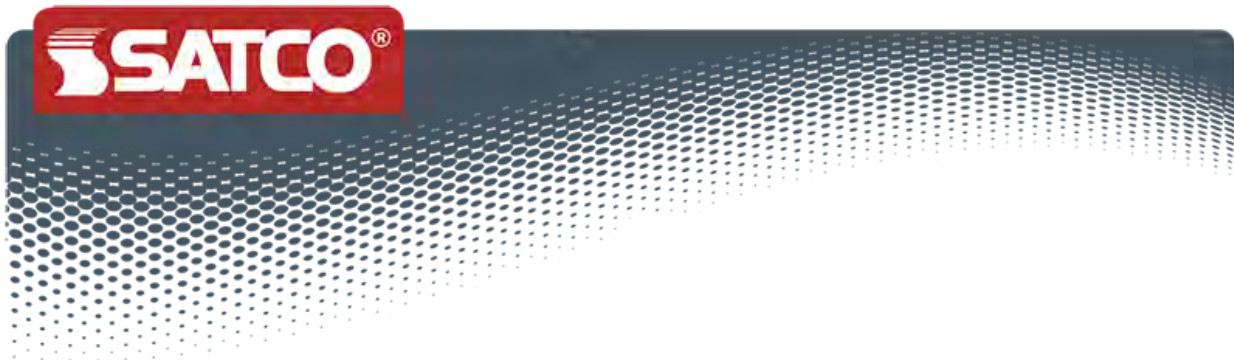
91

Watts	Order Number	Model Number	Voltage	Lumens	Lamp Life (Hrs.)	Dimensions (W"xH")	CCT
12	73447	SKPT12LEDU30E26	120-277v	1100	50,000	2.75 x 6.45	3000K
12	73448	SKPT12LEDU50E26	120-277v	1100	50,000	2.75 x 6.45	5100K
20	73449	SKPT20LEDU30E26	120-277v	1800	50,000	2.75 x 7.64	3000K
20	73450	SKPT20LEDU50E26	120-277v	1800	50,000	2.75 x 7.64	5100K

MAX14046

Lighting layouts and spacing criteria are available upon request





S9394

**APPROVED**

TYPF  
DLC

54W/LED/HID/5000K/100-277V  
54 watt - LED HID Replacement; 5000K; Mogul extended base;  
100-277 volts

#### Features

- High Lumen Omni-directional LED for Industrial / Commercial applications
- Replaces HID, CFL, and Incandescent
- Ballast by-pass - Direct wire only 100V - 277V
- UL approved for totally enclosed fixtures
- Damp location - IP65 rated
- For outdoor & indoor use
- DLC Listed
- Base up or base down operation (high/low bay and post top)
- Emits no UV light / Contains no mercury (Hg)
- 5 year limited warranty
- Classified under UL 1598C

#### Additional Technical Specifications

- Power Factor >0.9
- Operating temperature range -20°C to 65°C
- Operating Frequency 50-60Hz
- Working Voltage AC90-305V

Minimum Compartment Size		
Length	Width	Depth
17.3 inch	9.25 inch	9.25 inch

Optional accessory: In-line surge protector [80-929](#)

This item has been discontinued.  
Possible replacement:

- [S29394](#)



S9394

Item Number	Product Line	UPC	Input Voltage	Watts	Incandescent Equivalent	Fluorescent Equivalent	HID Equivalent
S9394	Hi-Pro	045923093944	100 - 277	54	300W	85W	250W

Base	ANSI Base	Lamp Code		Dimmable/Non-Dimmable	Finish	MOL In Inches	MOD In Inches	Initial Lumens
Mogul Extended	EX39	54W/LED/HID/5000K/100-277V		Non-Dimmable	White	10-3/4"	3.69"	7200
Average Rated Hours	Kelvin Temp	Color	CRI	Beam Spread Deg	Operating Temperature		Pack	Package Type
50000	5000	Natural Light	80+	300	-20C (-4F) to a maximum of +65C (+149F)		12	Box
CEC Status	DLC ID:	RoHS Compliant	UL or ETL Listed	UL Classification	Warranty	Status	Suggested Substitute	
Lawful for sale in California	P7RMM9YA; PMM9NX2Z <a href="#">DLC Search</a>	Yes	Yes	cULus - Damp Location Rated	<a href="#">5 Year Limited</a>	Discontinued	<a href="#">S29394</a>	



