



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE CIVIL ENGINEER SUPPORT AGENCY

22 DEC 2011

FROM: HQ AFCESA/CEO
139 Barnes Drive Suite 1
Tyndall AFB FL 32403-5319

SUBJECT: **Engineering Technical Letter (ETL) 11-29: Use of Light-Emitting Diode (LED) Fixtures in Airfield Lighting Systems on Air Force Installations and Enduring/Contingency Locations**

1. Purpose. This ETL provides approval to use LED fixtures in airfield lighting systems on Air Force installations and expeditionary locations. This ETL supersedes ETL 11-13, *Use of Light-Emitting Diode (LED) Fixtures in Airfield Lighting Systems on Air Force Installations and Expeditionary Locations*, dated 14 April 2011, and revises the application approval for LED fixtures.

2. Application. Requirements in this ETL are mandatory. Any deviations require written approval from the airfield lighting systems engineer, HQ AFCESA/CEOA.

2.1. Authority: Unified Facilities Criteria (UFC) 3-535-01, *Visual Air Navigation Facilities*; Air Force instruction (AFI) 32-1044, *Visual Air Navigation Systems*

2.2. Effective Date: Immediately

2.3. Intended Users:

- Major command (MAJCOM) electrical engineers
- Base civil engineers (BCE)

2.4. Coordination:

- MAJCOM operations division chiefs
- MAJCOM electrical engineers
- Air Force Safety Center (AFSC)
- Air Force Flight Standards Agency (AFFSA)

3. References.

3.1. Air Force:

- AFI 32-1044, *Visual Air Navigation Systems*, <http://www.e-publishing.af.mil>

3.2. Joint:

- UFC 3-535-01, *Visual Air Navigation Facilities*, http://www.wbdg.org/ccb/browse_cat.php?o=29&c=4

3.3. Federal Aviation Administration (FAA):

- FAA AC 150/5345-53C, *Airport Lighting Equipment Certification Program*, Addendum, http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/0B467310A914F788862570C800719ED7?OpenDocument

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4. Acronyms:

AFI	- Air Force instruction
FAA	- Federal Aviation Administration
HQ AFCESA/CEO	- Headquarters, Air Force Civil Engineer Support Agency, Operations and Program Support Division
LED	- light-emitting diode
MAJCOM	- major command
UFC	- Unified Facilities Criteria

5. Background. Airfield lighting fixtures with LED technology were first installed on taxiways in late 2002. The FAA approved additional LED applications in subsequent years but Air Force endorsement is required for FAA-approved applications of new technology. Air Force endorsement is provided after a period of time sufficient for industry to identify and correct design characteristics, for preservation of the Air Force mission, and for the most effective use of resources. This determination is made after carefully considering commercial uses and applications and after comparing that success to Air Force use and potential effects on the mission.

6. Policy.

6.1. LED fixtures are approved for use on Air Force installations and for enduring and contingency applications where currently certified via the FAA-approved third-party certification body, with the following exceptions:

- Medium- and high-intensity runway edge lighting
- Approach lighting
- Obstruction lighting

6.2. The latest FAA-certified equipment list, the address list of certified airport lighting equipment manufacturers, and the list of third-party certifiers are provided in FAA AC 150/5345-53C, *Airport Lighting Equipment Certification Program*, August 2010 Addendum.

7. Point of Contact. The authority having jurisdiction on all matters discussed in this ETL is the airfield lighting systems engineer, HQ AFCESA/CEO. Questions and comments about this ETL are encouraged and should be directed to the airfield lighting systems engineer, DSN 523-6354 or commercial (850) 283-6354, e-mail afcesar@tyndall.af.mil, or mail to 139 Barnes Drive, Suite 1, Tyndall AFB, FL 32403-5319.

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