



Submission Process Overview for Hort V3.0

March 15th, 2023

Agenda

- Hort V3 Resources
- Timeline/Fees
- V3.0 Policy Refresher
- Submission Changes
 - Portal
 - Application Excel Form
 - Questionnaire
- Qualified Products List (QPL)

Introductions

Presenter



Aaron Feldman
Senior Technical Operations Analyst

Q&A Support



Kasey Holland
Technical Manager



Dave Ryan
Hort Lead Reviewer

Webinar Logistics

- Slides and webinar recording will be posted shortly after today's presentation [here](#)
- All attendees are muted, if you experience technical issues, please use the Chat feature to let us know

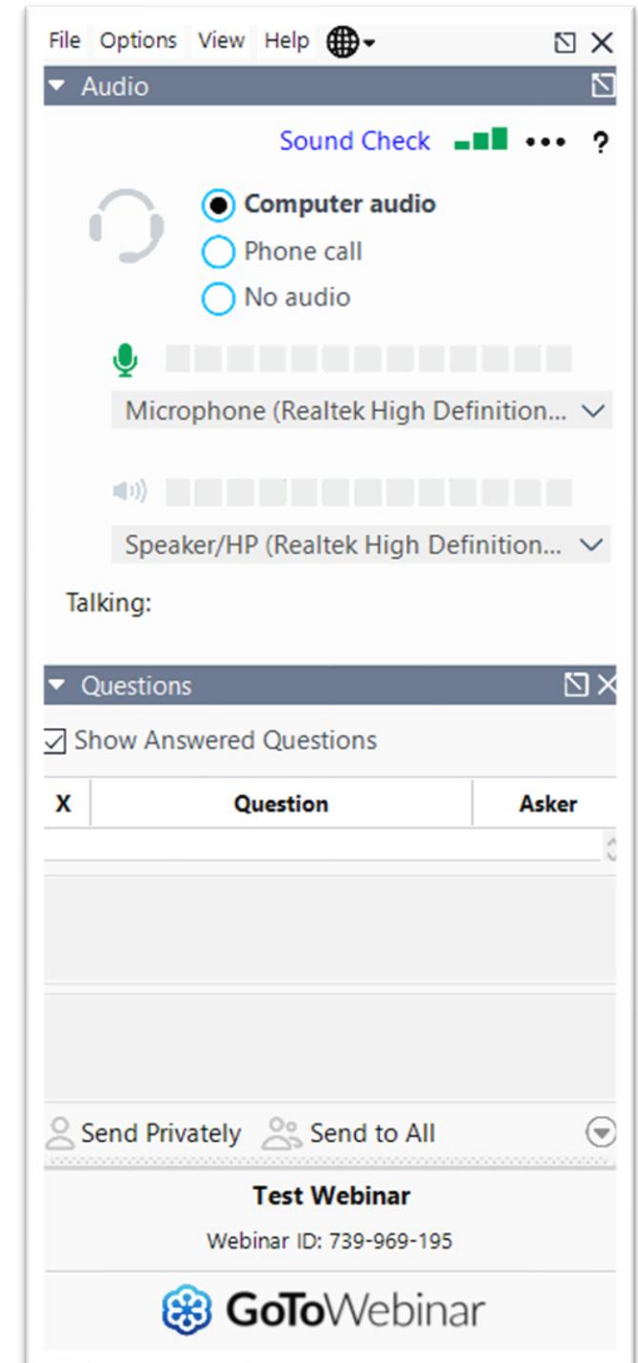
The screenshot shows the DLC website's 'On-Demand / Past Events' page. The navigation bar includes 'FIND PRODUCTS', 'ABOUT US', 'OUR WORK', 'RESOURCES', 'NEWS & EVENTS', 'JOIN US', a search icon, and a user profile for 'Lani Malapan'. The breadcrumb trail is 'Home / News & Events / On-Demand & Past Events'. The main content area is titled 'On-Demand / Past Events' and includes filters for 'WEBINARS' and 'FILTER BY YEAR'. Three event cards are displayed:

- Impacts of Outdoor Lighting**: Feb. 1st @ 11:30am HST. Categories: EVENT, LUNA, SSL, WEBINAR. Description: 'Together with the IES Honolulu Section, Hawaii Energy, and the International Dark Sky Association (IDA) the DLC is excited to'.
- Webinar: Final Release Hort V3.0 Technical Requirements**: Categories: EVENT, HORT, WEBINAR. Description: 'Join us as we provide an overview of the final release of Hort V3.0 Technical Requirements. We will discuss the timeline'.
- Webinar: Draft 2 Hort V3.0 Technical Requirements**: Categories: EVENT, HORT, WEBINAR. Description: 'This webinar will introduce submitters Draft 2 of Hort V3.0 Technical Requirements.'

The screenshot shows a chat window interface. The window title is 'Chat' and it shows a message from 'Me (to All - Entire Audience):'.

Questions and Answers

- Q&A will be held at the end of the webinar.
- But please enter your questions as they come up into the “Questions” pane in GoToWebinar.
 - Questions will be answered as they come in via the Questions pane
 - Some questions will be answered aloud (anonymously) at the end during the Q&A session



The screenshot displays the GoToWebinar interface with two panes open. The top pane is the 'Audio' settings window, which includes a 'Sound Check' indicator, radio buttons for 'Computer audio' (selected), 'Phone call', and 'No audio', a microphone selection dropdown set to 'Microphone (Realtek High Definition...)', and a speaker/HP selection dropdown set to 'Speaker/HP (Realtek High Definition...'. Below the audio settings is a 'Talking:' indicator.

The bottom pane is the 'Questions' window, which has a 'Show Answered Questions' checkbox checked. It features a table with columns for 'X', 'Question', and 'Asker'. The table is currently empty. At the bottom of the pane, there are buttons for 'Send Privately' and 'Send to All', and a dropdown menu. The webinar title 'Test Webinar' and ID 'Webinar ID: 739-969-195' are displayed, along with the GoToWebinar logo.