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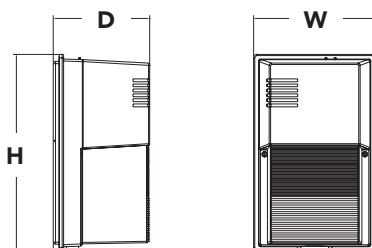
## TWS LED LED Wall Luminaire

DNQ - DID NOT  
QUALIFY FOR  
EFFICACY

TYPE

### Specifications

<b>Width:</b>	6-3/4" (17.2 cm)
<b>Height:</b>	10-7/8" (27.7 cm)
<b>Depth:</b>	5-5/16" (13.5 cm)
<b>Weight:</b>	3.19 lbs (1.45 kg)



Catalog  
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

### Introduction

The popular TWS luminaire is now available with long-lasting, energy-efficient LED technology. Featuring a classic dayform, the TWS LED offers a traditional appearance and is powered by advanced LEDs.

The TWS LED luminaire is powerful yet energy efficient, capable of replacing up to a 70W HPS or 100W MH wall pack while saving up to 80% in energy costs. With long-life LEDs, the TWS LED eliminates frequent lamp and ballast replacements associated with traditional technologies.

### Ordering Information

EXAMPLE: TWS LED P1 50K 120 PE

TWS LED					
Series	Performance Package	Color Temperature	Voltage	Control Options	Finish
TWS LED	P1 1476 lumens	50K 5000K <sup>1</sup>	120 120V <sup>2</sup>	PE Photoelectric cell, button type	(blank) Dark bronze

### Accessories

Ordered and shipped separately.

TWSWG

Wire Guard

### NOTES

- Corrected color temperature (CCT) shown is nominal per ANSI C78, 377-2008.
- 120V driver operates on 120V.

### FEATURES & SPECIFICATIONS

#### INTENDED USE

The TWS LED combines traditional wall pack design with high-output LEDs to provide an energy-efficient, low maintenance LED wall pack suitable for replacing up to 70W HPS or 100W MH fixtures. The traditional shape helps maintain building aesthetics when replacing only a portion of your building's wall packs. TWS LED is for outdoor applications such as personnel doors, loading areas, driveways and parking areas.

#### CONSTRUCTION

Back plate is die-cast aluminum. Front cover is impact-resistant polycarbonate which is fully gasketed. All electronics are protected in the upper housing. Housing is sealed against moisture and environmental contaminants.

#### FINISH

UV stabilized polycarbonate front cover has dark bronze color which provides superior resistance to corrosion and weathering and that can withstand extreme climate changes without cracking or peeling.

#### OPTICS

Protective polycarbonate lens covers the LEDs. Prismatic front cover and precision-molded reflector for superior uniformity and fixture spacing. Light engine is available in 5000K (70 min. CRI).

#### ELECTRICAL

Light engine consists of two high-powered, long-life, high-efficacy LEDs mounted on an internal aluminum heat sink to maximize heat dissipation and promote long life (L95/100,000 hours at 40°C). Driver and integral photocell operate at 120V and are fully enclosed in the upper housing. There are no user serviceable parts.

#### INSTALLATION

Back housing easily mounts to any recessed junction box. With all electronics in upper housing the open lower section makes wiring easy. Mount on any vertical surface. Not recommended in applications where a sprayed stream of water can come in direct contact with polycarbonate lens.

#### LISTINGS

UL Certified to US and Canadian safety standards for wet-location mounting higher than 4 feet off the ground.

Rated for -40°C to 40°C ambient temperature.

#### WARRANTY

5-year limited warranty. Complete warranty terms located at:  
[www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx).

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications are subject to change without notice.





**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**12/10/2019 12:59:18 PM**

**in**

**Case No(s). 19-1625-EL-EEC**

Summary: Application -Malone University and Ohio Power Company for approval of a special arrangement agreement with a mercantile customer electronically filed by Tanner Wolfram on behalf of Ohio Power Company