ema

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

C A T A L O G U E

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

ABOUT EMA

COMPANY PROFILE

Established in 1986, EMA Tesisat is the leading airfield ground lighting manufacturer from Turkey. Known for its products' quality, reliability and durability EMA has been supplying numerous civil and military airports worldwide for 30 years.
EMA offers its customers a full range of AGL solutions. EMA's high quality, reliable AGL products are manufactured to ISO 9001:2008 Quality Procedures and Systems. Our products are fully compliant with and tested to International Standards, including ICAO, FAA, IEC and CENELEC. Our range of 12 inch inset lights has recently received FAA certification.

PRODUCTS & SERVICES

EMA's product range includes;

- approach, taxiway and runway lights, (LED & Halogen),
- transformers, connector kits and factory molded plug & receptacles,
- constant current regulators,
- remote control and monitoring systems,
- rotating airport beacons,
- obstruction lighting,
- guidance signs,
- wind direction indicators,
- frangible masts,
- heliport lighting,

REFERENCES

IN TURKEY

Ministry of Defense
- Turkish Land Forces
- Turkish Air Forces
- Turkish Naval Forces
- Turkish Gendarmerie

Ministry of Transport
- General Directorate of State Airports Authority
- General Directorate of Infrastructure Investments
- General Directorate of Civil Aviation

Ministry of Health
- City Hospitals
- Education and Research Hospitals
- 112 Emergency Hospitals
- Private Hospitals

Hotels

Shopping Malls

Office Buildings and Residences

ABROAD

- Turkmenistan
- Azerbaijan
- Kazakhistan
- Kyrgyzstan
- Georgia
- Pakistan
- Afghanistan
- Indonesia
- Irak
- Egypt
- Iran
- Jordan
- Libya
- Algeria
- Macedonia
- Albania
- Bulgaria
- Greece
- Cyprus

FAA L-850

IEC 61822

IEC 61823

IEC TS 61827

CENELEC ENV 50235

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

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TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

REL (R-2150)
ELEVATED RUNWAY EDGE LIGHT

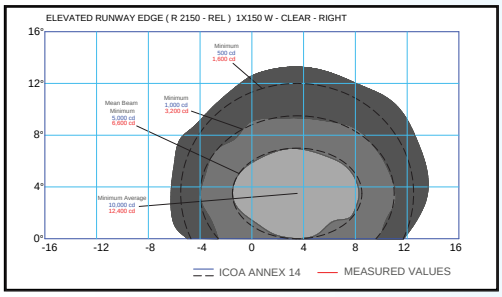
RELATED STANDARDS
FAA AC 150/5345-46 L-862
ICAO Annex 14 Vol. 1 Para. 5.3.9
IEC TS 61827
STANAG 3316

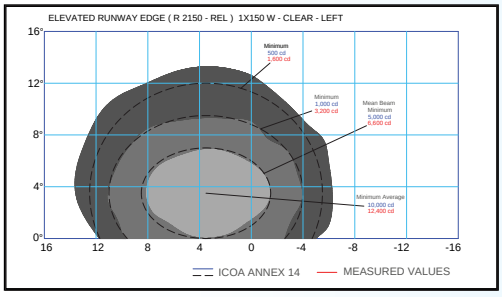
APPLICATIONS
- As high intensity, bidirectional edge lighting for runways up to 60 meters wide in CAT I, II & III conditions
- As medium or high intensity runway edge, threshold and runway end light

IMPORTANT FEATURES
- IEC TS 61827 certified
- Small size helps resist heavy jet blasts at runway end and threshold
- Easily mounted with frangible coupling over a 2" muff pipe
- Needs very little maintenance thanks to simple construction and minimum number of parts
- Accurate and effective photometrics with one PK30d prefocused quartz halogen lamp
- Re-lamping is fast and easy without any tools
- Multipurpose optical system with 2 piece inner glass lens any combination of colors can be made
- Long lamp life 1000 hours at full intensity (6.6A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities.

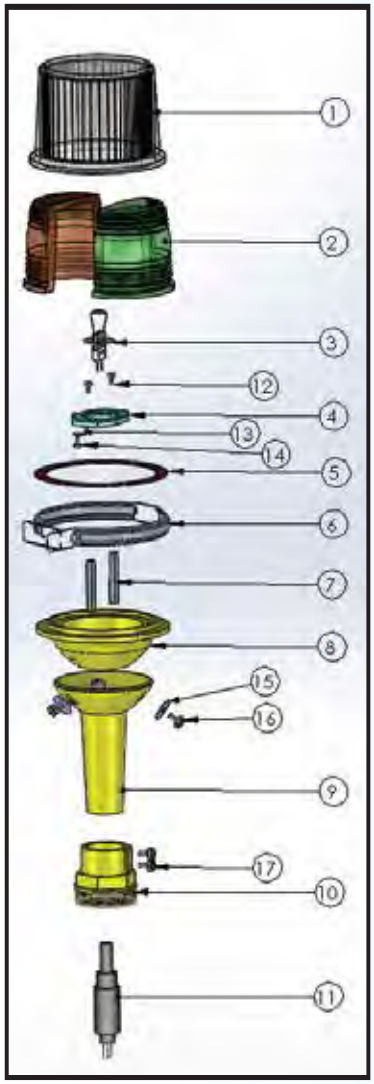
ELECTRICAL SUPPLY
Through a 100W, 150W or 200W isolating transformer.

PHOTOMETRIC PERFORMANCE





MATERIALS & FINISH
Chromate treatment and electrostatic powder coating.
The color is aviation yellow and hardware is made of stainless steel.



CONSTRUCTION
1. Outer dome, glass, externally smooth
2. 180° inner prismatic lenses, glass, through-colored clear
3. Lamp, quartz halogen, prefocused PK30d
4. Lamp base
5. O-ring gasket for heat
6. Clamping ring made of stainless steel
7. Lamp height adjustment jig
8. Upper body, die-cast aluminium alloy
8. Lamp base hardware
9. Lower body, die-cast
10. Frangible coupling
11. Style 1 & 6 plug
12. Screw
13. Screw
14. Screw
15. Washer
16. Aiming screw
17. Coupling to body screws

WEIGHT
With the inner lenses, Net weight is 2,2 kg.

PACKING INFO
In cardboard boxes of 15,8x15,8x31,5cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

TEL (T-2045)
ELEVATED TAXIWAY EDGE LIGHT

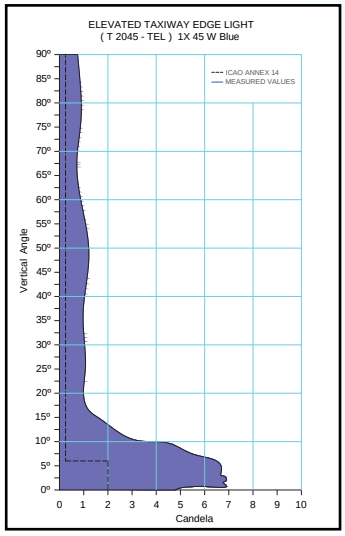
RELATED STANDARDS
FAA AC 150/5345-46 L-861T
ICAO Annex 14 Vol. I Para. 5.3.18
IEC TS 61827
STANAG 3316

APPLICATIONS
- As medium intensity taxiway edge light
- As omni-directional heliport perimeter light (FATO & TLOF)

IMPORTANT FEATURES
- IEC TS 61827 certified
- Available with halogen lamp or LED module
- Small size helps resist heavy jet blasts
- Easily mounted with frangible coupling over a 2" muff pipe
- Needs very little maintenance thanks to simple construction and minimum number of parts
- Re-lamping is fast and easy without any tools
- Long lamp life 1500 hours at full intensity (6.6A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities. LED fixture has an average life of 50000 hours at high intensity.

ELECTRICAL SUPPLY
Through,
- 45 W isolating transformer for halogen lamp.
- 20/25 W isolating transformer for LED.

PHOTOMETRIC PERFORMANCE



CONSTRUCTION
1. Blue colored, prismatic dome
2. Lamp, quartz halogen, prefocused PK30d
3. Silicone rubber gasket for watertightness
4. Stainless steel clamp
5. Lamp holder
6. Upper body, die-cast aluminium alloy
7. Lower body, die-cast
8. Breakable coupling
9. 2 pole FAA L-823 plug
10. Screw
11. Screw
12. Screw
13. Lamp height adjustment jig
14. Washer
15. Aiming screw
16. Coupling to body screws

MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel

WEIGHT
Net weight is 1,6 kg. Halogen, 2 kg. LED

PACKING INFO
In cardboard boxes of 15,8 x 15,8 x 31,5 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

RGL (WIG-WAG)
LED ELEVATED RUNWAY GUARD LIGHT

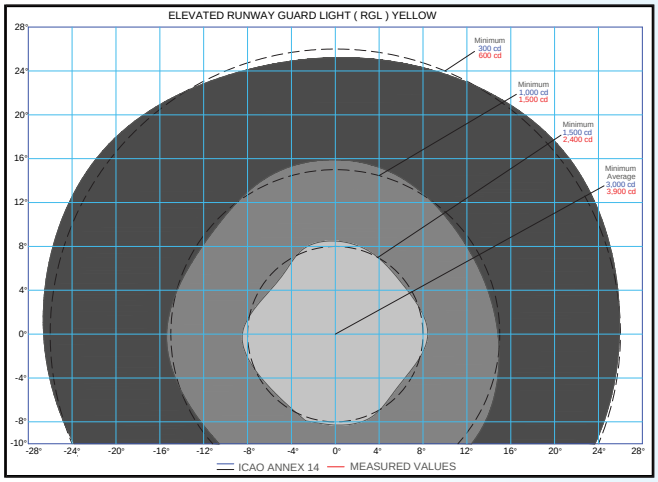
RELATED STANDARDS
FAA AC 150/5345-46 L-804
ICAO Annex 14 Vol. I Para. 5.3.23
IEC TS 61827
STANAG 3316