Hort V3 Resources

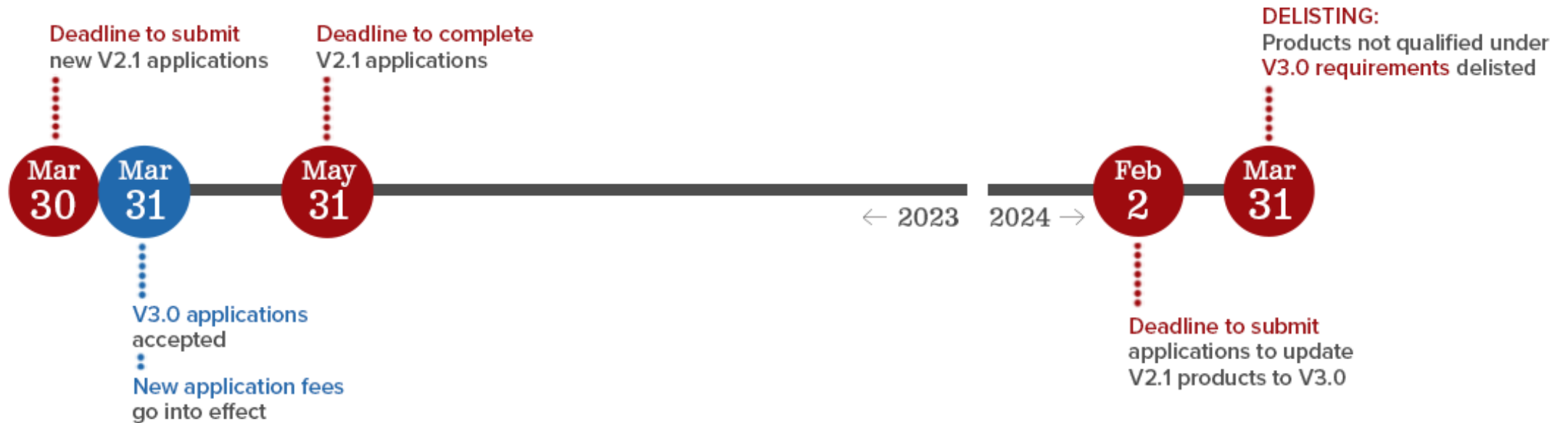
Hort V3 Resources

- [Hort V3.0 Technical Requirements](#)
- [Guidance for Submitting Horticultural Product Images](#)
- [Fees document](#)
- [Hort V3.0 Final Release Webinar](#)
- horticulture@designlights.org



Timeline/Fees

V2.1/V3.0 Timeline



Updating Listed Products from V2.1 to V3.0

- V2.1 products will NOT be automatically updated to V3.0
- All V2.1 products MUST submit updated application to V3.0
- Required information for update: product application information, controls, and product image
- If no action is taken, V2.1 products will be delisted even if they meet the V3.0 PPE threshold requirement



