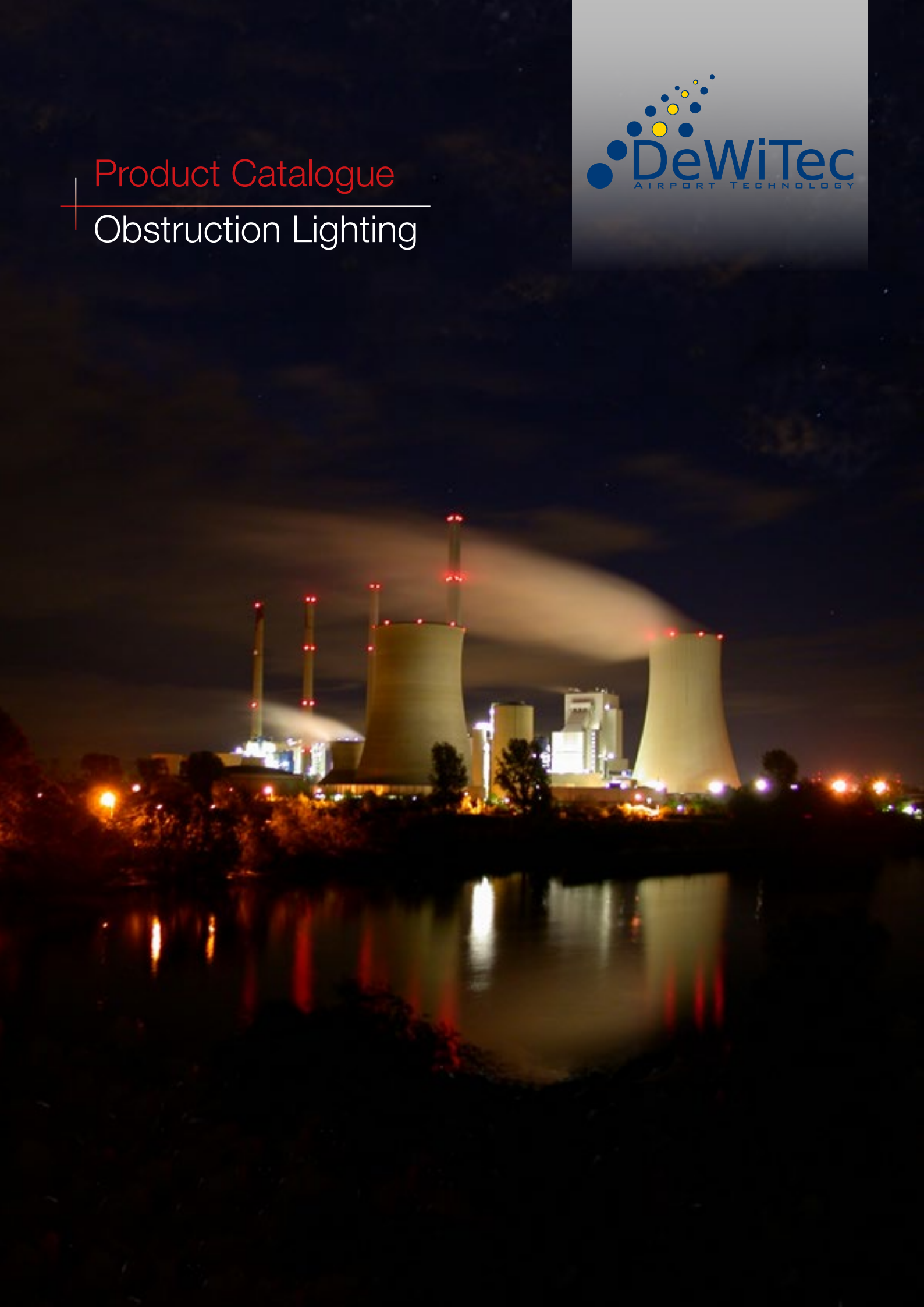
Product Catalogue

Obstruction Lighting

DeWiTec
AIRPORT TECHNOLOGY



Obstruction Lighting

In this brochure we give you an overview of obstacle warning light products and tell you about some of the reference projects implemented by DeWiTec. You will find out more about the benefits of modern LED lighting as well as typical applications and the installation regulations they are based on.

