

Intertek

Intertek Airport Lighting Equipment Certification Program



IES Government Contacts Subcommittee, October 15, 2012

IES Airport Lighting Conference, St. Pete Beach, FL

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Typical Products Tested IAW FAA AC 150/5345 series Include:

- Rotating Beacons
- Obstruction Lights
- Wind Cones
- Isolation Transformers
- Taxiway / Runway Inpavement Lights
- Retroreflective Markers
- Cable Connectors
- Underground Cable
- Runway & Taxiway Signs
- Portable Runway Lights
- Light Bases
- Constant Current Regulators
- Precision Approach Path Indicators (PAPI)
- Runway End Identification Lights (REIL)



FAA AC 150/5345-53D

- Manufacturer submits certification request
- Qualification testing
- Documentation submittal and engineering review
- Initial manufacturing facility audit
- License Agreement
- Certificate issued and product listed in 53D Addendum
- Certification process covered under ANSI accreditation to ISO Guide 65

AL-2 Request for Certification or Revision of Certificate

Exhibit 2 Form AL-2rev, Request for Certification - EQUIPMENT
An Activity Sponsored and Administered by
INTERTEK
AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM
REQUEST FOR EQUIPMENT CERTIFICATION

PROGRAM ADMINISTRATOR
DEPARTMENT ALECP
INTERTEK
3933 US ROUTE 11
CORTLAND, NY 13045-0950

Intertek

TO BE COMPLETED AND FORWARDED WITH REQUIRED DOCUMENTATION TO THE ADMINISTRATOR pg 1 of ____

DATE:	L-type:	Catalog No./Lamp No. (or attach list):
1. MFG Name: _____ Contact: _____		
MFG Facility site: _____ Phone: _____		
_____ e-mail: _____		
_____ website: _____		
2. The equipment to be tested is:		
<input type="checkbox"/> prototype		
<input type="checkbox"/> production unit		
and described as follows		
3. The Certification is (check applicable note):		
___ new listing of product (or re-qualification)		
___ addition of product (issued as new cert)**		
___ addition of product to Certificate issued**		
___ addition of lamp to Certified product**		
___ revision to catalog numbers listed or additional catalog numbers for tested product****		
___ a manufacturer listing for non-OEM product**		
___ a manufacturer name and/or site change**		
___ modification to certified product**		
(requires Waiver form submittal and Engineering review fee)		
Fee for review \$ 800. **List applicable test reports below and submit a copy of report(s) with copy of current C of C:		
4. To be tested at:		
<input type="checkbox"/> Intertek – Lighting Department – Cortland, NY		
<input type="checkbox"/> Manufacturer's Facility (see section 5)		
<input type="checkbox"/> Independent Commercial Laboratory (subject to audit and see section 5)		
Name: _____		
Location: _____		
Contact: _____		
Phone: _____		
5. WITNESS: Attach the Proposed Test Schedule and test Plan (to be witnessed – Engineering Review for Test Plan required) Authorization for engineering and witness fees required. Request from Program Coordinator (jill.wilson@intertek.com)		
6. In addition to copies of applicable test reports and written authorization or PO for ** \$800 fee per certificate, attached to this form are:		
<input type="checkbox"/> (a) List of Types, Classes, Styles, Sizes, manufacturer's catalog numbers.		
<input type="checkbox"/> (b) Section and part drawings		
<input type="checkbox"/> (c) Assembly drawings		
<input type="checkbox"/> (d) Bill of Materials showing manufacturer's name and part numbers		
<input type="checkbox"/> (e) Statement of Warranty		
<input type="checkbox"/> (f) Instruction/Installation/operating manual		
<input type="checkbox"/> (g) Product Description sheet (marketing material)		
<input type="checkbox"/> (h) AL2-B Lamp Life Test form		
If submitting electronically, please identify the file name to include the L-type, catalog no, document name, client, date		

BY FILING THIS FORM, THE LICENSEE AGREES TO THE FOLLOWING:
A. THAT THE EQUIPMENT BEING SUBMITTED FOR TEST IS REPRESENTATIVE OF PRODUCTION AND IS A DUPLICATE OF THE TYPE PRODUCT DESIGNATED THAT WILL BE OFFERED FOR SALE, OR THAT IS A PROTOTYPE OF THE PRODUCTION UNITS WHICH WILL BE IDENTICAL TO IT WHEN OFFERED FOR SALE.
B. THAT THE TESTING LABORATORY IS TO VERIFY THE DESIGN CONSTRUCTION OF THE SAMPLE, WHICH LICENSEE WILL DELIVER TO THE LABORATORY, BY REFERENCE TO DRAWINGS AND OTHER DESCRIPTIVE INFORMATION.
C. PERMIT THE ADMINISTRATOR TO WITNESS THE TESTING (AT HIS OPTION) AND HAVE COMPLETE ACCESS TO THE TEST SAMPLE AND ALL DATA PERTAINING THERETO.
D. THAT THE APPLICANT AGREES TO COMPLY WITH THE REQUIREMENTS FOR VERIFICATION AND TO SUPPLY ANY INFORMATION NEEDED FOR EVALUATION OF PRODUCTS TO BE CERTIFIED.