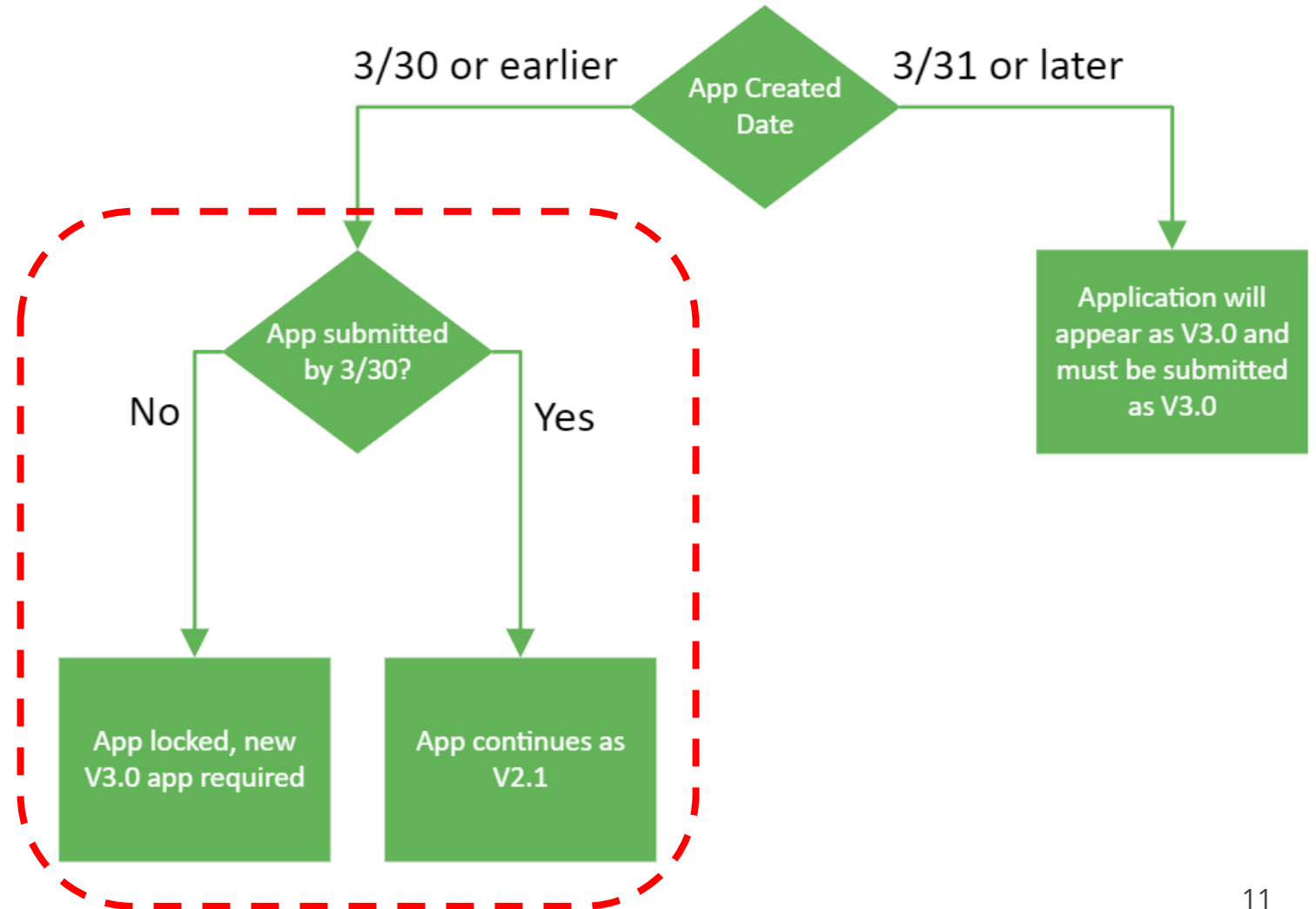
Horticultural Lighting

Browse the greenest horticultural lighting fixtures on the market to capture energy and cost savings for your facility.

[BROWSE QUALIFIED PRODUCTS](#)


Timeline Implications – Once V3.0 is live

**V2.1 applications
MUST be
submitted by 3/30
to process as V2.1**



Fees

- Details can be found [here](#)
- Starting 3/31 all new invoices (regardless if V2.1 or V3.0) will follow updated fee structure
- V2.1 to V3.0 update apps where testing is not required will be charged the “non-performance-affecting updates”
- Other fees are applied as noted if testing is required
- All V2.1 to V3.0 updates incur a review fee



Horticultural Technical Requirements
Application Fees

New application fees will go into effect for all Horticultural applications starting on March 31, 2023. This increase allows the DLC to maintain the rigorous level of evaluation and review that goes into each application.

Application Fees

Level 1 (Single Product) Applications	
Basic fixture* with one LED type, one driver, no fan, and no spectral tuning	\$1000
Additional LED type included in fixture (Q ₉₀ verification)	\$115
Additional driver available in fixture (lifetime & efficiency verification)	\$105
Internal fan included in fixture (lifetime verification)	\$45
Spectral tuning (per channel flux verification) per worst-case efficacy parent product	\$125
Active cooling (performance verification) per application	\$175

*A basic fixture does not include any additional features. An advanced product includes at least one of the following: more than one LED; more than one driver; fan; and/or spectral tuning abilities.

Level 2 (Family Grouping) Applications	
Each parent product	\$1000
Additional* LED type included in fixture (Q ₉₀ verification)	\$115
Additional* driver available in fixture (lifetime & efficiency verification)	\$105
Internal fan included in fixture (lifetime verification)	\$45
Spectral tuning (per channel flux verification) per worst-case efficacy parent product	\$125
Active cooling (performance verification) per application	\$175
Each additional family member (child) after the parent	\$35

*Each family application (or spectral subgroup, as applicable) includes at least one parent product and each additional worst-case LED type and driver included in the application. Multiple family codes cannot be included in the application. Multiple family codes cannot be included in the application.

Private Label Applications

Application fee for each parent* within an application	\$1000
Each additional family member (child) in the family	\$35

*Multiple families can be included in the same private label application. Multiple family codes cannot be included in the application.

Hort Application Fees | March 15, 2023

Update Application (Including Private Label Updates)	
Performance-affecting updates (per parent product)	\$750
*Additional LED type	\$115
*Additional driver	\$105
Internal fan	\$45
Spectral tuning (per channel) per worst-case efficacy parent product	\$125
Active cooling per application	\$175
Performance-affecting updates (per child product)	\$35
Additional child product added to family	\$35
Non-performance-affecting updates	\$500
TM-33 document review	\$100
Nomenclature updates	No fee

*For product families with multiple ambient temperatures, additional worst-case configurations may require testing and may be considered additional LED types or additional drivers.

Policy Refresher



Policy Refresher – New Efficacy Threshold

Table 1. DLC Horticultural Lighting Technical Requirements

Parameter, Attribute, or Metric	Requirement	Requirement Type	Method of Measurement and Evaluation
Photosynthetic Photon Flux (Φ_p or PPF) ($\mu\text{mol} \times \text{s}^{-1}$)	n/a	Reported	(ANSI/IES LM-79) 400-700 nm range, with 400-500 nm, 500-600 nm, and 600-700 nm bins reported alongside the total
Far-Red Photon Flux ($\Phi_{p,fr}$ or PFR) ($\mu\text{mol} \times \text{s}^{-1}$)	n/a	Reported	(ANSI/IES LM-79) 700-800 nm range
Photon Flux (P_{FBAR}) ($\mu\text{mol} \times \text{s}^{-1}$)	n/a	Reported (Optional)	(ANSI/IES LM-79) 280-800 nm range
Spectral Quantum Distribution (SQD) ($\mu\text{mol} \times \text{s}^{-1} \times \text{nm}^{-1}$)	n/a	Reported	(ANSI/IES LM-79) (ANSI/IES TM-33-18) 400-800 nm range
Photosynthetic Photon Intensity Distribution (I_p or PPID) ($\mu\text{mol} \times \text{s}^{-1} \times \text{sr}^{-1}$)	n/a	Reported	(ANSI/IES LM-79) (ANSI/IES TM-33-18) 400-700 nm range
Photosynthetic Photon Efficacy ^{1,2} (K_p or PPE) ($\mu\text{mol} \times \text{J}^{-1}$)	$\geq 22.30 \mu\text{mol} \times \text{J}^{-1}$	Required/Threshold	(ANSI/IES LM-79) 400-700 nm range
Photon Efficacy ($P_{E_{FBAR}}$) ($\mu\text{mol} \times \text{J}^{-1}$)	n/a	Reported (Optional)	(ANSI/IES LM-79) 280-800 nm range



