

# NOVA

## PARATONER TOPRAKLAMA

### 'PowerLED' TECHNOLOGY

## AIRCRAFT WARNING SYSTEMS





## WHAT IS A WARNING SYSTEM ?

A warning system is a device that allows a stationary object within the airline's field of view alerting by means of light within a certain range. There are basically two different types; power supplied and solar powered.

## HOW IT WORKS ?

The electric powered warning lights with light sensor (photocell) are designed to be "off" during the day and "on" at night. Also the solar powered models that store the energy during the day are designed to be work as the same way too.

## WHERE IS IT USED ?

- Airports
- Radio & Telecommunication towers
- Wind Turbines
- Industrial smoke stacks
- Tall buildings and business towers
- Cranes
- Energy transmission lines

## WHY IS IT IMPORTANT ?

According to the rules of International Civil Aviation Organization (ICAO); High buildings, skyscrapers, towers, mountains, etc., located in the routes of air vehicles such as airplanes and helicopters have to have light warning systems in terms of safety of navigation.



## DON'T LOSE THE Visibility...

**The PowerLED** technology warning light is produced with a different technology from the classical type of warning lights. It is designed to allow maximum light distribution under minimum environmental conditions.

**The PowerLED** technology warning light's frame is produced by "aluminum injection" technology. The special glass design is not easily affected by external factors; it is very durable and has a solid structure.

**The PowerLED** technology warning light's LED cooler function ensures that the device is long-lived and maintenance-free when lifting faults due to frequent heating problems seen in the classical type of warning lamps.



### SINGLE AIRCRAFT WARNING LIGHT

Product Code	AE 71005
Material	Glass on aluminum body
Package Size	11.5 x 11.5 x 24 (cm)
Package Weight	1.5 kg
Warranty	2 years



### DOUBLE AIRCRAFT WARNING LIGHT

Product Code	AE 71006
Material	Glass on aluminum body
Package Size	11.5 x 33.5 x 45 (cm)
Package Weight	5.3 kg
Warranty	2 years



### WARNING LIGHT FIXING ARM

Product Code	AE 65371
Material	Steel
Plating	Electro galvanized
Product Size	Contact the company
Product Weight	2 kg



**SINGLE HEAD  
WARNING LIGHT  
WITH SOLAR PANEL**

Product Code	AE 71008
Material	Glass on aluminum body
Package Size	Contact the company
Package Weight	Contact the company
Warranty	2 years

**DOUBLE HEAD  
WARNING LIGHT  
WITH SOLAR PANEL**

Product Code	AE 71007
Material	Glass on aluminum body
Package Size	Contact the company
Package Weight	Contact the company
Warranty	2 years



## DEVICE OPERATION MODE

There is a microprocessor in the electronic circuit of this device which enables us to program the flashing modes.

LED beacons are manufactured in one of the following modes:

**Flashing Mode:** The flashing frequency is 1 Hz.

**Steady Mode :** All the LEDs in the light emit constant light.

## FAULT FUNCTIONS

Both luminaires have the same electronic circuits and they both have two fault detection outputs: power fault (normally close) and LED fault (normally open). In case of a failure, an externally connected lamp, buzzer or alternative signal to the related output is activated.

**Power Fault:** If there is a power supply failure, device can send an information by dry contact.

**LED Fault:** The micro controller checks all the LEDs every 15 minutes and detects a failure. If the PowerLED stop emitting light, device can send an information by Dry Contact. A light sensor is built in to the circuits which turn on and off the LEDs during all night and all day.

**Important Note:** Double aircraft warning light is designed to power on one of the warning light as soon as the light sensor is triggered by the dark. In case of a fault in the operating beacon light, the other light turns on in maximum of 10 seconds and the faulty unit generates a fault indication signal.



**FAA-** Federal Aviation Administration / United States (AC No. 150/5345-43F, 2006)

**FAA-** Federal Aviation Administration / United States (Tip L810)

**ICAO-** International Civil Aviation Organization (Addit.14, 4.Edition July 2004)

**ICAO-** International Civil Aviation Organization (Low Power, Type B)

**DGAC-** Direction General of Civil Aeronautics / Mexico

**İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI**  
(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)  
Adres/Address: İnönü Cad. No:38, Sefaköy-Küçükçekirce / İSTANBUL Tel: (0212) 444 1 428

**MUAYENE VE DENEY RAPORU**  
TEST REPORT

**TÜRKAK**  
T.C. EKİŞ  
T.C. İZMİR İZMİR

IAU	
15-238	
02.10.2015	

**Deneysel Talep Eden** : AMPER TEKNOLOJİ ELEKTROMEKANİK MÜHENDİSLİK TİCARET A.Ş.  
(Adı, Adresi, Şehiri v.b.) Perpa Ticaret merkezi A Blok Kat:11 No 1406 P.K. 34385 ŞİŞLİ / İSTANBUL  
Customer (Name, Address, City etc.)