APPLICATIONS
• Unidirectional high intensity flashing yellow lights used in pairs as a warning to pilots and drivers of vehicles when they are operating on taxiways, that they are about to enter a runway

IMPORTANT FEATURES
- Alternate flash rates 45-50 fpm
- Long lamp life LED fixture has an average life of 50000 hours at high intensity
- Easy maintenance with on/off switch and circuit breaker
- Easily mounted with frangible coupling
- Supplied with tether to keep from breaking loose
- Resist jet blasts up to 480 km/h
- The two light sources are surrounded by a black face plate and independent visors to reduce the amount of reflecting sunlight
- Monitoring is available

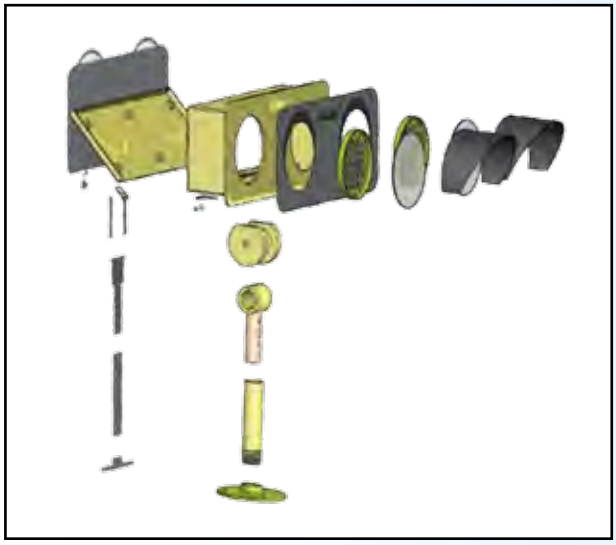
ELECTRICAL SUPPLY
Through 45 W isolating transformer

PHOTOMETRIC PERFORMANCE



MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel.

CONSTRUCTION



WEIGHT
Net weight is 14 kg. Dimensions: 70 x 70 x 40

PACKING INFO
In cardboard boxes of : 84,5 x 78 x 50 cm. / 20 kg.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

PA 45
PORTABLE AIRFIELD LIGHT

RELATED STANDARDS
ICAO Annex 14 Vol. I Para. 5.3.2

APPLICATIONS
• For temporary installations at civil and military airfields and heliports in case of emergency or maintenance power-offs or to delineate areas temporarily closed to traffic for works

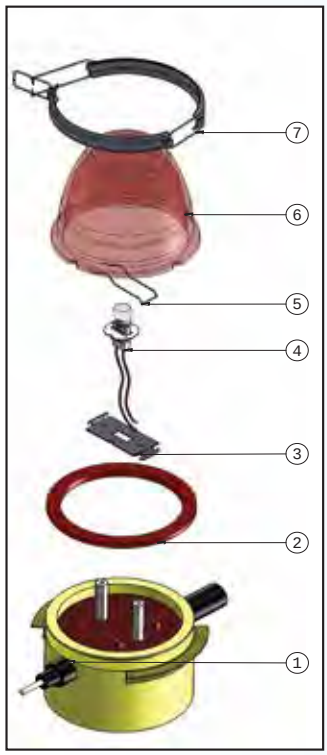
IMPORTANT FEATURES
• Available with halogen lamp or LED module
• Long lamp life 1000 hours at full intensity (6.6A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities. LED fixture has an average life of 50000 hours at high intensity.
• Needs very little maintenance thanks to simple construction and minimum number of parts
• In compliance with IEC 61823 for electrical characteristics of the transformer
• Plug and receptacle to FAA L-823
• Wide choice of lens types and colors

ELECTRICAL SUPPLY
Through combined isolating transformer;
• 45 W isolating transformer for halogen lamp.
• 20/25 W isolating transformer for LED.

MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel.

WEIGHT
Net weight is 3,3 kg

PACKING INFO
In cardboard boxes of : 21 x 21 x 19 cm.



CONSTRUCTION
1. Aluminium alloy body and combined isolation transformer
2. Silicone rubber gasket for water tightness
3. Lamp holder
4. Lamp, quartz halogen prefocused PK30d
5. Lamp base fitting hardware
6. Prismatic dome
7. Stainless steel clamp

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

TEL-B (T-2045 B)
8" INSET TAXIWAY EDGE LIGHT

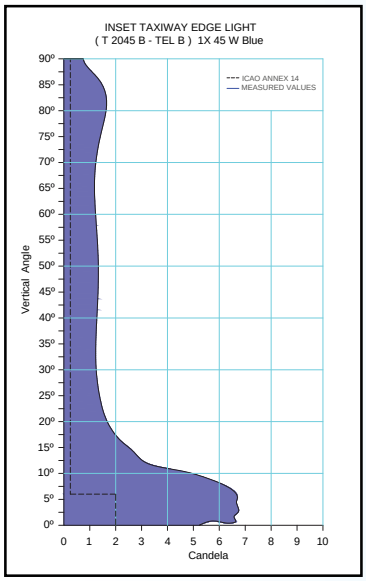
RELATED STANDARDS
FAA AC 150/5345-46 L-852T
ICAO Annex 14 Vol.I Para. 5.3.18
IEC TS 61827
STANAG 3316

APPLICATIONS
- As medium intensity taxiway edge light
- As omni-directional heliport perimeter light (FATO & TLOF)

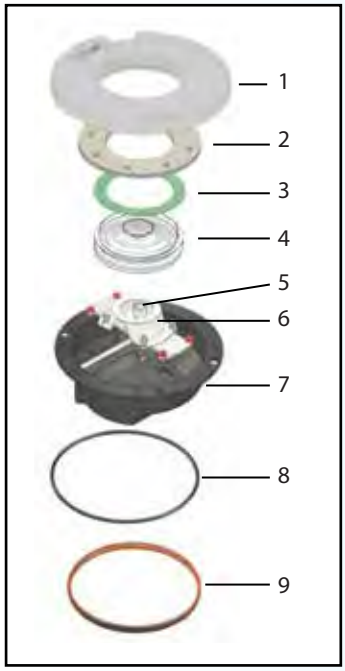
IMPORTANT FEATURES
- IEC TS 61827 certified
- Available with halogen lamp or LED module
- Simple installation, uninstallation
- Needs very little maintenance thanks to simple construction and minimum number of parts
- Re-lamping is fast and easy without any tools
- Long lamp life 1500 hours at full intensity (6.6 A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities. LED fixture has an average life of 50000 hours at high intensity.
- Accumulation of water in front of the lens does not effect photometric performance
- The light has a 12,5 mm height from ground level

ELECTRICAL SUPPLY
Through,
- 45 W isolating transformer for halogen lamp
- 20/25 W isolating transformer for LED

PHOTOMETRIC PERFORMANCE



MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation grey and hardware is made of stainless steel



CONSTRUCTION
1. Top cover
2. Prism holder
3. Prism gasket
4. Prism
5. 45W quartz halogen prefocused PK30d lamp
6. Anodized aluminium reflector
7. Bottom cover
8. O-ring gasket
9. Gasket

WEIGHT
With the inner lenses, Net weight is 3,2 kg.

PACKING INFO
In cardboard boxes of 21 x21 x 18,7 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

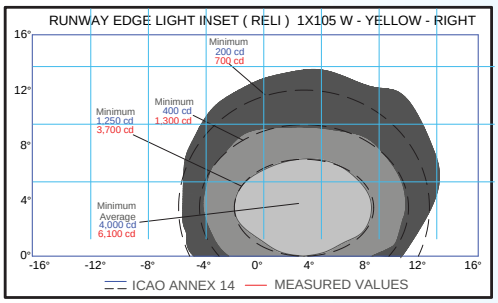
RELI
12" INSET RUNWAY EDGE LIGHT

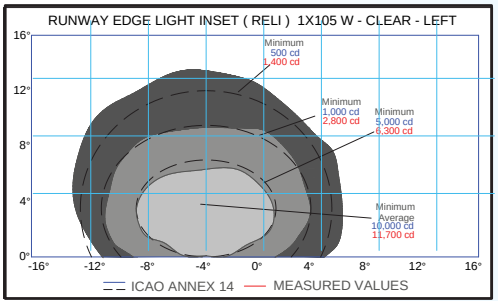
RELATED STANDARDS
FAA AC 150/5345-46 L-850C
ICAO Annex 14 Vol. I Para. 5.3.9
IEC TS 61827
STANAG 3316

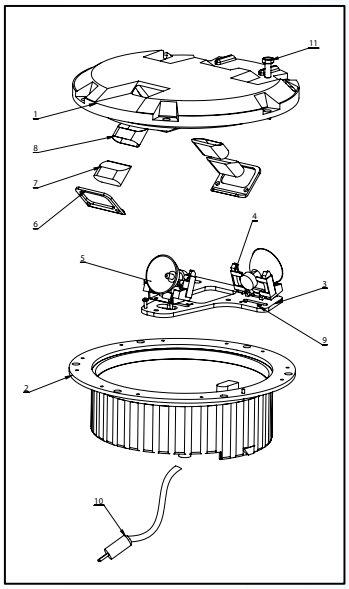
APPLICATIONS
• As bidirectional high intensity runway edge light in CAT I, II & III conditions