NEW Efficacy Threshold

Policy Refresher – Product Application Information

- Single product may be listed in multiple Controlled Environments and Lighting Scheme
- Product image guidance available [here](#)

Table 2. Application Information Reporting Requirements

Controlled Environment ¹		Lighting Scheme ¹		Product Image and Dimensions ²	Requirement Type	Method of Measurement and Evaluation
		Position	Use Case			
Indoor	(Stacked)	Top light, intra-canopy, other (text)	Sole-source or Supplemental	All product submittals are required to include: <ul style="list-style-type: none"> • A representative image of the qualifying product or family • Product physical dimensions (in inches) 	Reported	Product specification sheet or supplemental materials
	(Non-stacked)					
Greenhouse		Top light, intra-canopy, other (text)	Supplemental			

Policy Refresher – Controllability

Parameter, Attribute, Metric		Requirement	Requirement Type	Method of Measurement, Evaluation
Dimming Capability	All replacement lamps	Products must be dimmable	Required	Product specification, minimum input wattage, default PPF
	All DC products			
	AC luminaires with PPF $\geq 350 \mu\text{mol} \times \text{s}^{-1}$			
	AC luminaires with PPF $< 350 \mu\text{mol} \times \text{s}^{-1}$	Report whether the product is dimmable or non-dimmable	Reported	
Dimming Range ²		Report: minimum input wattage, minimum PPF, default input wattage, default PPF	Reported	Report: dimming or control method designation to the product, connector, or transmission hardware ³
Dimming and Control Methods ²		Report: dimming or control method designation to the product, connector, or transmission hardware ³	Reported	
Integral Control Capabilities		N/A	Reported	Product spec sheet or supplemental documentation ¹

Report: dimming or control method designation to the product, connector, or transmission hardware³



Policy Refresher – Controllability

Acceptable terms
MUST be on
specification sheet
or supplemental
documentation

Table 4. Dimming and Control Method Designations to the Product

Control Type (as displayed on the QPL)	Definition	Acceptable Terms	
0-10V			
0-10V IEC 60929 Annex E			
0-10V ANSI C137.1 (8-Volt)	Wired analog low-voltage control that varies DC voltage between 0 and 10 volts to	0-10V, 10V, 10V0	
0-10V			
0-10V			
Wired	Phase	RJ-11	
		RJ-12	
	Phase	RJ-14	
		RJ-45	
		USB	
		Flying Leads	
DALI		Terminal Block	
		Other Wired	
	DALI2		Wireless Radio
			Infrared Receiver
		Other Wireless	

Table 5. Connectors and Transmission Hardware

Type of Hardware	Acceptable Terms
RJ-11	RJ-11, RJ11
RJ-12	RJ-12, RJ12
RJ-14	
RJ-45	
USB	
Flying Leads	
Terminal Block	
Other Wired	
Wireless Radio	
Infrared Receiver	
Other Wireless	

Table 6. Integral Control Capabilities

Integral Control Capabilities	Definition	Acceptable Terms
Dim to Off	The ability for a product to be turned on or off via a dimming control signal.	Dim to off, Dimming: 0%-100%
Energy Monitoring	The capability of a driver to report the energy consumption of a luminaire or lamp.	Energy (or Power) Monitoring, Energy (or Power) Metering, Energy (or Power) Measurement, Energy (or Power) Reading
Manual Dimming	A knob or other control device integrated into the fixture and used for manual dimming.	Manual Dimming, Knob Dimming, Dimming Knob, Fixture Integrated Dimming

Policy Refresher – Test Reporting Requirements

- ANSI/IES LM-79-19 only, ANSI/IES LM-79-08 will NOT be accepted

9.0 Additional Reporting Requirements for ANSI/IES LM-79 and ANSI/IES TM-33.....	40
9.1 ANSI/IES LM-79-19 Reporting	40
9.2 ANSI/IES TM-33-18 Reporting.....	41
9.3 Additional Application Details.....	43

- Includes more details on the specific metrics required within the report based on the test type
 - Full LM-79/SQD Report
 - Full LM-79/PPID Report
- SQD and PPID images must be generated by the pre-submission tool

Policy Refresher - SQD and PPID images

SQD and PPID images generated by Pre-submission Tool will be REQUIRED for new and update applications requiring a new LM-79 test report

NEW APPLICATION PORTAL ↗

TM-33 Horticultural Lighting Presubmission Tool

The TM-33 Presubmission Tool was designed by the DLC for use by manufacturers who intend to submit products for qualification to the DLC Horticultural Lighting Qualified Products List (QPL). This tool allows submitters to upload a TM-33 .xml document to generate, preview and download consistent SQD and PPID graph images in .png format for use as part of the submission process. The tool also validates the uploaded document to DLC and TM-33 requirements. This helps submitters identify missing information and provides a consistent format for the appearance of these graphics. Files are not stored and must be downloaded by submitter to include in application submission.

Application Pre-submission Tools

- Hort Pre-submission Tool
- LUNA Pre-submission Tool

Resources & Tools

DOWNLOAD SAMPLE FILE

- Sample TM-33 File
- Sample TM-33 File (Partial, PPID)
- Sample TM-33 File (Partial, SQD)

HELPFUL ARTICLES

- Intro to the Hort Pre-submission Tool
- Hort Pre-Submission Tool Output Messages