You can find detailed technical information about each light in the data sheets starting at page 8.

You can also download them on our website *www.dewitec.de*.

We look forward to speaking to you personally and supporting you professionally with:

Delivery, Installation and Commissioning of:

- LED obstruction lights
- Autonomus LED solar powered lights
- Remotely controlled and monitored obstruction light systems

for obstruction lighting applications in:

- low intensity
- medium intensity
- high intensity

together with the mounting hardware required.

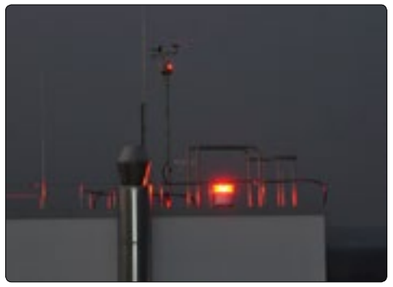
All our products are in accordance with the regulations of the international aviation organisations ICAO and FAA, the German BMVBW, as well as the VDE and CE.

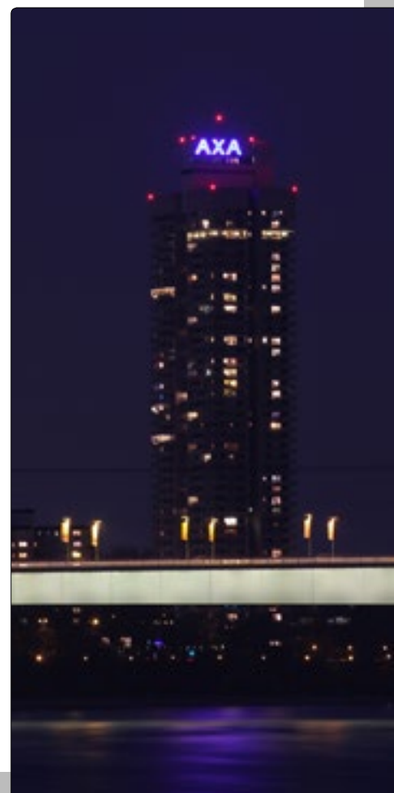
Example of installations

- „AXA-**Building**“ in Cologne, Germany:
  DWT-OBS-LED S Single Obstruction Lights flag Germany´s highest apartment house
- **Power Plant** „Staudinger“ in Hanau, near Frankfurt, Germany:
  DWT-OBS-LED A Single Obstruction Lights are installed here
- **Heliport** Hospital Cologne-Merheim, Germany:
  DWT-OBS LED AOL 303.2006 B with automatic switch

We provide steady-on or flashing obstacle warning lights for aviation obstacles for every application:

Masts, cranes, wind turbines or towers, as well as complex obstruction light systems for power stations and buildings. You will receive professional assistance in choosing components compliant to the regulations.





Cover with courtesy of:
http://home.arcor.de/matthias.gerth/staudinger

Benefits of modern LED-Obstruction-Lights

Compared to conventional obstacle warning lights with incandescent or fluorescent lamps,

LED-lights feature big advantages:

- 95% less energy consumption in comparison to conventional obstruction lights
- Easy installation due to small dimensions and less weight
- Shock and vibration resistant
- Less windload
- Significant decrease of running costs owing to dependability and long lamp durability (up to 15 years)
- Can be used with solar energy systems
- Environmentally compliant due to low material usage and low energy consumption
- Low default risk
- Competitive cost-performance ratio