IMPORTANT FEATURES
• ETL Certified (L850C-RELI-3-2-105W/W)
• IEC TS 61827 Certified
• Member of an extensive range of FAA Approved 12 inch diameter inset lights
• Equipped with two 105 W 6,6 A halogen pre-focused reflector lamps
• Long lamp life 1000 hours at full intensity (6.6 A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities.
• Needs very little maintenance with its aluminium body and optics, high temperature resistant wiring, gasket and front glass and stainless steel screws
• Lamp can be changed from the back easily without removing the reflector and front glass, no special equipment is needed
• Optical adjustment is done easily by two screws
• Low rising smooth outer surface
• Can be installed directly on a 12 inch shallow base or on a L-868 Size B deep base or by means of an adapter ring on a L-868 Size C deep base

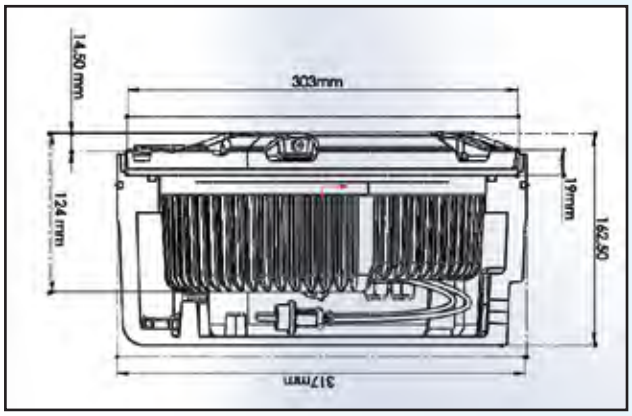
ELECTRICAL SUPPLY
Through, one 200 W isolating transformer

PHOTOMETRIC PERFORMANCE






CONSTRUCTION
1. Forged aluminium cover
2. Cast aluminium inner cover
3. Optical assembly
4. Lamp holder
5. 48 W prefocus halogen lamp
6. Prism retainer
7. Prism
8. Prism gasket
9. Optical adjustment screws
10. 2 pole FAA L-823 plug
11. Screw with washer



MATERIALS & FINISH
Aluminium alloy cover, inner cover and optical assembly. Hardware is made of stainless steel.

WEIGHT
Net weight is 8,1 kg.

PACKING INFO
In cardboard boxes of 33 x 33 x 16,5 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

TDZ
12" INSET TOUCHDOWN ZONE LIGHT

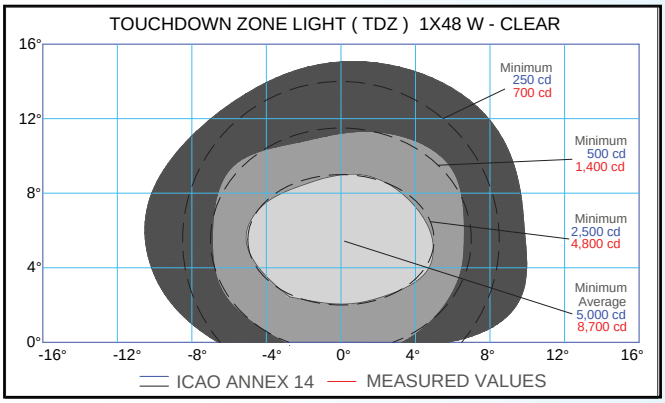
RELATED STANDARDS
FAA AC 150/5345-46 L-850B
ICAO Annex 14 Vol. I Para. 5.3.13
IEC TS 61827
STANAG 3316

APPLICATIONS
• As unidirectional touchdown zone light in CAT II & III conditions

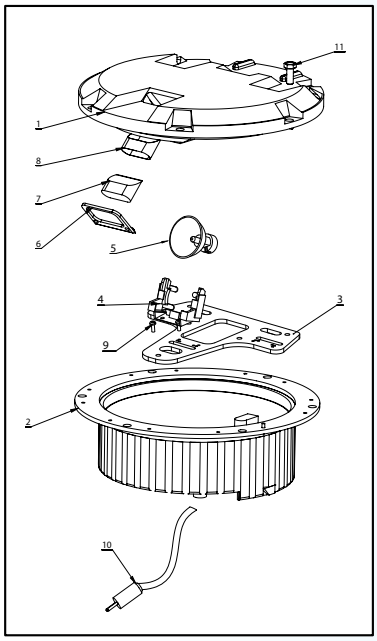
IMPORTANT FEATURES
• ETL Certified (L850B-TDZ-3-1-48W)
• IEC TS 61827 Certified
• Member of an extensive range of FAA Approved 12 inch diameter inset lights
• Equipped with one 48 W 6,6 A halogen pre-focused dichroic reflector lamps.
• Long lamp life 1500 hours at full intensity (6.6 A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities.
• Needs very little maintenance with its aluminium body and optics, high temperature resistant wiring, gasket and front glass and stainless steel screws
• Lamp can be changed from the back easily without removing the reflector and front glass, no special equipment is needed.
• Optical adjustment is done easily by two screws
• Low rising smooth outer surface
• Can be installed directly on a 12 inch shallow base, on a L-868 Size B deep base or by means of an adapter ring on a L-868 Size C deep base

ELECTRICAL SUPPLY
Through one 45 W isolating transformer

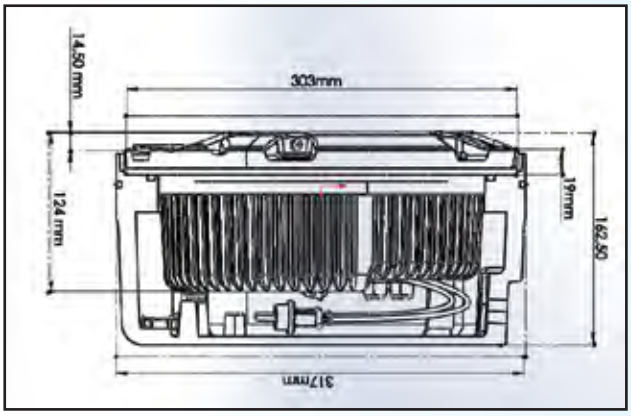
PHOTOMETRIC PERFORMANCE



MATERIALS & FINISH
Aluminium alloy cover, inner cover and optical assembly. Hardware is made of stainless steel.



CONSTRUCTION
1. Forged aluminium cover
2. Cast aluminium inner cover
3. Optical assembly
4. Lamp holder
5. 48 W prefocus halogen lamp
6. Prism retainer
7. Prism
8. Prism gasket
9. Optical adjustment screws
10. 2 pole FAA L-823 plug
11. Screw with washer



WEIGHT
Net weight is 8 kg.

PACKING INFO
In cardboard boxes of 33 x 33 x 16,5 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

RCL / TCL
8" INSET RUNWAY, TAXIWAY CENTER LINE LIGHT

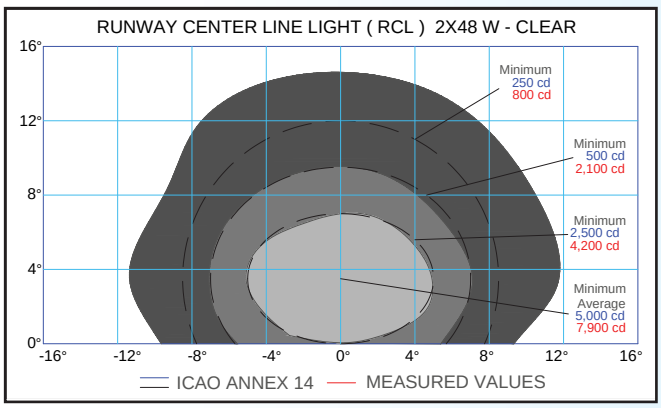
RELATED STANDARDS
FAA AC 150/5345-46 L-850A L-852A L-852B L-852C L-852D
ICAO Annex 14 Vol. I Para. 5.3.12 5.3.17
IEC TS 61827
STANAG 3316

APPLICATIONS
- As high intensity bidirectional runway center line light CAT II & III conditions
- As high intensity bi-directional taxiway center line light in CAT I, II and III conditions

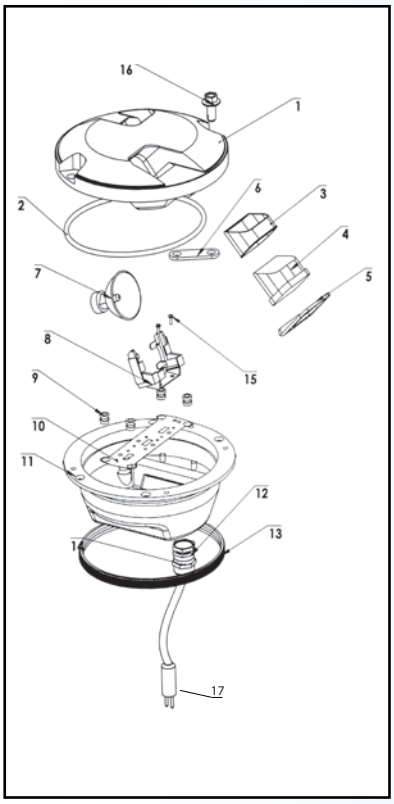
IMPORTANT FEATURES
- IEC TS 61827 Certified
- Needs very little maintenance with its aluminium body and optics, high temperature resistant wiring, gasket and front glass and stainless steel screws
- Equipped with two 48 W 6,6 A halogen pre-focused reflector lamps
- Needs very little maintenance with its aluminium body and optics, high temperature resistant wiring, gasket and front glass and stainless steel screws
- High mechanical strength obtained by forged aluminium helps resist all kind of aircraft loads
- Optical system simple and watertight
- Long lamp life 1500 hours at full intensity (6.6 A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities

ELECTRICAL SUPPLY
6,6 A through one 100 W isolating transformer

OPTICAL PERFORMANCE



MATERIALS & FINISH
Aluminium alloy cover, inner cover and optical assembly. Hardware is made of stainless steel



CONSTRUCTION
1. Forged aluminium cover
2. Silicon gasket
3. Prism gasket
4. Prism
5. Prism retainer
6. Prism retainer
7. 48/105 W reflective halogen lamp
8. Lamp holder
9. Optical adjustment screws
10. Optical assembly
11. Cast aluminium inner cover
12. Nut with washer and stainless steel racor
13. Silicon gasket
14. Nut with washer and stainless steel racor
17. 2 pole FAA L-823 style 1/6 plug

WEIGHT
Net weight is 8,1 kg.

