

DESIGNLIGHTS CONSORTIUM

2016

STAKEHOLDER MEETING

August 2-3 • Denver, CO

Breakout Session:

DLC Supporting Documentation

Michelle Newmark

D+R International





Overview of Topics

- Product Specification Sheets
- Warranty Documentation
- Self-certification Statement
- Driver and LED Specification Sheets





Product Specification Sheets

- Why does DLC need a Product Spec Sheet?
- The DLC requires specification sheets to understand the intended uses of the product and how they are being marketed to customers.
- Specifications created solely for the purposes of DLC qualification are not eligible.
 - Fabricated specification sheets will delay the review of the application.
 - Appropriate marketing material will be requested from the application contact.
 - Incorrect marketing material can be confusing to the customer if the product is qualified based on false information.





Product Specification Sheets

- The manufacturer must submit the specification sheets it is using in the marketplace.
- Specification sheets are what the end user of the product will see on the manufacturer's website or catalog.
- Specification sheets submitted for products that are not yet qualified must not have the DLC logo or mention of DLC qualification on them.



Product Specification Sheets

- Specification sheets must include:
 - Model numbers and nomenclature breakdown
 - Applicable and intended usage of the product
 - How the product is supposed to perform (CCT, CRI, Efficacy, Lumen Output, Wattage)
 - Dimming and controls information if applicable
 - Photos or constructional diagrams
- Specification sheets can include:
 - Expected lifetime of the product
 - Optional or included product variations (lenses, cables, mounting)
 - Customer ordering codes and information

8/16/2016 5





Warranty Documentation

- What is a warranty and why does DLC require it?
- Legal document explaining the terms and conditions of the warranty for the products being manufactured.
- Should include the length of the warranty period and all exceptions or limitations involved.
- Manufacturer must submit the warranty statement that is provided to customers purchasing the products.
- DLC requires a 5-year warranty term for all products being submitted. Warranty
 must cover all components of
 the submitted products.
- Can I just send a signed statement?

8/16/2016 6

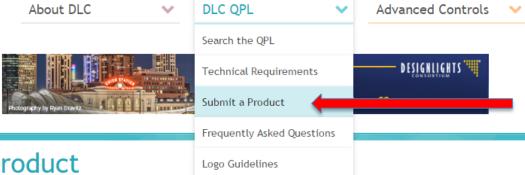


Self-certification Statement

- What is a self-certification statement?
- The self-certification statement contains all the terms and conditions related to submitting an application.
- All applications being submitted for qualification must include a signed self-certification statement in PDF format.
- It must be signed by a representative for the submitting organization.
- A stamp may not be substituted for a hand-written signature.
- https://www.designlights.org/resources/file/Application-Self-Certification-Statement







How to Submit a Product

▶ QPL ▶ productsubmit

Manufacturer Application Process

- · Are Your Products Eligible?
 - Technical Requirements
 Table
 - · Category Definitions
 - Category-Specific Requirements
 - Linear Replacement
 Lamps
 - Retrofit Kits
 - Screw-Base Replacements for HID Lamps
 - DLC Premium
 - Spocialty Products

Manufacturer's Guide

To download the June 10, 2016 version of the DLC Manufacturer's Guide in English, click <u>here</u>. To view in Mandarin, click <u>here</u>.

To submit a product to be added to the Qualified Products List (QPL), please review the information throughout this section to understand the DLC application process, including product performance requirements, supporting documentation requirements, and appropriate application fees. Below is an overview of the process:

STEP 1: Make sure your product is eligible - Review the available product categories and technical requirements. Your product must be marketed as and intended for an available category to be eligible for qualification.

STEP 2: Read the application instructions - These instructions will guide you through the file uploading process



How to Submit a Product

▶ OPL ▶ productsubmit

Manufacturer Application Process

- · Are Your Products Eligible?
 - Technical Requirements
 Table
 - · Category Definitions
 - Category-Specific Requirements
 - Linear Replacement Lamps
 - Retrofit Kits
 - Screw-Base Replacements for HID Lamps
 - DLC Premium
 - Specialty Products
- · Application Instructions
 - Single Products
 - Family Groupings
 - Private Labeling
 - · Dimming Information
 - LED Lighting Facts
 - Application Fees
- · Lab Testing
- · Specification and Policy

Manufacturer's Guide

To download the June 10, 2016 version of the DLC Manufacturer's Guide in English, click <u>here</u>. To view in Mandarin, click <u>here</u>.