View More

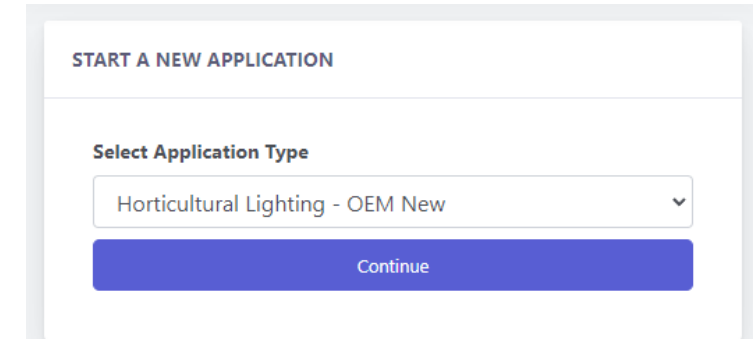
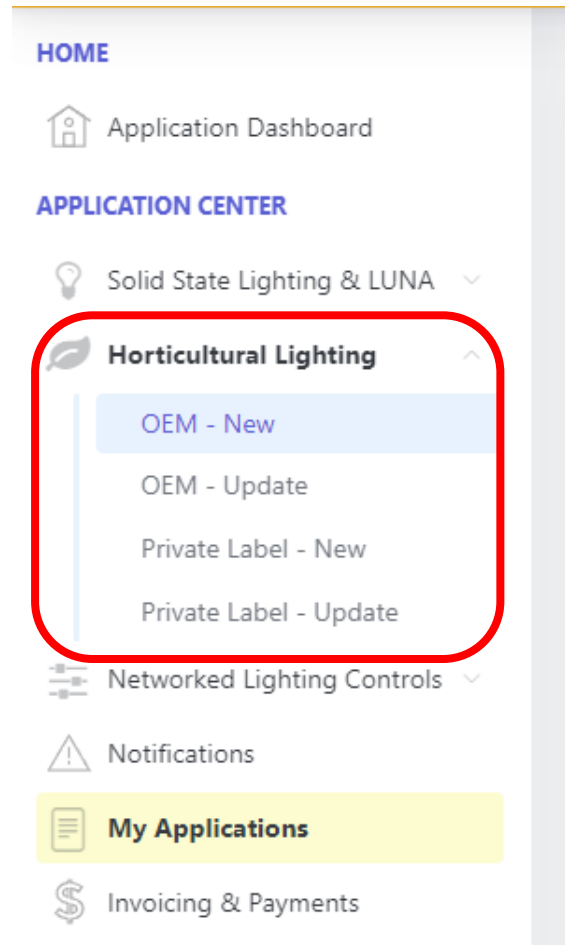
Upload TM-33 .xml document

Click on the upload TM-33 button below to select a TM-33 .xml document. When the tool has completed validation

Submission Changes

Submission Changes - Portal

Starting 3/31, all new applications will be V3.0 apps



Submission Changes - Portal

- The application type will have the version appended

Application ID	Application Name	Submitter	Type	Status
A-H-GZ0Y1C	2023-02-27 hort v3 staging v3 Manufacturers: Sitation	Steven Engelbrecht	Hort New OEM	Under Review In Progress
A-H-CV7AZD	HORT OEM NEW 20230301 Manufacturers: Aaron Acres	Aaron Feldman	Hort New OEM	Application Created
A-H-X3WYR7	HORT AAF V3 Test Manufacturers: Aaron Acres	Aaron Feldman	Hort New OEM	Reviewer Message Awaiting Response
A-H-6DVNOT	AAF HORT OEM NEW 20211207_02 Manufacturers: DLC1	afeldman@designlights.org	Hort New OEM	Application Created
A-H-G02VPF	2023-02-26 Hort V3 Test STG Manufacturers: Feldman Flowers	DLC User	Hort New OEM	Application Created
A-H-JTFSUP	Hort Update Question Set Test Manufacturers: DLC	Erin Walling	Hort Update OEM	Application Created
A-H-1RWZJL	EMW_HORT_PL_20220131_001 Manufacturers: DLC	Erin Walling	Hort Private Label	Application Closed

- Application Overview information will display the Technical Requirements Version

APPLICATION OVERVIEW	
Application ID:	A-H-X3WYR7
Application Name:	HORT AAF V3 Test
Application Type:	Hort New OEM
Manufacturer:	Aaron Acres
Submitter:	Aaron Feldman
Current Status:	Application Created
Technical Req. Version:	3

Submission Changes – App Excel Form

- V2.1 and V3.0 app Excel Forms are NOT compatible
- Only V2.1 App Excel Forms can be used for V2.1 apps
- Only V3.0 App Excel Forms can be used for V3.0 apps

The screenshot displays the 'Application Detail' page for application ID A-H-LHMODR (HORT NEW OEM 20230306). The page is divided into several sections:

- APPLICATION OVERVIEW:** A table listing application details.

Application ID:	A-H-LHMODR	Submitter:	Aaron Feldman
Application Name:	HORT NEW OEM 20230306	Current Status:	Application Created
Application Type:	Hort New OEM	Technical Req. Version:	3.0
Manufacturer:	DLC		
- APPLICATION PROGRESS:** A section with a heading and a paragraph: "Here's a high level overview of the review and publishing process for a Hort New OEM application. This will be updated automatically as your application progresses."
- COMMENTS:** A section with an "ADD COMMENT" button and a message: "Application comment functionality is not available until your application is submitted to the DLC. If you need help getting started, please contact horticulture@designlights.org."
- NEXT STEP:** A section with the instruction "Please upload your application spreadsheet" and an "Upload Spreadsheet" button.
- APPLICATION ACTIONS:** A section with "Delete Application" and "Add to Favorites" buttons.

Below the main content, there is a summary table and an error message:

Application Name:	HORT NEW OEM 20230306	Current Status:	Application Created
Application Type:	Hort New OEM	Technical Req. Version:	3
Manufacturer:	DLC		

Your application form did not process successfully.
The following error was returned:

- Submitted application form is the incorrect version, has missing data, or has incomplete data for the selected application type. If you require assistance, please contact horticulture@designlights.org.