PACKING INFO
In cardboard boxes of 21 x 21 x 18,7 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

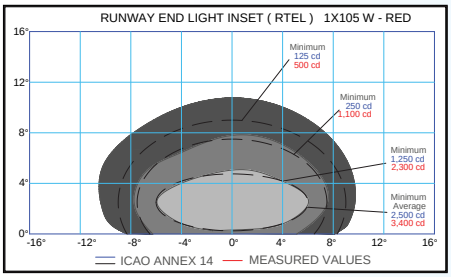
RTEL
12" INSET RUNWAY END, THRESHOLD LIGHT

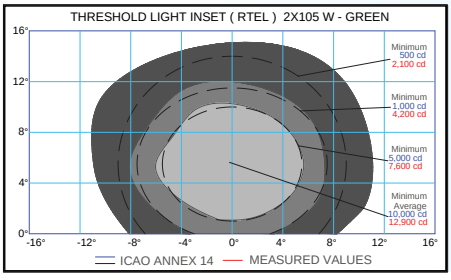
RELATED STANDARDS
FAA AC 150/5345-46 L-850D
ICAO Annex 14 Vol. I Para. 5.3.10 5.3.11
IEC TS 61827
STANAG 3316

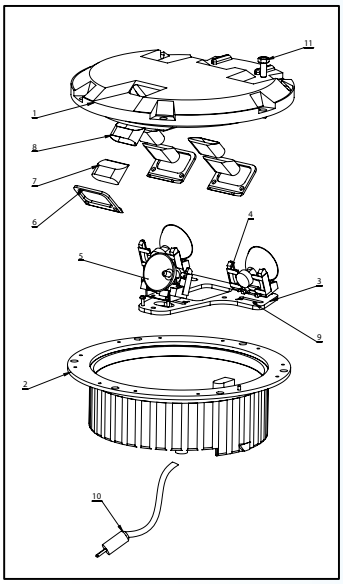
APPLICATIONS
- As bidirectional high intensity combined threshold and runway end light in CAT I, II & III conditions
- As unidirectional high intensity threshold or runway end light in CAT I, II & III conditions

IMPORTANT FEATURES
- ETL Certified (L850D-RTEL-3-1-105G)
- IEC TS 61827 Certified
- Member of an extensive range of FAA Approved 12 inch diameter inset lights
- Equipped with three or two 105 W 6,6 A halogen pre-focused reflector lamps
- Long lamp life 1000 hours at full intensity (6.6 A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities
- Needs very little maintenance with its aluminium body and optics, high temperature resistant wiring, gasket and front glass and stainless steel screws
- Lamp can be changed from the back easily without removing the reflector and front glass, no special equipment is needed
- Optical adjustment is done easily by two screws
- Low rising smooth outer surface
- Can be installed directly on a 12 inch shallow base, on a L-868 Size B deep base or by means of an adapter ring on a L-868 Size C deep base

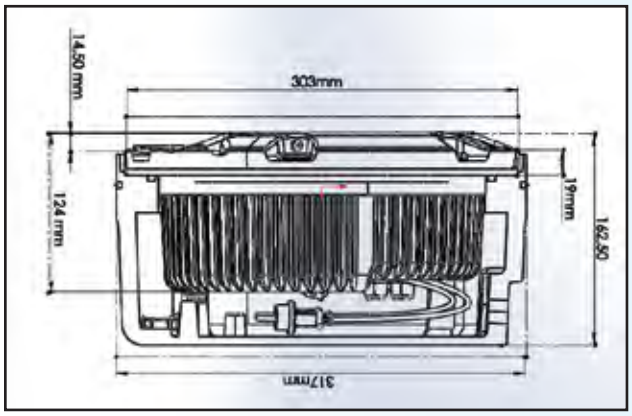
ELECTRICAL SUPPLY
Through,
- One 300 W isolating transformer (bidirectional) or
- One 100 W or one 200 W isolating transformer (unidirectional)

PHOTOMETRIC PERFORMANCE






CONSTRUCTION
1. Forged aluminium cover
2. Cast aluminium inner cover
3. Optical assembly
4. Lamp holder
5. 105 W prefocus halogen lamps
6. Prism retainer
7. Prism
8. Prism gasket
9. Optical adjustment screws
10. 2 pole FAA L-823 plug
11. Screw with washer



MATERIALS & FINISH
Aluminium alloy cover, inner cover and optical assembly. Hardware is made of stainless steel.

WEIGHT
Net weight is 8,2 kg.

PACKING INFO
In cardboard boxes of 33 x 33 x 16,5 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

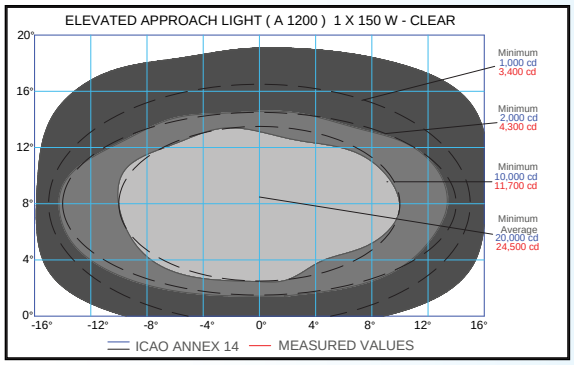
ATL (A-1200)
ELEVATED APPROACH, THRESHOLD & RUNWAY END LIGHT

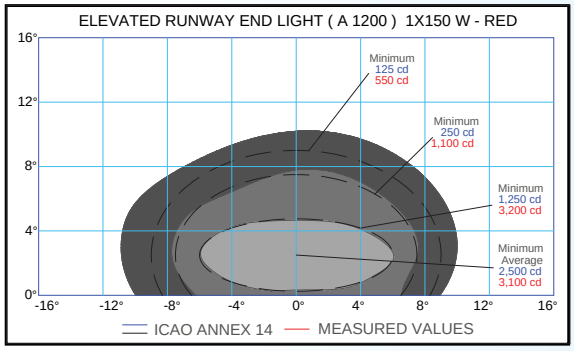
RELATED STANDARDS
FAA AC 150/5345-46 L-862S FAA-E-982
ICAO Annex 14 Vol. I Para. 5.3.4
IEC TS 61827
STANAG 3316

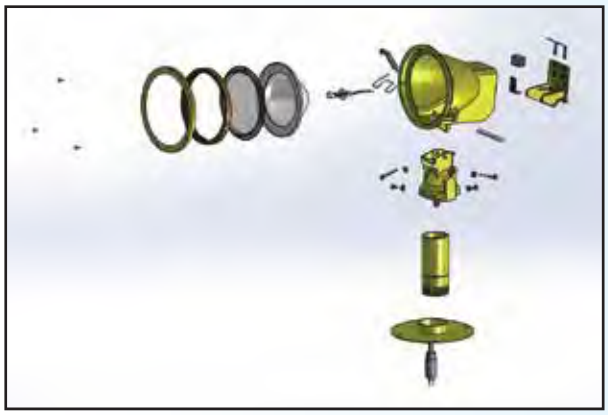
APPLICATIONS
- As high intensity approach centerline, crossbar and side row light in CAT I, II & III conditions
- As high intensity threshold, threshold wing bar, runway end and stop bar light in CAT I, II and III conditions
- As heliport flood light with visor

IMPORTANT FEATURES
- IEC TS 61827 certified
- Easily mounted with breakable coupling over a 2" conduit elbow.
- Needs no maintenance with its aluminium body and optics, temperature resistant wiring, gasket and front glass and stainless steel screws
- Lamp changed from the back easily without removing the reflector and front glass. PK30d quartz halogen, prefocused lamp needs no special equipment to be changed
- Optical adjustment is done easily by two screws
- Long lamp life uses 200 W lamp for threshold, 150W for approach , 100W for runway end and 45W for stop bar

ELECTRICAL SUPPLY
Through a 45 W, 100 W, 150 W or 200 W isolating transformer.