To submit a product to be added to the Qualified Products List (QPL), please review the information throughout this section to understand the DLC application process, including product performance requirements, supporting documentation requirements, and appropriate application fees. Below is an overview of the process:

STEP 1: Make sure your product is eligible - Review the available product categories and technical requirements. Your product must be marketed as and intended for an available category to be eligible for qualification.

STEP 2: Read the application instructions - These instructions will guide you through the file uploading process and explain the details of the application form. Please review this in detail to ensure the most efficient review of your application.

STEP 3: Read the Lab Testing Requirements page - This page lists the testing laboratory requirements for test reports to be accepted by the DLC.

STEP 4: Read the FAQ page - If you have additional questions, please read the FAQs page. FAQs are updated regularly to reflect the most current DLC policies.

STEP 5A: Complete the application - The QPL application requirements are analogous to those of ENERGY STAR. The application form has five main parts: application contact information, model information, photometric and

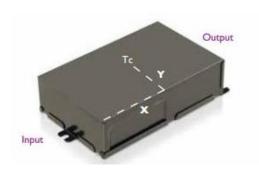


- · Manufacturer must submit the specification sheet they are using in the marketplace. Spec sheets created for DLC submission only are not acceptable.
- Product specification sheet must clearly detail dimming capabilities if products capable of dimming are submitted.
- LED package/module/array specification sheet (i.e. the specification sheet for the element that was tested for LM-80)
- o IES LM-79-08 report(s) containing sections 9, 10, and 12
 - Supplemental power quality test report or LM-79 with worst case power factor and total harmonic distortion (THD) measurements, if not included in primary LM-79
- · IES photometric file (Please ensure this is in IES file format with the file extension ".ies"; DLC review staff currently use Photometric Toolbox to read IES files.)
- · Warranty document: Legal warranty document explaining warranty terms and conditions
- Signed Self-certification Statement (PDF)
- · Proof of safety certification from an appropriate safety certification body relevant in the US or Canada
- Product installation instructions (retrofit kits and linear replacement lamps only)
- · Lumen maintenance information: select one of the two options and submit all of its corresponding required documents listed below. For more information regarding lumen maintenance, please see the Technical Requirements Table.
- Option 1
 - IES LM-80-08 test report
 - Note: Manufacturers are expected to provide the most recent LM-80 report available for the LED package/module/array used in the product
 - · Schematic/photograph from LED package/module/array manufacturer that shows the specified temperature measurement point (TMP), if not included in the LM-80
 - In-situ temperature measurement test (ISTMT) report
 - · Photograph of temperature measurement point (i.e. attached thermocouple) showing that the temperature is measured at the TMP specified by the LED package/module/array manufacturer
 - Saved copy of the completed ENERGY STAR TM-21 worksheet (Excel file format), available for download

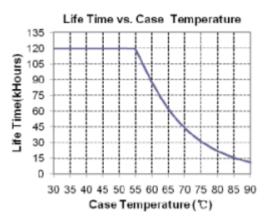


Driver Information and Specification Sheets

- Driver ISTMTs are required for all the drivers that are used in the family for Premium classification applications.
- A picture of the driver Tc location is required for driver ISTMTs.
- Custom drivers must provide equivalent documentation that includes:
 - TMP location
 - Operating temperature for >50,000 hour life



T _a /T _c	Lifetime
(°C)	(h)***
-2560/	
75/65	50k/100k
-2550/	
75/65	50k/100k
-2550/	
80/70	50k/100k
-2550/	
80/70	50k/100k







Driver Information and Specification Sheets

- Driver specification sheets must be materials produced by the driver manufacturer.
- Fabricated driver specification sheets that are not created by the driver manufacturer will not be accepted and can result in delays in the application review process.





LED Specification Sheets

- What is the LED spec sheet and why does DLC need it?
- LED Specification sheets are used to ensure the LED package is applicable within a series of packages.
- This information includes the nomenclature of the series, CRI and CCT information, die spacing, size and shape of the LED package, electrical/optical characteristics, and can include optional information such as binning.





LED Specification Sheets

- Required for all applications that include a lumen maintenance review.
- Should include detailed performance information on the LED package used in the LM-80 and ISTMT reports.

8/16/2016 14





Recap

- Specification sheets
- Warranty statements
- Self-certification statements
- Driver specification sheets
- LED specification sheets



Questions?





Thank you!

Michelle Newmark

D+R International – DLC Support Team

mnewmark@drintl.com

301-628-2093