**Deneysel Talep Tarihi / No** : 01.10.2015  
Order Date / No

**Numunenin Kabul Tarihi** : 01.10.2015  
Test Item Receipt Date

**Deneyleerin Yapıldığı Tarih** : 02.10.2015  
Date of Test

**Uygulanan Standart /Metod** : TS EN13832-1 ; TS 3033 ENR0529  
Applied Standard/Method

**Raporun Sayfa Sayısı** : 16  
Number of Pages of the report

**Açıklamalar**  
Deney ve/veya ölçüm sonuçları genişletilmiş ölçüm belirsizlikleri (jansması halinde) ve deney metodları bu raporda tamamlanmış kısımlar olan takip eden sayfalarda verilmiştir.  
The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Mühür Seal	Tarih Date	Deneysel Sorumlusu Person in Charge Sercan ÖZKAN Lab. Tech.	Kontrol Eden Reviewer Tamer ŞAHİN Quality Manager	Onaylayan Approved By Prof. Dr. Zafer ULLU Lab. Manager
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İki rapor, herhangi bir istatistiksel veri ile olmadan keskin kopyaları çoğaltılmamalıdır. İstatistiksel veri tabanlı raporlar gerektirir. Bu rapor, sadece benzersiz örnekler için geçerlidir. "Kısmi Seçim" yerine geçmez.  
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(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)  
**MUAYENE – DENEY SONUÇLARI / TEST RESULTS**

## FOTOMETRİK ÖLÇÜM SONUÇLARI / PHOTOMETRIC MEASUREMENT RESULTS

Ölçülen Toplam Güç / Measured Total Power	5W – 0,47gf – 44mA
Ölçülen Işık Akısı / Measured Luminous Flux	162,83 lm
Merkezde Ölçülen Işık Şiddeti / Measured Luminous Intensity in centre	53,4 Candela

## FOTOMETRİK ÖLÇÜM BELİRSİZLİK TABLOSU / PHOTOMETRIC MEASUREMENT UNCERTAINTY BUDGET

Deneysel Test / Unit	Ölçüm Belirsizliği / Uncertainty
Radiant Flux (Watt)	1,3%
Luminous flux (Lumen / Lm)	1,08%



## PARATONER TOPRAKLAMA

### 'PowerLED'

### TECHNICAL SPECTS

FUNCTIONS	POWER SUPPLIED WARNING LIGHT	WARNING LIGHT WITH SOLAR PANEL
LIGHT OUTPUT	>53 candela	>53 candela
VERTICAL DIVERGENCE	10 degree	10 degree
HORIZONTAL	360 degree	360 degree
LED COLOUR	Red	Red
LED LIFESPAN	100.000 hours	100.000 hours
FLASH PATTERN	Steady burning (Default)	Steady burning (Default)
INPUT VOLTAGE	110-220 VAC, 50/60 Hz, 12-24-48 VDC	110-220 VAC, 50/60 Hz, 12-24-48 VDC
POWER CONSUMPTION	8 W	8 W
SOLAR PANELS	-	20 W
BATTERY	-	12 V / 7.2 Ah x 2 Units
LENS	Glass, UV stabilized	Glass, UV stabilized
BODY	Die-casting aluminium	Die-casting aluminium
WATER PROOF	IP 65	IP 65
WEIGHT	1.5 KG	5.3 KG
MOUNTING SIZE	Threaded 3/4" bottom hub	Threaded 3/4" bottom hub
TEMPERATURE RANGE	-40 C° ~ +55 C°	-40 C° ~ +55 C°
RELATIVE HUMIDITY	100% with condensation	100% with condensation
WIND SPEED	Up to 150mph (240kph)	Up to 150mph (240kph)
WARRANTY	2 Years	2 Years
OPTIONAL	Available in flashing pattern (1 HZ)/Available with built-in photo sensor/Available with built-in alarm relay contacts	

Nova Paratoner Topraklama İnşaat ve San. Tic. Ltd. Şti.

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