OPTICAL PERFORMANCE






CONSTRUCTION
1. Front ring
2. Heat resistant gasket
3. Front glass
4. Anodized specular reflector
5. PK30d quartz halogen, prefocused lamp
6. Heat resistant internal wiring
7. Electrical connectors
8. Upper body and lamp holder, die-cast aluminium
9. Back cover
10. Space for short circuit relay
11. Screws for angle adjustment
12. Lower body, die-cast aluminium
13. Breakable coupling
14. 2-pole plug to FAA L-823 with heat resistant wires

MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel.

WEIGHT
With the inner lenses, Net weight is 1,95 kg.

PACKING INFO
In cardboard boxes of 21 x 18,5 x 30 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

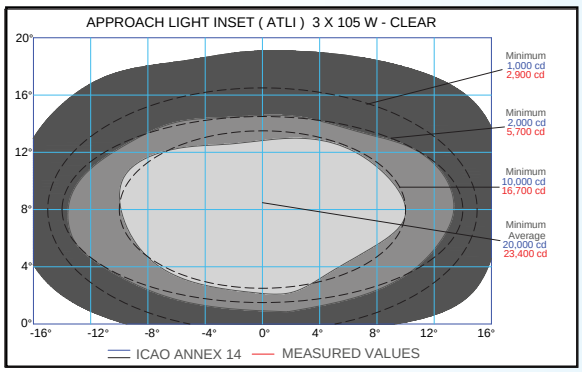
ATLI
12" INSET APPROACH LIGHT

RELATED STANDARDS
FAA AC 150/5345-46 L-850E
ICAO Annex 14 Vol. I Para. 5.3.4
IEC TS 61827
STANAG 3316

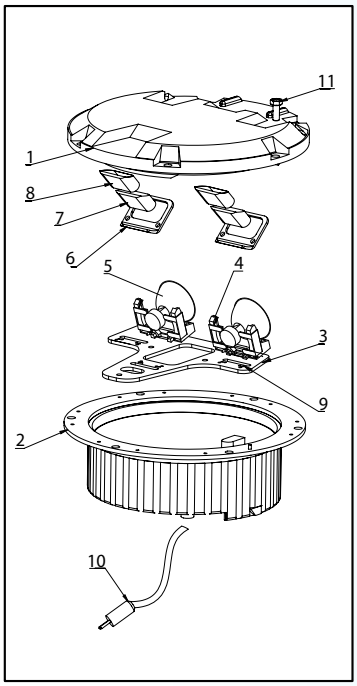
APPLICATIONS
• As unidirectional high intensity approach centerline, crossbar and side row light in CAT I, II & III conditions

IMPORTANT FEATURES
• ETL Certified (L850E-ATLI-3-2-48G)
• IEC TS 61827 Certified
• Member of an extensive range of FAA Approved 12 inch diameter inset lights
• Equipped with two or three 105 W 6,6 A halogen pre-focused dichroic reflector lamps.
• Long lamp life 1000 hours at full intensity (6.6 A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities.
• Needs very little maintenance with its aluminium body and optics, high temperature resistant wiring, gasket and front glass and stainless steel screws
• Lamp can be changed from the back easily without removing the reflector and front glass, no special equipment is needed.
• Optical adjustment is done easily by two screws.
• Low rising smooth outer surface
• Can be installed directly on a 12 inch shallow base, on a L-868 Size B deep base or by means of an adapter ring on a L-868 Size C deep base

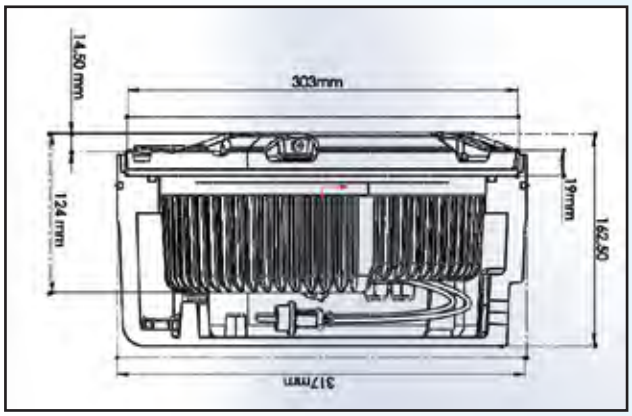
ELECTRICAL SUPPLY
Through,
• one 300 W isolating transformer (3x105 W) or
• one 200 W isolating transformer (2x105 W)

PHOTOMETRIC PERFORMANCE


MATERIALS & FINISH
Aluminium alloy cover, inner cover and optical assembly. Hardware is made of stainless steel.



CONSTRUCTION
1. Forged aluminium cover
2. Cast aluminium inner cover
3. Optical assembly
4. Lamp holder
5. 105 W prefocus halogen lamps
6. Prism retainer
7. Prism
8. Prism gasket
9. Optical adjustment screws
10. 2 pole FAA L-823 plug
11. Screw with washer



WEIGHT
Net weight is 8,1 kg.

PACKING INFO
In cardboard boxes of 33 x 33 x 16,5 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

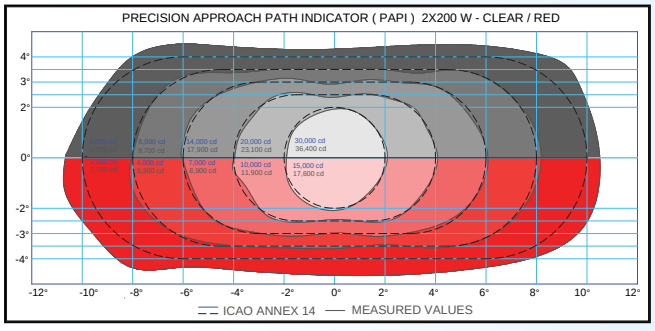
PAPI-400
PRECISION APPROACH PATH INDICATOR

RELATED STANDARDS
FAA AC 150/5345-28 L-880
ICAO Annex 14 Vol. I Para. 5.3.5
STANAG 3316

APPLICATIONS
• PAPI-400 enables the pilot precisely determine the approach angle
• PAPI-400 helps landing day and night in average conditions without the need for other instruments

IMPORTANT FEATURES
• Aerodynamic and small in size
• Sharp transition from white to red and the intensity changes less than 3 times throughout the the full beam width
• Long lamp life 2x200 W prefocused PK30d quartz halogen has a working life of 1500 hours at full intensity (6,6A) which increases to 2000-4000 hours in practice as the light usually operates at lower intensities
• Mounting and setting are done easily with special equipment
• Corrosion proof materials aluminium hardware, stainless steel screws and mounting legs
• Stable with four legs
• Waterproof dust proof thanks to the gasket, internal water drained through outlets
• Lamp bases help provide a healthy beam without doing optical adjustment after each re-lamping
• Hardened front glass against stones and other flying particles moved by the helicopter propeller

ELECTRICAL SUPPLY
Through two 200W-6,6A isolating transformers

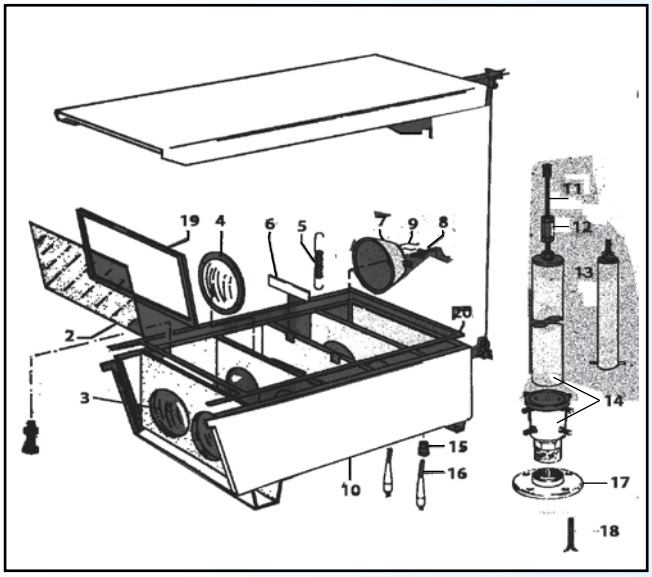
PHOTOMETRIC PERFORMANCE


MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel. legs are made of aluminium tubing

WEIGHT
Net weight is 33 kg.

PACKING INFO
In cardboard boxes of 62 x 40 x 100 cm.