FORM AL-2rev 9/2010

- Copy of all Qual Test Reports
- List of L-type, class, style, size
- List of catalogue number(s)
- Section & part drawings
- Assembly drawings
- BOM with mfg name/catalogue numbers
- Statement of Warranty
- Instruction/installation/operating manual
- Product Description sheet (marketing)
- AL-2B Lamp Life form

Qualification Testing

FAA AC 150/5345-53D, Appendix 2, section 5.C.i

Must be done IAW ISO 17025

At Intertek – covered under A2LA accreditation

Outside of Intertek – covered by audit and witness

- Test Plan Review and Acceptance
- Assignment to Intertek Representative
- Formal Report issued by Manufacturer

Common Qualification Tests Performed

***Per Product Specific FAA
150/5345 Series Advisory
Circulars :***

- Photometry
- Chromaticity
- Accelerated Life
- Vibration (Sinusoidal, Random)
- Mechanical Shock
- Corrosion (Salt Fog) / Accelerated Corrosion
- Moisture, Rain Spray, Immersion, Icing
- Dust
- Wind Load
- Temperature / Humidity Cycling
- EMI / EMC
- Altitude
- Lamp Life Test
- Insulation Resistance
- Thermal Shock
- Operational
- Accelerated Weathering
- Electrical
- Leakage Current
- Dielectric
- Transient Suppression

Current Program Status

85 Participating Manufacturers

(5 pending new program participants)

- 25 new and requalification certificates issued since the spring meeting
- 171 revised certificates issued since the spring meeting

New Product Certifications

8 year re-qualifications (4 years for L-890 ALCMS)

Product modifications

- requires - AL-2 resubmittal
 - associated documentation
 - abbreviated testing

Specification updates

Semi-annual inspections

Semi-annual Inspections

- AL-7 Audit (follows basic ISO quality assurance requirements)
- AL-1; AL-1A Contact Sheet
- Product Checklist(s)
 - Construction review using the applicable ACs
- Production Testing Requirements
 - As required in the applicable ACs

New Specifications

- FAA AC 150/5345-43G – 9/26/12
 - Specification for Obstruction Lighting Equipment
- FAA AC 150/5345-53D – 9/26/12
 - Airport Lighting Equipment Certification Program

FAA AC 150/5345-43G

- Principal changes
 - Clarifications to be consistent with EB67D
 - Clarifications for use of multiple pulse flashes
 - Multiple light units allowed for L-864

Required Action:

No additional testing required at this time

FAA AC 150/5345-53D

- Use of ISO Guide 65 instead of ANSI Z34.1
- Third Party Approval changed to 4 years
- Minimum warranty clarification
- Interim testing acceptance
- Challenge sample process
- Addition of L-891, L-892, and L-893

FAA EB67D Update Status

- Issued on 3/6/2012 (with 9 month effective date)
- Intertek sent out lists of products that need to be updated to assist manufacturers.
- Intertek Webinar was presented on July 10, 2012
- Most file reviews are complete, quotes issued
- Testing is currently in process (if needed)
- Many updates are just documentation

EB67D Update Status

- 21 manufacturers effected by update.
- Some LED products currently certified to “B”
- Some LED products currently certified to “C”
- All LED products must demonstrate compliance with “D” by December 2012
- Currently 43% have not yet authorized any activity.

FAA EB67D Update Status

PROCESS

- Manufacturer requests Engineering Review
- Intertek will do engineering review to determine required action items based on qualification file
- Testing will be done if necessary
- AL-2 form can be submitted at any time during the process

EB67D Update Status

- Intensity ratio (1.0)
 - Must test each color LED
- Colors (2.1)
 - Existing Data can be reviewed
 - Testing required if design modifications are necessary
- LED High Temperature (2.2)
 - No further testing required (new method already used)
- Power Factor (2.5.1)
 - Existing Data can be reviewed
 - Testing required if design modifications are necessary

EB67D Update Status

Accelerated Life (2.4a)

Testing required for each LED color/type

LED junction temperature (2.4b)

Manufacturer submits evaluation with LED ratings

C2 Surge (2.12)

Testing required

Arctic Kit (2.13.1)

Testing required if applicable

Existing data can be reviewed

EB67D Update Status

Flicker (2.15)

- If PWM, testing required

Warranty (4.0)

- Documentation submittal required

“L” Suffix (5.0)

- Suffix will be added to certificate when complete



Questions?