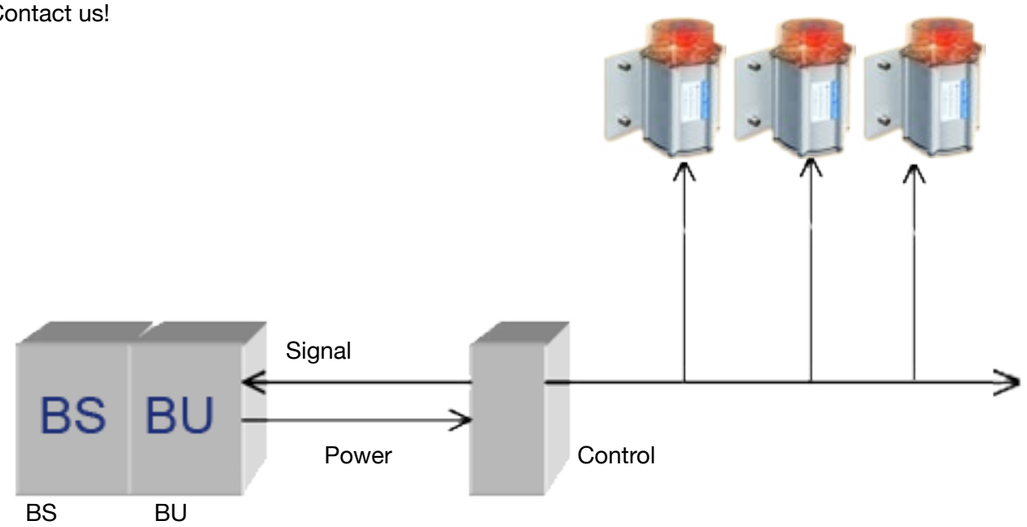
Reliability and Quality

DeWiTec obstacle warning lights based on LED technology are supremely reliable, even under extreme weather conditions.

Obstruction Light Systems

For more complex obstruction light systems we provide upstream control and monitoring systems.

Contact us!



BS: Base Station (radio technology)

BU: Backup-Unit / BS-Power supply with battery unit

Power Supply / Emergency Power Operation

All obstruction lights are available in

12V, 24V, 48V AC/DC and 230V AC.

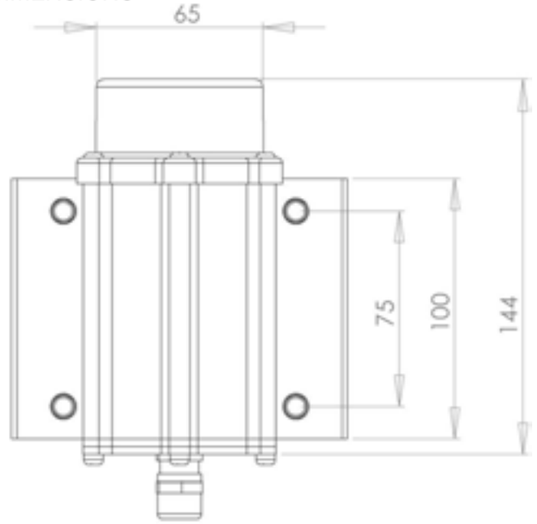
The obstacle warning lights can be provided with uninterrupted power supply (UPS), or, due to their low power consumption, together with a back-up battery, e.g. in radio stations.

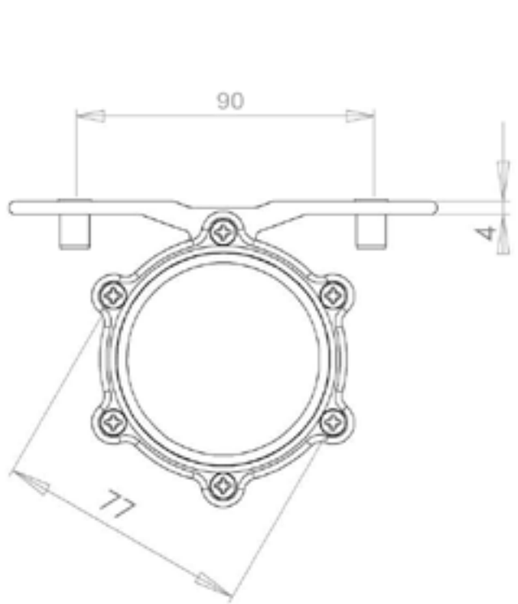
DWT-OBS-LED-A

Compact Single LED Obstruction Light

- Based on LED technology
- Compact design
- Low energy consumption
- Easy to install
- Lightweight and small: low wind factor

DIMENSIONS





Typical Application

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Low Intensity Obstruction Light ICAO Type A

This low intensity compact obstruction light with LED technology is excellent for most applications. Due to its small dimensions it can be used in non-stationary applications, e.g. for cranes or other temporary obstacles.

For transient-endangered applications the use of surge protective devices is recommended.