CONSTRUCTION
1. Aluminium cover
2. Front glass
3. Outer lens (2)
4. Inner lens (2)
5. Filter holder
6. Red filter (2)
7. Specular reflector
8. Lamp, quartz halogen, prefocused PK30d (2)
9. Lamp holder (2)
10. Aluminium cast lockable body
11. Mounting leg (4)
12. Differential angle adjustment sleeve
13. Anchoring leg (4)
14. Mounting flange, breakable coupling and height adjustment equipment
15. Compression bushing (2)
16. Cable with 2 pole plug (2)
17. Anchor bolts (16) (optional)
18. Front glass gasket
19. Cover gasket



TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

REIL / RTIL / ALSF
RUNWAY END IDENTIFIER LIGHTS
(Runway Threshold Identification Light)

RELATED STANDARDS
FAA AC 150/5345-51 E-849
ICAO Annex 14 Vol. I Para. 5.3.8
STANAG 3316

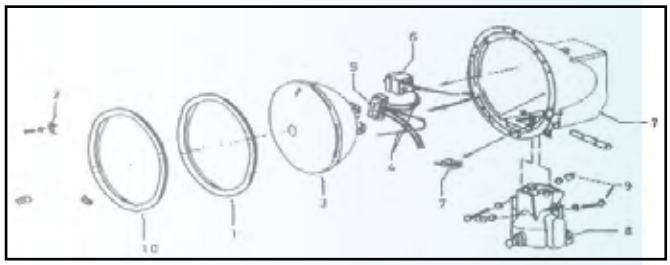
APPLICATIONS
- In high intensity precision approaches
- In identifying extension of runway centerline, sequenced flashing and in identifying runway threshold, simultaneous flashing

IMPORTANT FEATURES
- A simple electronic system is used to adjust the flashing sequence.
- Simultaneous or sequenced firing
- Thanks to simple wiring flashing sequence of the full system can be controlled with a single 2-core cable.
- Lights can be mounted on Aluminium columns with an outer diameter of 60mm.
- The light has an assembly for angle adjustment
- Silicone rubber gasket is used to provide watertightness
- Safety switch cuts off the power of control cabinet when light needs to be re-lamped.
- The light has a trigger transformer and a terminal block for incoming cables
- The lamp has a minimum life of 500 hours

IMPORTANT FEATURES OF CONTROL CABINETS
- Each light is coded in the cabinet according to its location or sequence, lights can be placed up to 50m away from the cabinets. Thermo regulated heating is done in the cabinets to prevent condensation. Input voltage adjustable from 200 to 250V ensures proper light output.
- A control cabinet contains; a monophase transformer, rectifier, power capacior, printed circuit board for triggering, contactor, terminal block for energy supply cable and connection cables to the lighths.
- Cabinets are made of fiber polyester. The cover is hinged, outlets for air circulation are designed to keep water or any other material out.
- Cabinets have special locks.
- Power supply is cut off and the capacitors are discharged automatically when the cover is opened.
- Thermo regulated heating is done against condensation.
- Has a roof structure to protect from sunlight.
- With the control cabinet breakable couplings, mounting column, clamps and all other mounting equipment are delivered
- Cabinets operate between -30°C and +60°C.
- Cabinets can resist winds as fast as 160km/hour.
- Control cards are placed in socket thus plugged and removed easily.
- Main control cabinet has the same features as the control cabinets. It also has a printed circuit board that can be adjuster to flash the system in sequence once or twice per second.

PHOTOMETRIC PERFORMANCE
- Lamp used : PAR 56 type FT34HP lamp
- Energy per flash : 60 Joule
- Peak intensity : $25x10^6$ Cd
- Effective peak intensity: 14.000 Cd
- Flash duration at half the effective intensity : 120 microseconds
- Effective Intensity at ±15° horizontal and vertical beam spreads : 8000 Cd

CONSTRUCTION OF LIGHT FIXTURES



1. Silicone rubber gasket
2. Lamp clamps
3. PAR 56 lamp FT34HP
4. Internal wiring
5. Terminal block
6. Trigger transformer
7. Die-cast aluminium body with safety switch
8. Aluminium cast lower body
9. Adjustment screws
10. Window ring

MATERIALS AND FINISH
- Lamp body and other parts have electrostatic powder coating The color is aviation yellow. Hardware, screws, washers and bolts are made of stainless steel

WEIGHT
- Control cabinets weight 14kg.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

TEL-C (T-36045)
8" INSET HELIPORT PERIMETER LIGHT

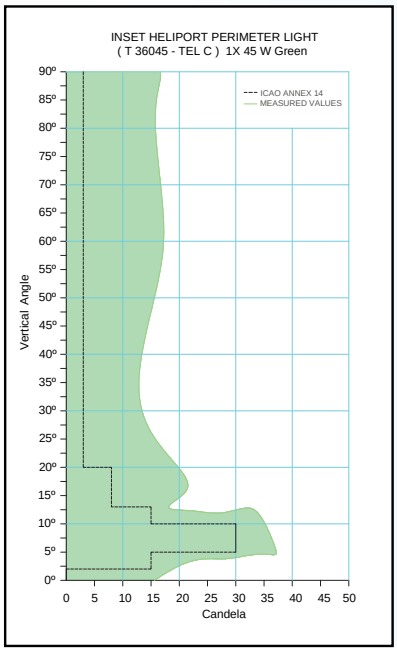
RELATED STANDARDS
ICAO Annex 14 Vol. II Heliports
IEC TS 61827
STANAG 3652

APPLICATIONS
• As omni-directional heliport perimeter light for use in Touchdown and Lift-off Areas (TLOF) as well as Final Approach and Take-off areas (FATO)
• Also used in traffic and safety lighting

IMPORTANT FEATURES
• IEC TS 61827 certified
• Available with halogen lamp or LED module
• Needs very little maintenance thanks to simple construction and minimum number of parts
• Easy changing color filters and lens
• Simple installation, uninstallation
• Energy saver uses 45 W quartz halogen PK30d lamp
• Long lamp life 1000 hours at full intensity (6.6A) increases to 2000-4000 hours in practice as the light usually operates at lower intensities. LED fixture has an average life of 50000 hours at high intensity.

ELECTRICAL SUPPLY
Through,
• 45 W isolating transformer for halogen lamp.
• 20/25 W isolating transformer for LED

PHOTOMETRIC PERFORMANCE



CONSTRUCTION
• Prismatic and heat resistant optical system
• Anodized aluminium reflector
• Silicone rubber gasket for watertightness
• 45W, PK30d, quartz halogen lamp rated 1000 hours
• LED Unit selectable, green or yellow

MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel

WEIGHT
Net weight is 2,2 kg.

PACKING INFO
In cardboard boxes of 21 x 21 x 18,7 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

OBSL/OBDL
LOW INTENSITY OBSTACLE LIGHT

RELATED STANDARDS
FAA AC 150/5345-43 L-810
ICAO Annex 14 Vol. I Para. 6.3 Type A&B

APPLICATIONS
• Marking of all fixed obstructions to air traffic such as chimneys, high rise buildings etc.

IMPORTANT FEATURES
• Available with incandescent lamp or LED
• Corrosion resistant aluminium body
• Minimum 32 cd light intensity in all directions
• The light has an easily mounted construction
• The red prismatic dome of the light are resistant to heat shocks
• Silicone rubber gasket is used between the dome and the body to provide watertightness
• The lights can operate between -40°C to +50°C and resist wind as fast as 160km/h
• In OBD or OBSL 10 cd x 32 cd when the light in use burns out, the transfer relay instantaneously tranfers the supply to the second lamp.
• Photoelectric units are optional to control the operation of lights, this can also be done by a switch or a remote control
• The lights are steady burning

CONSTRUCTION
• Prismatic dome
• Silicone rubber gasket
• Aluminium cast or sheet metal body
• Stainless steel clamps
• Porcelain lampholder and incandescent or LED lamp
• Transfer relay (only in OBDL-32CD)

OBSL

OBDL

ELECTRICAL SUPPLY
• Electrical supply is 220V 50Hz AC
• Single light and double light both have the same electrical features

MATERIALS & FINISH
Chromate treatment and electrostatic powder coating. The color is aviation yellow and hardware is made of stainless steel.

WEIGHT
OBDL Net weight is : 17.8 kg
OBSL Net weight is : 6.9 kg

PACKING INFO
In cardboard boxes of OBDL : 19,5 x 12,5 x 43 cm.
In cardboard boxes of OBSL : 43,5 x 42,5 X 15,7 cm.

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

HB
LED HELIPORT BEACON

RELATED STANDARDS
ICAO Annex 14 Vol. II Heliports

APPLICATIONS
- Used as a means to aid the pilot in visually locating the heliport, where long-range visual guidance is considered necessary or identification of the heliport is difficult due to surrounding lights

IMPORTANT FEATURES
- Brilliance control at 3%, 10%, 100% according to night visibility or the helicopter distance
- Emits repeated series of equispaced short duration white flashes corresponding to letter "H" in morse code
- Optional photocell unit for automated on/off switching

ELECTRICAL SUPPLY
110 V / 220 V 50 Hz or 24 / 48 AC

WEIGHT
Net weight is 8 kg

PACKING INFO
In cardboard boxes of : 50 x 50 x 50 cm.

