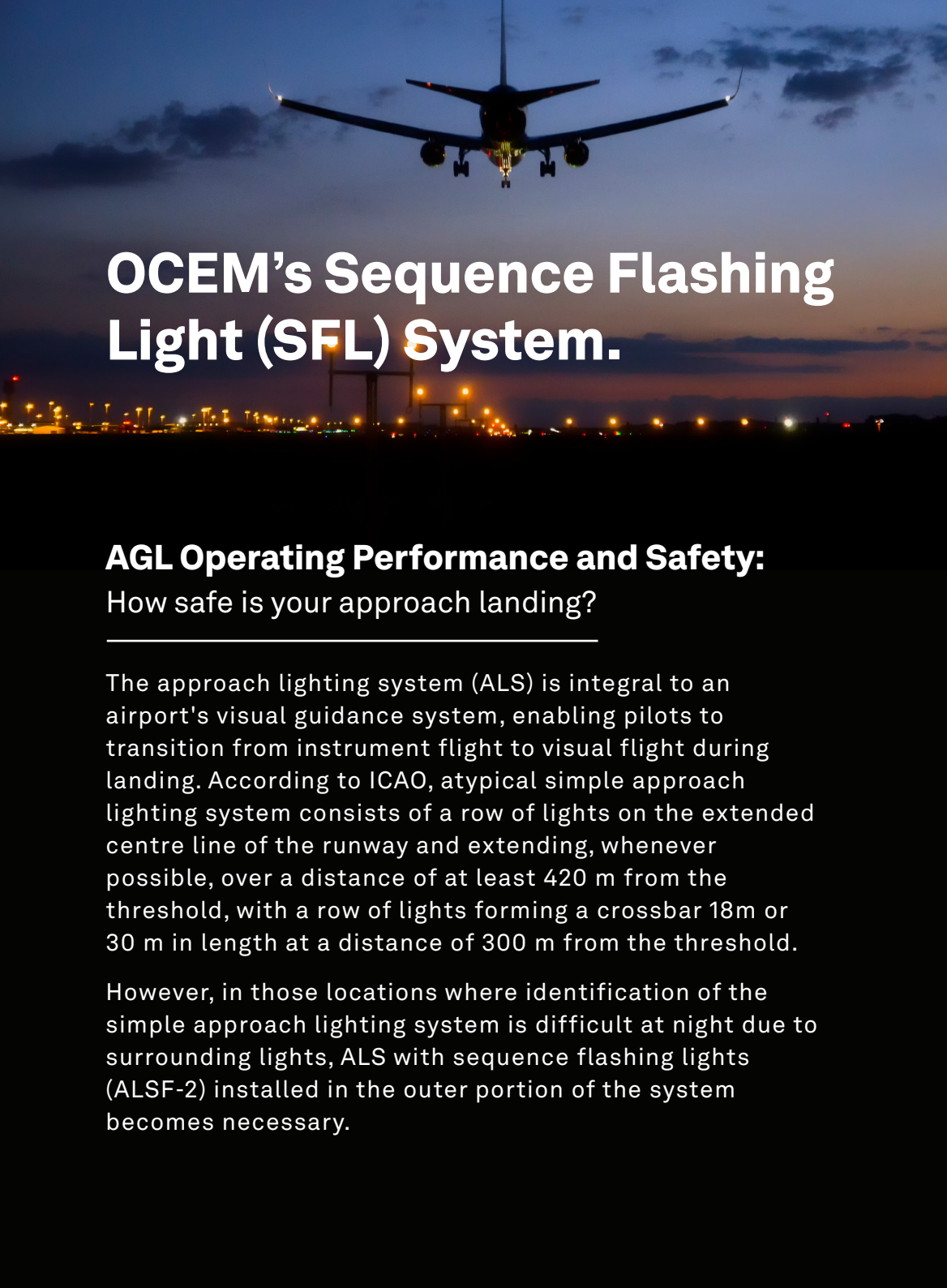


A background image of an airplane landing at night. The plane is silhouetted against a dark sky with some clouds. The runway lights are visible in the foreground, creating a bright, glowing line of light. The overall scene is dark, emphasizing the lights of the aircraft and the runway.