The bottom section contains an "UPLOAD YOUR COMPLETED APPLICATION EXCEL FORM HERE" area with a "Choose File" button (showing "No file chosen") and an "Upload Spreadsheet" button. Below this is an "ACCEPTED FILES" section showing ".xls .xlsx". To the right, the "INSTRUCTIONS" section provides guidance on submitting the application and downloading the correct Excel form for HORT Level 1 or Level 2 applications, with buttons for "View HORT Level 1 Instructions" and "View HORT Level 2 Instructions".

Submission Changes – App Excel Form

DLC FIND PRODUCTS ▾ ABOUT US ▾ OUR WORK ▾ RESOURCES ▾ NEWS & EVENTS ▾ JOIN US ▾ Q Aaron Feldman DLC

Workplan Timeline Solid-State Lighting LUNA **Horticultural Lighting** Networked Lighting Controls

Horticultural Lighting Program

The DLC's Horticultural Lighting Program is designed to accelerate widespread adoption of energy-saving LED technology in the horticultural lighting sector. With energy consumption from horticultural facilities continuing to grow, we're creating tools and resources to position controlled environment agriculture as a leader in energy efficiency.

PROGRAM OVERVIEW →

Technical Requirements

- HORT Technical Requirements V2.1
- HORT Technical Requirements V3.0
- Testing Lab Requirements
- Revision Cycle
- HORT Surveillance Testing

Qualify a Fixture

- Application Process
- Level 1 (formerly Single Product) Applications**
- Level 2 (formerly Family Grouping) Applications**
- Private Label Applications
- Update Listed Fixtures**
- Delisting Requests
- Application Review Timeframes
- Logo Use Guidelines

Learn

- Hort Lighting Resources
- Hort FAQs
- Past Technical Requirements

ANNOUNCEMENTS

February 2023 Member Newsletter

February 15, 2023

February 2023 DLC Newsletter

February 15, 2023

Submission Changes – App Excel Form

The screenshot shows the DLC website's navigation menu at the top, including links for 'FIND PRODUCTS', 'ABOUT US', 'OUR WORK', 'RESOURCES', 'NEWS & EVENTS', and 'JOIN US', along with a search icon and a 'MyDLC' user profile button. The breadcrumb trail indicates the current page is 'Home / Our Work / Horticultural Lighting / Qualify a Fixture / Horticultural Level 1 (Formerly Single Product) Applications'.

On the left sidebar, there are sections for 'Application Instructions', 'Application Forms', and 'TECHNICAL REQUIREMENTS'. Under 'TECHNICAL REQUIREMENTS', two green boxes indicate 'HORT v3.0 EFFECTIVE MAR 2023' and 'HORT v2.1 EFFECTIVE SEP 2021'. Below this is a 'LEARN MORE' section with links for 'Level 1 (formerly Single Product)', 'Level 2 (formerly Family Grouping)', 'Private Label', and 'Update a Fixture'.

The main content area is titled 'QUALIFY A FIXTURE' and 'Horticultural Level 1 (Formerly Single Product) Applications'. A blue button labeled 'DOWNLOAD APPLICATION FORMS' is highlighted with a red box. Below this, a paragraph states 'Level 1 (formerly Single Product) applications are used to qualify...'. The 'Application Instructions' section begins with the heading 'Determine if your product is eligible to be qualified by the...' followed by a list of requirements: 'Review the Horticultural Lighting Technical Requirements to ensure your product meets the minimum performance requirements.' and 'Review the Testing Lab Requirements to ensure your product meets the minimum performance requirements.'

A red-bordered box on the right, titled 'Application Forms', contains the following text: 'The application forms below should be used on all applications submitted through the Application Portal.' It lists several forms with download icons: 'Hort OEM New App Excel Form', 'Hort OEM New App Excel Form - EXAMPLE', 'Performance Impact of Inlet Fluid Temperature Worksheet (externally supplied actively cooled fixtures only)', 'Power Source Test Report Worksheet (DC-powered fixtures only)', 'Cabling Loss Calculator Worksheet (DC-powered fixtures only)', and 'Hort Required Documentation Checklist'.

Submission Changes – App Excel Form

Reported Performance Table Tab

- Addition of Product Application Info
- New requirement for all products for product dimensions

Please enter in feet.	Please enter in inches.	Please enter in inches.	Please enter in inches.
Length (ft)	Width (in)	Height (in)	Diameter (in)

Model Number	Controlled Environment	Lighting Scheme (Position)	Other Lighting Scheme (Position)	Lighting Scheme (Use Case)
ABC-60W-LT	Indoor (Non-stacked), Indoor (Stacked)	Top light		Sole-Source
ABC-60W-GRNH	Greenhouse	Intra-canopy		Supplemental
ABC-60W-UNV	Indoor (Non-stacked), Indoor (Stacked), Greenhouse	Top light, Intra-canopy	Side Light	Sole-Source, Supplemental

Submission Changes - App Excel Form

- NEW “Controllability tab



- All models listed on “Reported Performance Table” tab MUST be listed on the “Controllability” tab.



Model Number	
ABC-60W-LT	Indoor (Non-stack
ABC-60W-GRNH	Greenhouse
ABC-60W-UNV	Indoor (Non-stack

Reported Performance Table



Model number		
	Dimmable <i>(please select from dropdown)</i>	
ABC-60W-LT	Yes	
ABC-60W-GRNH	Yes	
ABC-60W-UNV	No	

Reported Performance Table Controllability Spec

Submission Changes - App Excel Form

- Dimming Performance
- Dimming and Control Method to the Product – Wired and Wireless
- Connector or Transmission Hardware – Wired and Wireless
- Integral Control Capabilities

Dimming Performance				
Dimmable <i>(please select from dropdown)</i>	Reported Minimum Input Wattage	Reported Minimum Photosynthetic Photon Flux	Reported Default Input Wattage	Reported Default Photosynthetic Photon Flux

