

Intertek

Intertek Airport Lighting Equipment Certification Program



IES Government Contacts Subcommittee, May 10, 2012

FAA - Washington, DC

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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 150/5345-53C

- Manufacturer submits certification request
- Qualification testing
- Documentation submittal and engineering review
- Initial manufacturing facility audit
- License Agreement
- Certificate issued and product listed in 53C 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:		3. The Certification is (check applicable note):
<input type="checkbox"/> prototype <input type="checkbox"/> production unit and described as follows		
4. To be tested at:		<input type="checkbox"/> new listing of product (or re-qualification) <input type="checkbox"/> addition of product (issued as new cert)** <input type="checkbox"/> addition of product to Certificate issued** <input type="checkbox"/> addition of lamp to Certified product** <input type="checkbox"/> revision to catalog numbers listed or additional catalog numbers for tested product*** <input type="checkbox"/> a manufacturer listing for non-OEM product** <input type="checkbox"/> a manufacturer name and/or site change** <input type="checkbox"/> modification to certified product** <small>(requires Waiver form submittal and Engineering review fee)</small> Fee for review \$ 800. **List applicable test reports below and submit a copy of report(s) with copy of current C of C:
<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 Warrantee <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 THERE TO.
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 8/2510

- 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 Warrantee
- Instruction/installation/operating manual
- Product Description sheet (marketing)
- AL-2B Lamp Life form

Qualification Testing

FAA AC 150/5345-53C, 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 New Manufacturers)

(2 New Manufacturing sites)

(3 Manufacturers withdrew)

(2 Pending new program participants)

- 41 new and requalification certificates issued since the fall meeting
- 153 revised certificates issued since the fall meeting

New Manufacturers

- aqua signal Teterow GmbH & Co.
- Hella KGaA Hueck & Co.
- Pollite, Ltd
- Precision Control System of Indianapolis
- Airsafe Airport Equipment Co. Ltd

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 EB67D

EB 67 History

- First certification of LED in ALECP – September 1999
- FAA Supplemental Performance Requirements for LED Source Lighting – July 10, 2001
- EBXX – December 2003 through November 2004
- EB67 – November 2004
- EB67B – March 12, 2007
- EB67C – December 29, 2010
- EB67D – March 6, 2012

EB67D certification overview

- 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

EB67D

Combined Principal changes from C and D

- Intensity ratio
- Colors
- Power Factor
- Accelerated Life / LED junction temperature
- C2 Surge
- Warrantee
- “L” Suffix

EB67D

- Intertek Webinar being planned for mid June.
 - More details to follow
 - Aimed at helping manufacturers with common questions

Related Standards

- ICAO Annex 14 – Volume I (Aerodromes)
- ICAO Annex 14 - Volume II (Heliports)
- IEC 61827 (runway and taxiway lights)
- IEC 61822 (CCRs)
- IEC 61823 (transformers)
- Transport Canada CAR 621.19 (Obstruction)



Questions?