OCER's Sequence Flashing Light (SFL) System.

AGL Operating Performance and Safety:

How safe is your approach landing?

The approach lighting system (ALS) is integral to an airport's visual guidance system, enabling pilots to transition from instrument flight to visual flight during landing. According to ICAO, atypical simple approach lighting system consists of a row of lights on the extended centre line of the runway and extending, whenever possible, over a distance of at least 420 m from the threshold, with a row of lights forming a crossbar 18m or 30 m in length at a distance of 300 m from the threshold.

However, in those locations where identification of the simple approach lighting system is difficult at night due to surrounding lights, ALS with sequence flashing lights (ALSF-2) installed in the outer portion of the system becomes necessary.

While the ALSF-2 is quite commonplace, not all flashing lights are the same. Many are difficult to install and even harder to maintain. OCER's LED Sequence Flashing Light (SFL) system stands out through a unique set of features and design, namely:

Flexibility: Supports different flashing modes including sequenced flashing, contemporary flashing and clustered flashing. Lights have three configurable luminance levels: high (100%), medium (30%) and low (10%)

Easy installation and maintenance: Power line communication and a dedicated menu on the master unit's touch panel make it easy to send configuration data to the flash unit in the field, enabling smooth installation of new lights and replacement of potentially damaged fixtures

Supports Plug & Play: Easy integration into other systems. For example it can be integrated remotely in OCER's Airport Lighting Control and Monitoring System (ALCMS) or other third-party software platforms

Extremely Fast: The lights come on very quickly at start-up and in the unlikely event of a power outage

Appealing & User-friendly: The visual representation of the flashing light system topology is straightforward making it very easy to use

Of Highest IP Grade lights: The lights are either IP68 or 67

Low Power Consumption: The system only requires 35W of power for operation

Widely Compliant: It is compliant with ICAO, EASA, IEC, FAA, STANAG and CASA

OCEM's Sequence Flashing Light (SFL) system setup



Flash Master Control Unit (FMCU): The FMCU is the interface between the control system and the flashing units on the field. It has two main functions; that of supplying power to the flash field units (FFU) and in controlling and monitoring the entire system. The FMCU communicates through power line communication.



Flash Field Unit (FFU): The FFU receives and executes commands from the FMCU. It supplies power to the associated elevated/inset light fixture and provides diagnostic information such as LED status, faults etc. to the FMCU.



Flashing Lights: The flashing lights can either be an elevated option such as LEFL or an inset fixture such as LIFL.

Advantages of OCEM's SFL system

OCEM's market leading full LED approach solution comprises the precision approach path indicator (PAPI), elevated and inset approach lights and the SFL. The company offers the best quality-price ratio solution in the market that is successfully installed at several leading airports worldwide. The advantages of OCEM's SFL system:

- **Advanced Control and Monitoring features:** Many electrical and environmental parameters are automatically available in the master unit, enabling predictive maintenance operations
- **Full control:** The system can be controlled from either a local interface (industrial grade touch screen) or remote ALCMS
- **System Monitoring:** The system diagnostic panel makes monitoring easy and convenient
- **Unique Smart Repeater function:** In the event of communication issues, the FMCU adopts multi-hop techniques to reach all the units, guaranteeing increased communication robustness
- **Thyristor-based synchronization:** Accurate synchronization between the lights is guaranteed even with poor communication links

OCEM's LED SFL system guarantees a safer approach at Bardufoss Military Airbase in Norway



The Norwegian army commissioned OCEM Airfield to deploy an LED flashing system at one of its military bases. OCEM supplied the LEFL, a versatile flashing light suitable as an approach SFL, a Runway Threshold Identification Light (RTIL), and a Circling Guidance Light (CGL). The flashing light system is used as a landing aid and complements the elevated runway lights (LERA), also supplied by OCEM.

It is often switched on in poor weather conditions to guide planes to the airfield and is switched on when the effective range of steady burning approach lights at full intensity becomes insufficient to ensure adequate guidance. Often the flashing lights are also switched on in good visibility conditions to facilitate the location of the runway. The customer has been extremely happy with the full implementation of the solution which is a big step forward in guaranteeing a safer approach at the Norwegian military airport.

**Contact us for more information or consult
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