0-10V IEC60929 Annex E	0-10V ANSI C137.1 (8V)	0-10V ANSI C137.1 (9V)	0-10V Other Protocol
Yes	Yes	No	
Yes	Yes	No	

Table 4. Dimming and Control Method Designations to the Product

Control Type (as displayed on the QPL)	Definition	Acceptable Terms
0-10V		
0-10V IEC 60929 Annex E		
0-10V ANSI C137.1 (8-Volt)	Wired analog low-voltage control that varies DC voltage between 0 and 10 volts to produce varying light output.	0-10V, 10V, 10V0
0-10V ANSI C137.1 (9-Volt)		
0-10V Other		

Table 5. Connectors and Transmission Hardware

Type of Hardware	Acceptable Terms
RJ-11	RJ-11, RJ11
RJ-12	RJ-12, RJ12
RJ-14	
RJ-45	
USB	
Flying Leads	
Terminal Block	
Other Wired	
Wireless Radio	
Infrared Receiver	
Other Wireless	

Table 6. Integral Control Capabilities

Integral Control Capabilities	Definition	Acceptable Terms
Dim to Off	The ability for a product to be turned on or off via a dimming control signal.	Dim to off, Dimming: 0%-100%
Energy Monitoring	The capability of a driver to report the energy consumption of a luminaire or lamp.	Energy (or Power) Monitoring, Energy (or Power) Metering, Energy (or Power) Measurement, Energy (or Power) Reading
Manual Dimming	A knob or other control device integrated into the fixture and used for manual dimming.	Manual Dimming, Knob Dimming, Dimming Knob, Fixture Integrated Dimming

Submission Changes – Questionnaire

Two Application Pages of the Application Questionnaire:

1. Product Info & Performance
2. Product Image(s)

The screenshot displays a web interface for an application questionnaire. It is divided into several sections:

- APPLICATION OVERVIEW:** A table with the following details:

Application ID:	A-H-XO3NGZ	Submitter:	Aaron Feldman
Application Name:	AAF HORT OEM new 20230309_02	Current Status:	Application Created
Application Type:	Hort New OEM	Technical Req. Version:	3.0
Manufacturer:	DLC		
- APPLICATION ACTIONS:** Two buttons: "Save Progress & Exit" (grey) and "Submit Application" (blue).
- APPLICATION PAGES:** A green header with a list of pages: "Product Info & Performance" and "Product Image(s)". This section is highlighted with a red rounded rectangle.
- HORT NEW OEM APPLICATION QUESTIONNAIRE:** A section with a disclaimer: "Please take your time and answer questions thoroughly. Your responses are saved automatically every 30 seconds."

Submission Changes – Questionnaire

Select a single image to apply to all products OR indicate if you have different images for each product.

Please take your time and answer questions thoroughly. Your responses are saved automatically every 30 seconds.

PRODUCT IMAGE(S)

Please review the [product image specification](#) before uploading assets. Non-compliant assets will be rejected and may delay processing of your application.

39. Do you want to use a representative image for all products in this application? Required

Please select "yes" if you would like one image to represent all products in your family or "no" if you would like a different image to represent each product

Yes, I will upload one image to represent all products in this family

No, each product in this family has its own image

[Previous](#) [Submit Application](#)

Submission Changes – Questionnaire

PRODUCT IMAGE(S)

Please review the [product image specification](#) before uploading assets. Non-compliant assets will be rejected and may delay processing of your application.

39. Do you want to use a representative image for all products in this application?

Required

Please select "yes" if you would like one image to represent all products in your family or "no" if you would like a different image to represent each product

- Yes, I will upload one image to represent all products in this family
 No, each product in this family has its own image

40. Upload a representative image for all products in this application

Required

Choose File No file chosen

Previous

Submit Application

Submission Changes – Questionnaire

39. Do you want to use a representative image for all products in this application? Required

Please select "yes" if you would like one image to represent all products in your family or "no" if you would like a different image to represent each product

Yes, I will upload one image to represent all products in this family

No, each product in this family has its own image

40. Upload a images for a products in this application Required

Model Number × ▼

Please select an image for this product Required

Model Number × ▼

Please select an image for this product Required



Submission Changes – Types of Update

- Products meet PPE threshold and no changes since qualification

- V3.0 App Excel Form
- Product Specification sheet
- QPL download of products/family to update
- Product Image(s)
- Safety compliance certificate
- No Testing or reports required

- Products don't meet PPE threshold

- All documents on left
- Additional test reports, supporting documentation (ex. SQD/PPID images, ISTMT's, etc.) dependent on the type of change

QPL Changes



QPL Changes - Filters

- New checkbox for V3.0
- Product Application info within “Product Features
- Additions to Reported Performance Criteria
- New section for “Control Features”

The screenshot displays a filter interface with the following elements:

- A yellow banner at the top stating "You have 0 saved items".
- Two buttons: "Save Search Criteria" (dark grey) and "View Saved Searches" (yellow).
- A dropdown menu for "Listed Products" with a downward arrow.
- Filter categories with expand/collapse icons: "Manufacturer" (+), "Brand" (+), "Technical Requirements Version" (-), "State Compliance" (+), "Product Features" (+), "Tested Performance Criteria" (+), "Reported Performance Criteria" (+), and "Control Features" (+).
- The "Technical Requirements Version" section is expanded, showing two checkboxes: 2.1 and 3.0.
- A red button at the bottom labeled "RESET FILTERS" with a circular arrow icon.