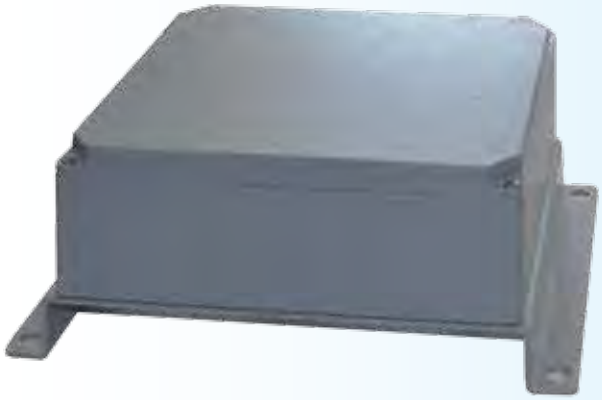
PHOTOMETRIC FEATURES

WHITE LIGHT

ELEVATION	EFFECTIVE INTENSITY
10°	250 Cd
7°	750 Cd
4°	1700 Cd
2 1/2°	2500 Cd
1 1/2°	2500 Cd
0°	1700 Cd

-180° Azimuth +180°

HEAD UNIT



CONTROL BOX

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

AB-4000
AIRPORT ROTATING BEACON

RELATED STANDARDS
FAA AC 150/5345-12 L-801A
ICAO Annex 14 Vol. I Para. 5.3.3
STANAG 3316

APPLICATIONS
• As identification and location markers for airports primarily for night operations

IMPORTANT FEATURES
• Available with two heads or with fail-safe four heads with automatic relay. If either of the primary lamps burn out, the stand-by pair of lamps will automatically light and cancel the primary set.
• Standard green and clear (white) color filters
• Tell-tale circuit is standard to warn when stand-by lamps go on
• Very low maintenance for heavy duty motor and reductor box
• 24±2 fpm and flash duration is 260 ms.
• Working temperature from - 40 to + 55 C°
• Standart photocell relay,
• Lamp PAR 64 1000 W 4000 hour lamp life ,
• Wind velocity resist up to 160 km/h,
• All moving parts are self lubricated types.
• Lamp heads adjustable and preset to 5 degrees,

ELECTRICAL SUPPLY
Total power consuption of motor 200 W at 220/380 V 50 Hz,

PHOTOMETRIC PERFORMANCE

Beacon Type	Elevation Angle in degrees	Minimum Effective Intensity of flash in candelas
L-801A	1 and 2	25,000
	3 to 7	50,000
	8 to 10	25,000
L-802A	1 and 2	37,500
	3 to 7	75,000
	8 to 10	37,500

The intensities are expressed in white light. For the effective intensity of green light values must be multiplied by 0,40

MATERIALS & FINISH
Chromate treatment and electrostatic powder coating.The color is aviation yellow and hardware is made of stainless steel

CONSTRUCTION

WEIGHT
Net weight is 40 kg.

PACKING INFO
58 x 80 x 21 cm

RELATED STANDARDS

FFAA AC 150/5345-44
ICAO Annex 14 Vol. I Para. 5.4
Cenelec ENV 50235
STANAG 3316

APPLICATIONS

On civil or military airports as;

- Mandatory Instruction Signs
- Information Signs
- VOR Check Point Signs
- Runway Distance Remaining Signs
- Arresting Barrier Signs

IMPORTANT FEATURES

- Cenelec ENV 50235 certified
- Complies with the requirements of ICAO Annex 14, for luminance and chromaticity
- Economical to run and easy to maintain; low power demand, long lamp life, vertical panels keep dirt from accumulating
- Low weight, yet rigid construction due to aluminum extrusions and parts
- Frangibility compliance to ICAO, FAA and ENV requirements
- Reliable operation between -20ºC to +55ºC
- Re-lamping is fast and easy with removable parts
- Multiple lamps ensure signal availability in case of partial lamp failure
- 24W fluorescent lamps used in all size with over 10000 hours of average rated lamp life and 75 lm/watt efficiency

The 6000K light source also improves color contrast and sign legibility. Also available in LED or 6.6 A incandescent lamps

- Seamless polycarbonate message panels are resistant to UV, abrasion and high temperatures. The 4mm thick panels provide improved resistance to jet blasts and strong winds
- High power factor

ELECTRICAL SUPPLY

Series 2.8 to 6.6 A or 110 V / 220 V / 240 V AC 50/60 Hz

MATERIALS AND FINISH

- Body: Aluminum extrusions, panels, corner leg supports and mounting legs
- Panel: long-life polycarbonate, UV and abrasion resistant
- Stainless steel hardware
- White or Black colored baked polyester powder coating

TESİSAT ve ENDÜSTRİYEL CİHAZLAR SANAYİ ve TİCARET ANONİM ŞİRKETİ

WC / LWC / LDI
WIND CONES & LANDING DIRECTION INDICATOR

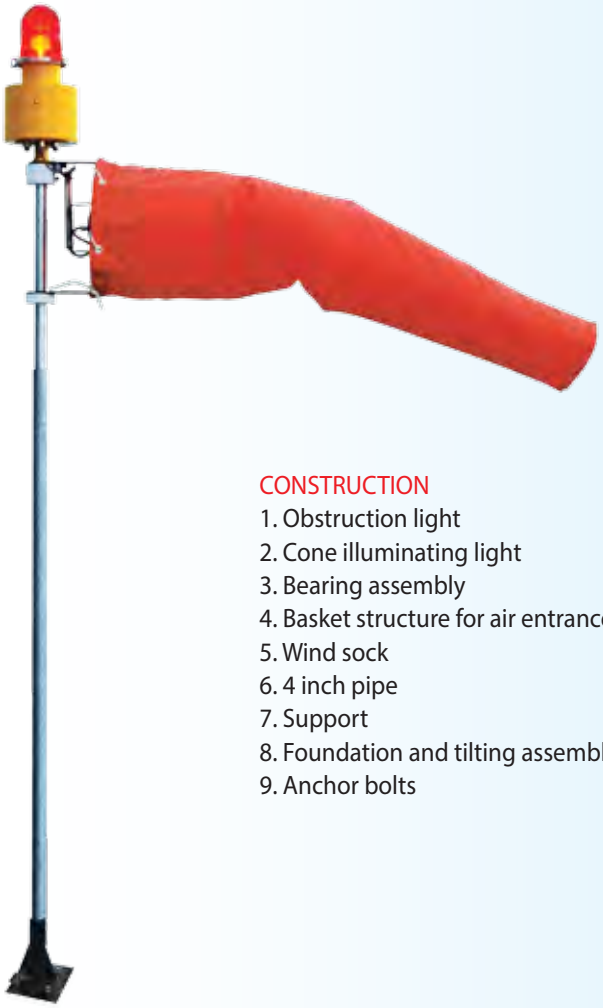
LIGHTED WIND CONE

RELATED STANDARDS
FAA AC 150/5345-27 L-806 L-807
ICAO Annex 14 Vol. I Para 5.1.1
STANAG 3316

APPLICATIONS
• Wind Cones provide visual information about wind direction and velocity on the ground at airports & heliports, to aircraft or helicopter pilots in flight.

IMPORTANT FEATURE S
• Making a full 360° rotation, provides precise information in every wind condition.
• Can be produced with or without the lighting equipment.
• Obstruction light can be mounted on top of the leg when requested.
• Synthetic fabric cone is coater with water repellant.
• The standard color is aviation red/white striped orange is are also available on request.
• When ordering cone length, color and obstruction light (if wanted) should be specified.
Type 1 : 240 cm long cone 60 x 240
Type 2 : 375 cm long cone 90 x 375
Type 3 : 120 cm long cone 30 x 120

ELECTRICAL SUPPLY
220V AC 50Hz



CONSTRUCTION
1. Obstruction light
2. Cone illuminating light
3. Bearing assembly
4. Basket structure for air entrance
5. Wind sock
6. 4 inch pipe
7. Support
8. Foundation and tilting assembly
9. Anchor bolts

LANDING DIRECTION INDICATOR

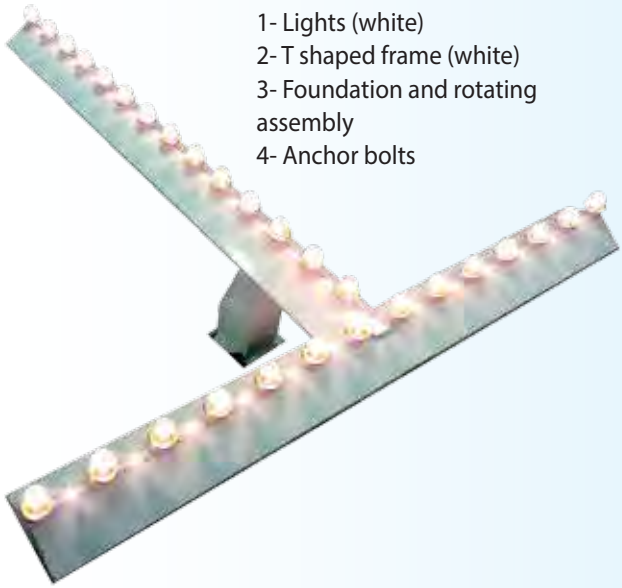
RELATED STANDARDS
FAA AC 150/5345-36 L-808
ICAO Annex 14 Vol. I Para. 5.1.2
STANAG 3316

APPLICATIONS
• Landing Direction Indicator and Lighted Wind Tee provide visual information about wind direction on the ground at airports, to aircraft pilots in flight.

IMPORTANT FEATURES
• Landing Directin Indicator is in the form of a "T"
• Frame color is white, it is illuminated by white lights

ELECTRICAL SUPPLY
220 V AC 50 Hz

CONSTRUCTION
1- Lights (white)
2- T shaped frame (white)
3- Foundation and rotating assembly
4- Anchor bolts



LB
AIRFIELD LIGHT BASES

RELATED STANDARDS
FAA AC 150/5345-42 L-867 & L-868

APPLICATIONS
For ground fixing of elevated and inset lights, for underground housing of isolating transformers

- Type L-867 Bases and extensions for applications subject to occasional light vehicular loading but no aircraft or other heavy vehicular loading.
- Type L-868 Bases and extensions for applications subject to aircraft and other heavy vehicular loading.