Single Obstruction Light

Type A (> 10 cd)

OPTICAL CHARACTERISTICS

Light Intensity	>10 cd
Lightcolor	Aviation Red
Horizontal Output (degrees)	360°

MECHANICAL CHARACTERISTICS

Height	144 mm
Diameter	90 mm
Weight	0,75 kg
Protection Class	IP 67
Operating Temperature	-25° C to + 70°C

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 230 V AC ◦ 24 V DC ◦ 12 V DC
Power Consumption	4 W

Available Options:

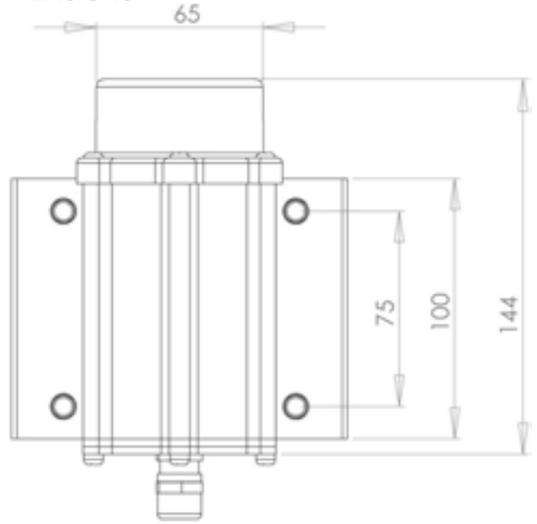
- ✓ Solar power supply
- ✓ Mast Fixing
- ✓ Stand
- ✓ Wall Mount

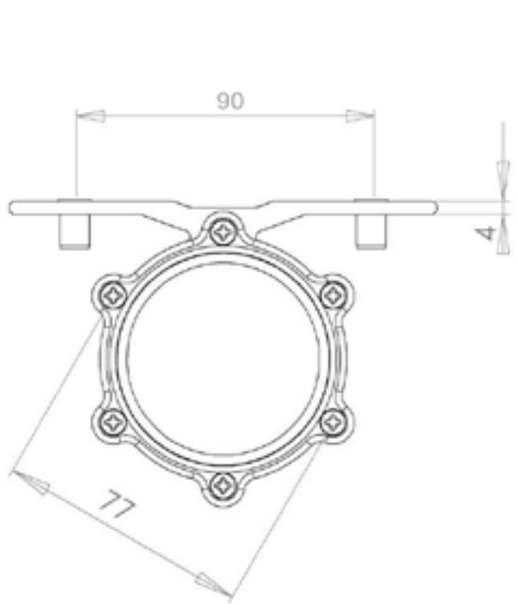
DWT-OBS-LED-A/D

Compact Double LED Obstruction Light

- Based on LED technology
- Compact design
- Low energy consumption
- Easy to install
- Lightweight and small: low wind factor

DIMENSIONS





Typical Application

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Low Intensity Obstruction Light ICAO Type A

This low intensity compact obstruction light with LED technology is excellent for most applications. Due to its small dimensions it can be used in non-stationary applications, e.g. for cranes or other temporary obstacles.

For transient-endangered applications the use of surge protective devices is recommended.

Double Obstruction Light

Type A (> 10 cd)

OPTICAL CHARACTERISTICS

Light Intensity	
Type A	>10 cd
Type B	> 32,5 cd
Lightcolor	Aviation Red
Horizontal Output (degrees)	360°

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 230 V AC ◦ 24 V DC ◦ 12 V DC
Power Consumption	4 W

MECHANICAL CHARACTERISTICS

Height	144 mm
Diameter	90 mm
Weight	0,75 kg
Protection Class	IP 67
Operating Temperature	-25° C to + 70°C

Available Options:

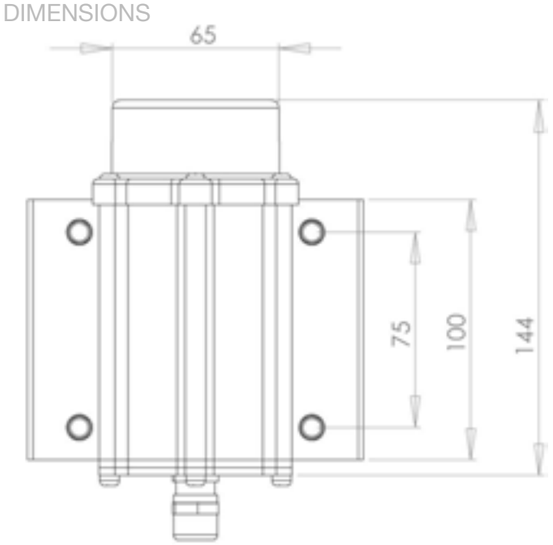
- ✓ Solar power supply
- ✓ Mast Fixing
- ✓ Stand
- ✓ Wall Mount

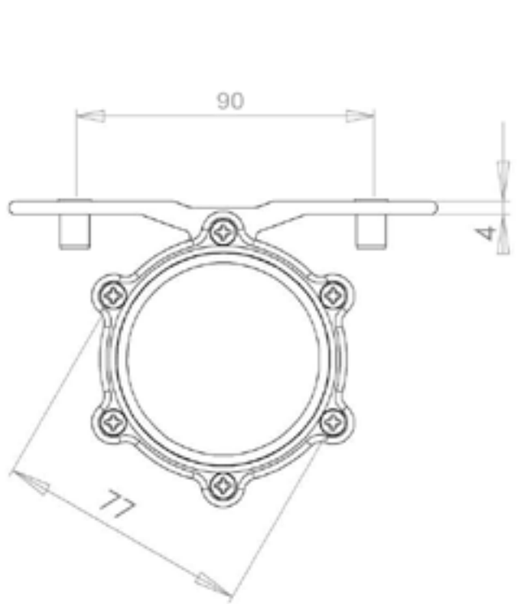
DWT-OBS-LED-B

Compact LED Double Obstruction Light

- Based on LED technology
- Compact design
- Low energy consumption
- Easy to install
- Lightweight and small: low wind factor

DIMENSIONS





Typical Application

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Low Intensity Obstruction Light ICAO Type B

This low intensity compact obstruction light with LED technology is excellent for most applications. Due to its small dimensions it can be used in non-stationary applications, e.g. for cranes or other temporary obstacles.

For transient-endangered applications the use of surge protective devices is recommended.

Double Obstruction

Light Type B (> 32 cd)

OPTICAL CHARACTERISTICS

Light Intensity	> 32,5 cd
Lightcolor	Aviation Red
Horizontal Output (degrees)	360°

MECHANICAL CHARACTERISTICS

Height	144 mm
Diameter	90 mm
Weight	0,75 kg
Protection Class	IP 67
Operating Temperature	-25° C to + 70°C

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 230 V AC ◦ 24 V DC ◦ 12 V DC
Power Consumption	4,5 W

Available Options:
- ✓ Solar power supply
- ✓ Mast Fixing
- ✓ Stand
- ✓ Wall Mount

DWT-OBS LED 74

Medium Intensity Obstruction Light

- 1-stage medium intensity obstruction light ICAO Type B (flashing)
- Integrated heating system for protection against ice
- LEDs protected against UV-light and condensation

MECHANICAL CHARACTERISTICS

Body	Powdercoated Aluminum, white
Operating Temperature	-40° C to + 60°C
Height	
Total	276 mm
Optics	116 mm
Diameter	330 mm
Weight	approx. 6,7 kg
Protection Class	IP 66
Installation	Base plate with 3 holes (8,5 mm diameter)

Impact and shock resistant, vibration proof

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	50 W
Steady-on	16 W
Flashing	

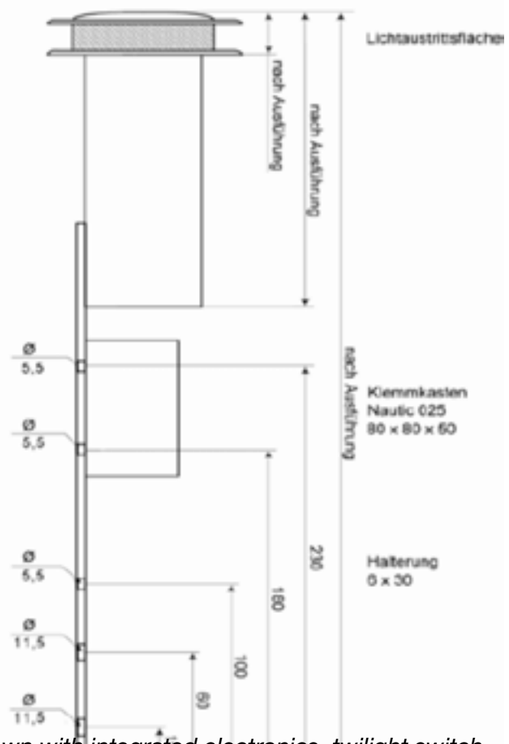
The electrical connection is carried out in a UV-resistant junction box made of plastic or aluminum (leads to 3 x 2.5 mm²)

OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	Aviation Red
Intensity	2000 cd ± 25%
Horizontal Divergence	360°
Flash Pattern	1s on / 2 s off (20 flashes per min)

Effective intensity complies with ICAO Type B

DIMENSIONS



Shown with integrated electronics, twilight switch and GPS module.

Typical Application

Medium Intensity Obstruction Light ICAO Type B

Certified according to No. 24 of the General Administrative Regulation for identification of obstacles to aviation (AVV marking) and CE.

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light). The electronic ballast unit compensates voltage losses due to long cable runs. They can be mounted externally in the cabinet or be integrated into the light.

Error messages occur as a collective report on potential free contacts.

Available Options::

- ✓ Steady light (ICAO Typ C)
- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Body material: stainless steel

DWT-OBS LED S

Single Obstruction Light

- The unique design of the glass provides an enhanced LED-performance and 360° visibility
- Modern SMS-LED technology
- Corrosion-resistant

Typical Application

➤ ➤ ➤

Low Intensity Obstruction Light (ICAO Type A)

The DWT-OBS-LED S single obstruction light is ideal for indicating potential obstructions and thus avoids threats to aviation. Because of the different power supply options, appropriate positions can be found for it in almost all applications.

Permanent-on or flashing versions available.

Double Obstruction Light

The DWT-OBS-LED S Double Obstacle Warning Light is identical to the single version, but if the main lamp fails, the stand-by lamp is automatically switched on (optional).

The yellow body shown in the picture above is a customised version - it is a non-standard version.

MECHANICAL CHARACTERISTICS

Material	
Housing	Aluminum
Hardware	Stainless Steel
Optic	Glass
Mounting	Threaded 1” NPT and 3/4” NPT bottom hub (adaptor included)
Operating Temperature	-55° C to + 55°C
Height	
Single	283 mm
Doublel	369 mm
Weight	
Single	approx. 4 kg
Doublel	approx 7,8 kg
Width	395 mm
Diameter Single = Lenght Double	147 mm
Protection Class	IP65

Corrosion resistant integrated LEDs

ELECTRICAL CHARACTERISTICS (DEPENDENT ON VERSION)

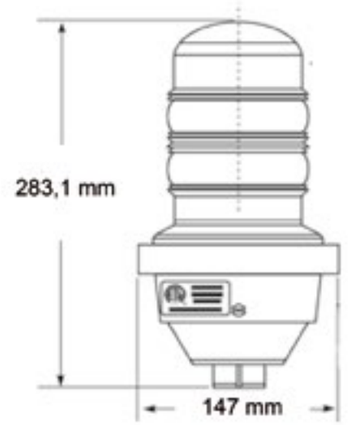
Nominal Operating Voltage	◦220 VAC (50/60 Hz) ◦120 VAC ◦48 VDC ◦24 VDC ◦12 VDC
Power Consumption	
220 V Version	14,5 W (17 W max)
12 V Version	24,5 W (29 W max)
24 V Version	22 W (29 W max)

Modern SMD-LED technology

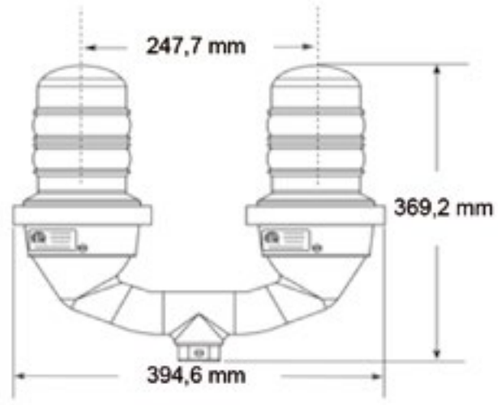
OPTICAL CHARACTERISTICS

Light Source	High Power LEDs
Light Color	Red (others optional)
Light intensity	
Type A	> 10 Candela
Horizontal Output	360°
Vertical Divergence	- 10° to + 20°
Flashing	Optional with control