QPL Changes - Filters

- New filters to identify Product Application information

Product Features

Features

- Dimmable
- Fan Presence
- Spectrally Tunable
- Actively Cooling Presence

Category

- Horticultural Lighting Fixture
- Linear Replacement Lamp
- Screw-Base Replacements For HID Lamps Omni-Directional
- Screw-Base Replacements For HID Lamps Directional

Controlled Environment

- Indoor (Stacked)
- Indoor (Non-Stacked)
- Greenhouse

Lighting Scheme (Position)

- Top light
- Intra-canopy

Lighting Scheme (Use Case)

- Sole-Source
- Supplemental

QPL Changes - Filters

New filters to identify Control Features

Control Features

Dimming and Control Method to the Product

- 0-10V ANSI C137.1 (8V)
- 0-10V ANSI C137.1 (9V)
- 0-10V IEC60929 Annex E
- 0-10V Other Protocol
- Phase Cut (Forward Phase)
- Phase Cut (Reverse Phase)
- DALI
- DALI-2
- Power Over Ethernet
- Ethernet TCP/IP
- Ethernet Proprietary
- Zigbee 3.0
- Zigbee - Manufacturer Specific
- Bluetooth Sig MESH and MMDL Layers
- Bluetooth - Manufacturer Specific
- Wi-Fi
- EnOcean

Connector or Transmission Hardware

- RJ-11
- RJ-12
- RJ-14
- RJ-45
- USB
- Flying Leads
- Terminal Block
- Wireless Radio
- Infrared Receiver

Integral Control Capability

- Dim to Off
- Energy Monitoring
- Manual Dimming

QPL Changes - Product Images

- Product Listing Page (PLP)
- Product Detail Page (PDP)

The screenshot displays the 'DLC Qualified Product Lists' interface for 'Horticultural Lighting'. The top navigation bar shows the breadcrumb 'DLC Qualified Product Lists > Horticultural Lighting'. Below this, there is a search bar with the text 'Search by model, manufacturer, brand, product name, or product ID' and a search tip: 'Search Tip: For an exact search, use quotes around the search term (ex. "PV05LXDIC")'. A pagination control shows 'Prev 1 2 Prev 1 2 3 4 5 ... 28 29 Next' and 'Viewing 1-25 of 705 results'. The main content area shows a list of products with small images and text. A sidebar on the left contains filters: 'Listed Products', 'Manufacturer', 'Brand', 'Technical Requirements Version', 'State Compliance', 'Product Features', 'Tested Performance Criteria', and 'Reported Performance Criteria'. A 'You have 0 saved items' notification is visible at the top left of the sidebar. An overlay window shows the 'Product Detail Page (PDP)' for a selected product. The PDP features a 'DLC HORT' logo in the top right corner. It is divided into two main sections: 'PRODUCT OVERVIEW' and 'PRODUCT INFORMATION'. The 'PRODUCT OVERVIEW' section includes fields for Model Number, Product Name, Product ID, QPL, Manufacturer, Brand Name, DLC Family Code, Listing Status, and Date Qualified. The 'PRODUCT INFORMATION' section includes fields for Qualified Product List, Product ID, Manufacturer, Brand, Product Name, Model Number, Technical Requirements Version, and DLC Family Code. Below these sections are several expandable tabs: 'PRODUCT CATEGORIZATION', 'PRODUCT CAPABILITIES', 'REPORTED PHOTOMETRIC PERFORMANCE', 'REPORTED ELECTRICAL PERFORMANCE', 'TESTED PHOTOMETRIC PERFORMANCE', 'TESTED ELECTRICAL PERFORMANCE', 'SQD/PPID', and 'VERSION HISTORY'. At the bottom of the PDP overlay, there are buttons for 'Save to List', 'Print this Page', and 'Close'. The 'DLC' logo is also visible in the bottom left corner of the PDP overlay.

QPL Changes – Product Detail Page

New properties within:

- Product Categorization
- Product Capabilities
- Reported Performance

The screenshot displays a product detail page for Product ID H-VTLERF. The page is divided into several sections, with a red box highlighting the 'PRODUCT CAPABILITIES' section and another red box highlighting the 'REPORTED PHOTOMETRIC PERFORMANCE' and 'REPORTED ELECTRICAL PERFORMANCE' sections. The 'PRODUCT CAPABILITIES' section includes the following properties:

PRODUCT CAPABILITIES	
Fan Presence	Yes
Spectrally Tunable	No
Dimmable	Yes
Dimming and Control Method to the Product	0-10V ANSI C137.1 (8V), Zigbee 3.0
Connector or Transmission Hardware	RJ-45, Wireless Radio
Integral Control Capabilities	Dim to Off, Energy Monitoring

The 'REPORTED PHOTOMETRIC PERFORMANCE' and 'REPORTED ELECTRICAL PERFORMANCE' sections each have a 'VIEW DETAILS' link.

QPL Changes – Saved item Download

Additional columns for new V3.0 properties starting 3/31

The screenshot shows the DLC Qualified Product Lists interface for Horticultural Lighting. The top navigation bar includes the DLC logo and links for FIND PRODUCTS, ABOUT US, OUR WORK, RESOURCES, NEWS & EVENTS, and JOIN US. The user is logged in as Aaron Feldman. The main heading is "DLC Qualified Product Lists > Horticultural Lighting". Below this, there is a search bar with the text "Search by model, manufacturer, brand, product name, or product ID" and a search tip: "Search Tip: For an exact search, use quotes around the search term (ex. 'PVOSLXDK')". A red box highlights the "DOWNLOAD MY LIST" button. Below the search bar, there are buttons for "Save Search Criteria" and "View Saved Searches". The interface also shows a list of products with columns for "Listed Products", "Manufacturer", and "Brand". The "Manufacturer" and "Brand" sections have search filters. The results section displays a list of products with "Add to my list" buttons. The page indicates "Displaying 1-25 of 1,201 results".

Hort V3.0 Summary

- Resources for Hort V3.0 can be found [here](#)
- Key Dates:
 - V2.1 product applications may be submitted until 3/30 and have until 5/31 to be completed
 - Only V3.0 product applications can be submitted starting on 3/31
- Policy Highlights – Efficacy, Product Application info, & Controllability
- Submission changes – New app excel form, updates to questionnaire
- QPL – Filters, Images, New Properties





Thank you!

Q&A