IMPORTANT FEATURES
- Bases are Class IA, hot galvanized steel unless otherwise specified
- Available diameters;
  Size A - 8 inch (203 mm),
  Size B - 12 inch (305 mm),
  Size C - 15 inch (381 mm)
- Flange rings are attached to side-walls with continuous watertight weld
- Internal and external grounding straps are standard
- Light bases can be provided with an optional plywood cover for shipping and ease of installation
- 12 inch to 8 inch and 15 inch to 12 inch adapter rings are available to match inset lights and bases of different sizes
- Light bases can be provided with a special jig for levelling and stabilization during installation

MATERIALS & FINISH
Deep bases are made of hot galvanized steel, Shallow bases are cast aluminium

BC / BM
FRANGIBLE COUPLING AND MASTS

FRANGIBLE COUPLINGS

RELATED STANDARDS
FAA AC 150/5345-46 Para. 3.4.2.1

APPLICATIONS
• Airfield lights are mounted on frangible couplings which are designed to break at a defined force. Their use protects the integrity of the unit itself and minimizes damage to the object that strikes it.

IMPORTANT FEATURES
• Couplings have a designed yield point, therefore they should be used with the light they are designed for. Failure to do so will result in the coupling not working properly
• Frangible couplings allow repairs to take place in minimal time.

FRANGIBLE MASTS

RELATED STANDARDS
FFAA AC 150/5345-45
ICAO Annex 14 Vol. I Para. 5.3.1.4

APPLICATIONS
• Frangible Masts are support structures for elevated approach lighting that break or yield on impact, to minimize damage airplanes and maximize safety

IMPORTANT FEATURES
• Frangible masts are very lightweight, yet rigid structures that break or yield on impact,


Frangible Mast

TESİSAT ve ENDÜSTRİYEL CİHAZLAR
SANAYİ ve TİCARET ANONİM ŞİRKETİ

CCR
CONSTANT CURRENT REGULATOR

RELATED STANDARDS
FAA AC 150/5345-10 L-828
ICAO Aerodrome Design Manual 3.2.1.4 to 3.2.1.6
IEC 61822
STANAG 3316

APPLICATIONS
• Is supplying output current levels for series lighting circuits on airport runways and taxiway lighting

IMPORTANT FEATURES
• IEC 61822 Certified
• Regulators are static type and thyristor controlled. Primary and secondary windings are seperated from each other.
• All regulators are air cooled.
• Regulators can be controlled by a control unit on them or by remote control from up to 3000m, by means of 0,9 mm diameter cupper conductors or FO cables
• Digital monitoring unit show circuit current, open circuit, overload, overload errors and voltage drops.
• Regulators can be produced with five different brightness levels as well as with a single level.
• Power can be between 1 kVA up to 30 kVA
• All CCR's can be operated control tower desk by RS232/RS485 with DAC/ADC PLC modules

PERFORMANCE
• With the regulators loaded with appropriate lamps through the isolating transformers and also with 30% of isolating transformers with secondary winding open, the output currents of the regulators are as follows;

ELECTRICAL SUPPLY
Produced on order 220 V or 380 V, 50 Hz.

MATERIALS & FINISH
Phosphating and baked polyester electrostatic powder coating. The color is gray.

WEIGHT

1 kVA 40 kg	7,5 kVA 175 kg	20 kVA 350 kg
2,5 kVA 100 kg	10 kVA 225 kg	25 kVA 450 kg
5 kVA 135 kg	15 kVA 270 kg	30 kVA 600 kg

PACKING INFO

1 kVA 50x50x65	7,5 kVA 85x65x105	20 kVA 100x100x125
2,5 kVA 85x65x100	10 kVA 100x90x125	25 kVA 125x125x150
5 kVA 65x100x160	15 kVA 100x110x125	30 kVA 125x125x150

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ALCMS
REMOTE CONTROL DESK

RELATED STANDARDS

FAA AC 150/5345-56 L-890
ICAO Aerodrome Design Manual Part 5 Para. 3.4.2

APPLICATIONS

- In controlling and monitoring the operational status of lighting systems

IMPORTANT FEATURES

- Esthetic appearance and easily mounted construction.
- Consists of two sections, first is the mimic diagram and second part has control keys.
- Mimic diagram is designed and produced according to the plans provided by the airport authorities. All the systems provided will be shown on the desk. It is possible to add future developments to the mimic diagram.
- All systems prodeced special software and touch screen monitor and industrial type PLC modules ACC to airport plan
- Signalization on the remote control desk is done by fiber optic cable.
- Remote control voltage is 48V DC and the brightness controlled by a switch.
- All the circuits belonging to the special lighting unit will be controlled by keys belonging to these units.
- With the active runway threshold selection switch the positions of flash, PAPI, threshold and runway end lights will change automatically.
- The desk will be designed to control the regulators in 5 and the flash lights in 3 different levels.
- Regulators, wind tee, wind cone and light in operation will be demonstrated on the mimic diagram with a signal lamp.
- In case of a circuit failure, the signal lamp belonging to that circuit will flash in addition to a buzzer. Alarm signal will continue flashing until the buzzer is shut and the circuit is fixed.
- Necessary terminal blocks for control and supply cables are present.
- All the necessary keys for the system will be delivered with the desk.

RELATED STANDARDS

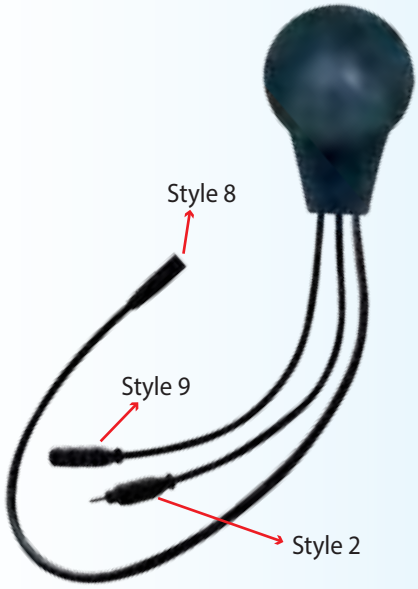
FAA AC 150/5345-47 L-831
ICAO Aerodrome Design Manual, Part 5 Para. 3.2.1.7
IEC TS 61823
STANAG 3316

APPLICATIONS

- In supplying the airfield lighting from a series circuit.

IMPORTANT FEATURES

- IEC 61823 certified
- The primary windings of all transformers are connected to a constant current regulator and the secondaries are connected to runway or taxiway lights. Thus the primary and secondary windings being separated, safety of the personnel is acquired.
- Operates without time limit in short circuit, open circuit and full load conditions.
- The plugs and receptacles enable easy connection
- Transformers can be operate continuously at 10% over load
- The Toroidal core made of low loss grain oriented laminations. Primary and secondary windings are made of double enamelled copper wire
- Two single-core primary leads 0.60m, 1x6mm^2, 5 kV with factory moulded Style 2 Plug and Style 9 Receptacle
- One two-core secondary lead 1.20m, 2x2.50mm^2, 1kV with factory moulded Style 7 or Style 8 receptacle
- Transformers are designed for continuous operation
- Transformers are resistant to salty water, fuel, oil and ozone in ambient temperatures between -55°C and +65°C Can directly be buried in soil



ELECTRICAL FEATURES

Rated Wattage (W)	Primary Current (A)	Minimum Power Factor	Minimum Efficiency	Secondary Current (A)	Load (Ohm)	Maximum Voltage At Open Circuit (V)
20/25	6.6	0.95	85	6.53 - 6.67	0,69	20
45	6.6	0.95	85	6.53 - 6.67	1,03	20
65	6.6	0,95	85	6.53 - 6.67	1,49	30
100	6.6	0.90	90	6.53 - 6.67	2,30	40
150	6.6	0,90	90	6.53 - 6.67	3,44	60
200	6.6	0.90	90	6.53 - 6.67	4.59	70
300	6.6	0,90	90	6.53 - 6.67	6,89	110

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PK / SK
PRIMARY & SECONDARY CONNECTOR KITS

RELATED STANDARDS

FAA AC 150/5345-26 L-823
TSEK-459 Certified

APPLICATIONS

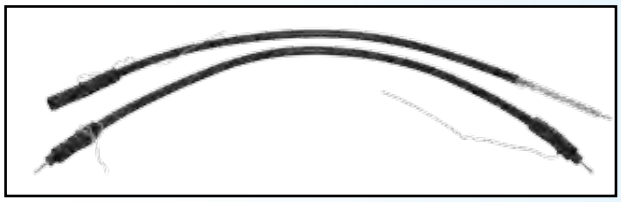
- Primary connector kits are used for creating a detachable watertight connection between the series airfield lighting cable and the primary winding of the isolating transformer
- Secondary connector kits are used for creating a detachable watertight connection between the secondary series circuit cables and either the secondary winding of the series transformer or the light.

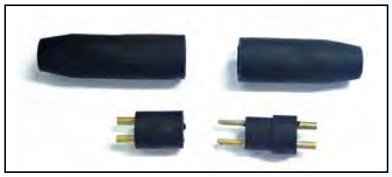
IMPORTANT FEATURES

- TSEK 459 Certified
- Connector kits can be used for screened and unscreened cables
- Connector kits cover all currently available airfield lighting cables
- EMA produces all of the types of plug and receptacle styles in FAA AC 150/5345-26 specification
- Connectors are resistant to abrasive chemicals and all weather conditions
- Excellent watertightness
- Plugs and receptacles can also be factory molded to cables

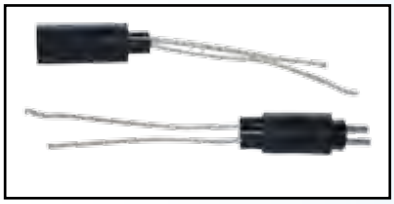
Primary plug and receptacle kit for screened cable

Primary plug and receptacle kit for unscreened cable





Secondary plug and receptacle



Secondary plug and receptacle after connection

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