



CASE STUDY

Avlite's Elevated Runway Guard Lights Help Enhance Airfield Safety for Strategically Positioned U.S. Air Force Base

Aviano Air Force Base, Italy



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Project Overview



Application

Enhance Airfield Safety for Strategically Located U.S. Air Force base



Product

Elevated Runway Guard Lights (ERGL)



Location

Aviano Air Force Base, Italy



Date

2019



Background

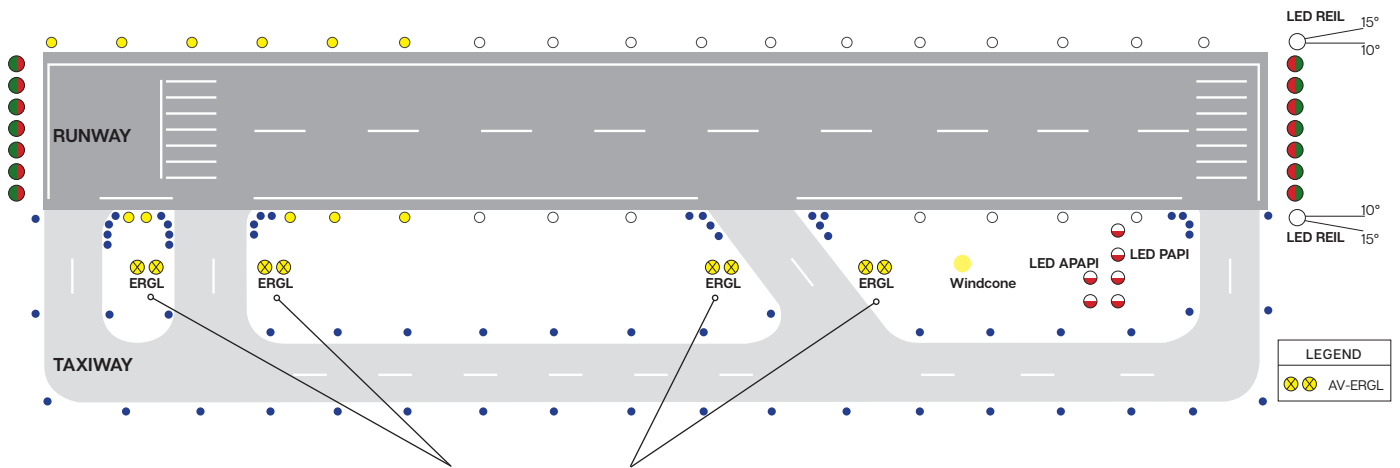
The Dolomite Mountains in Northeastern Italy are known for their rugged beauty, ski resorts, UNESCO World Heritage Site designation, and proximity to the popular tourist city, Venice. The 31st Fighter Wing of the U.S. Air Force also calls this area home. Located at Aviano Air Force Base, the 31st Fighter Wing (FW) is strategically located in the Dolomites to support critical missions and operations throughout NATO's southern regions.

The Airfield Safety Officer at Aviano AFB identified a safety concern with the airfield lighting. There were no Elevated Runway Guard Lights (ERGLs) to warn the aircraft pilots they were approaching a HOLD position prior to entering an active runway. In order to be compliant with the US Air Force's Unified Facilities Criteria UFC 3-535-01, ERGLs would have to be added to the airfield lighting.

Challenge

Extensive construction and electrical work was going to be required for ERGL installation if traditional, hard-wired systems were used. A runway shutdown was probable to ensure safety of construction crews and pilots. Critical missions flown by the U.S. Air Force's Most Combat Ready Fighter Wing could be affected because of the trenching and cables that had to be run with hard-wired ERGL systems.





Avlite's solar LED ERGLs provides a visual warning to pilots of an active runway and taxiway intersection.

Solution

The solution was to select a solar powered ERGL with remote control, which would eliminate the need to cut concrete, dig trenches, bury cable, backfill, re-concrete and seal all nine installation locations, running all the way back to the electrical vaults. Control for the system was accomplished by placing a Radio Frequency (RF) Transmitter in the air traffic control tower (ATC) with an external antenna; this would allow ATC operators to simply flip a switch to operate the ERGLs.

The Avlite ERGLs provide unidirectional yellow LED lights that alternatively flash 45-50 times per minute at the runway HOLD position. The energy efficient LEDs used in the ERGLs have an average life span of over 100,000 hours. Light head features an adjustable (1° increments) light beam and are mounted on a 300 MPH, jet-blast resistant, frangible coupling.

The integrated solar module and battery system are supplied on frangible mounts in high strength, FAA and ICAO compliant, yellow, powder coated frames for aircraft safety and recognition.

The U.S. Air Force also installed Avlite's optional ALCMS (Airfield Lighting Control and Monitoring System) interface to provide remote operation of all 18 ERGLs directly from the control tower.

Avlite's solar LED ERGLs are UFC, ICAO and FAA compliant and available in both low and high intensity models (depending on user requirements).

Outcome

Avlite supplied the solar LED ERGLs with remote operation within the stringent timeline the U.S. Air Force required. The airstrip remained fully operational during construction. By utilizing Avlite's solar ERGLs, the need for expensive electrical utility costs was eliminated, as was the need to hire expensive, private electrical contractors for the installation. Significant time and cost efficiencies were realized for Aviano AFB and the U.S. Air Force.

“It was an honor to satisfy the safety and operational demands of the U.S. Air Force with our solar LED Elevated Runway Guard Lights.”

— Jeffrey Trottier, Avlite Systems
DOD Business Development Manager



Avlite's ERGLs (above) enhance safety at critical runway intersections for the F-16 fighter squadrons at Aviano Air Force base.





All Avlite Systems products are manufactured to exacting standards under strict quality control procedures. Avlite's commitment to research and development, investing in modern equipment and advanced manufacturing procedures has made us an industry leader in solar aviation lighting. By choosing Avlite Systems you can rest assured you have chosen the very best.

- ✓ Experienced & Trained Personnel
- ✓ Worldwide Distribution Team
- ✓ Agile Manufacturing
- ✓ Product Innovation
- ✓ Precision Construction
- ✓ Total Quality Management
- ✓ ISO9001:2015
- ✓ Rapid Turnaround

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11 Industrial Drive,
Somerville VIC 3912
AUSTRALIA
t +61(0)3 5977 6128
f +61(0)3 5977 6124

11 Pinbush Road
Lowestoft, Suffolk NR33 7NL
UNITED KINGDOM
t +44 (0) 1502 588 026
f +44 (0) 1502 588 047

61 Business Park Drive
Tilton, New Hampshire 03276
USA
t +1 (603) 737 1311
f +1 (603) 737 1320

8 Wilkie Road
#03-01, Wilkie Edge
SINGAPORE 22809
t +65 (0) 6829 2243
f +65 (0) 6829 2253

www.avlite.com
info@avlite.com

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