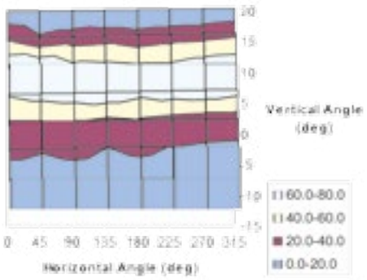
DIMENSIONS SINGLE OBSTRUCTION LIGHT



DIMENSIONS DOUBLE OBSTRUCTION LIGHT



PHOTOMETRY (ISOTROPIC INTENSITY CHART)



DWT-OBS LED S

Single Obstruction Light

- The unique design of the glass provides an enhanced LED-performance and 360° visibility
- Modern SMS-LED technology
- Corrosion-resistant

Typical Application

➤ ➤ ➤

Low Intensity Obstruction Light (ICAO Type B)

The DWT-OBS-LED S single obstruction light is ideal for indicating potential obstructions and thus avoids threats to aviation. Because of the different power supply options, appropriate positions can be found for it in almost all applications.

Permanent-on or flashing versions available.

Double Obstruction Light

The DWT-OBS-LED S Double Obstacle Warning Light is identical to the single version, but if the main lamp fails, the stand-by lamp is automatically switched on (optional).

The yellow body shown in the picture above is a customised version - it is a non-standard version.

MECHANICAL CHARACTERISTICS

Material	
Housing	Aluminum
Hardware	Stainless Steel
Optic	Glass
Mounting	Threaded 1” NPT and 3/4” NPT bottom hub (adaptor included)
Operating Temperature	-55° C to + 55°C
Height	
Single	283 mm
Doublel	369 mm
Width	395 mm
Diameter Single = Lenght Double	147 mm
Protection Class	IP65

Corrosion resistant integrated LEDs

ELECTRICAL CHARACTERISTICS (DEPENDENT ON VERSION)

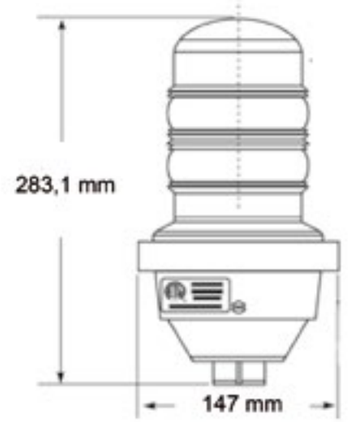
Nominal Operating Voltage	◦220 VAC (50/60 Hz) ◦120 VAC ◦48 VDC ◦24 VDC ◦12 VDC
Power Consumption	
220 V Version	14,5 W (17 W max)
12 V Version	24,5 W (29 W max)
24 V Version	22 W (29 W max)

Modern SMD-LED technology

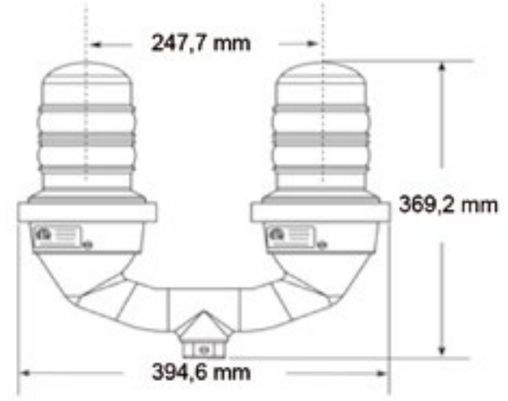
OPTICAL CHARACTERISTICS

Light Source	High Power LEDs
Light Color	Red (others optional)
Light intensity	
Type B	> 32 Candela
Horizontal Output	360°
Vertical Divergence	- 10° to + 20°
Flashing	Optional with control

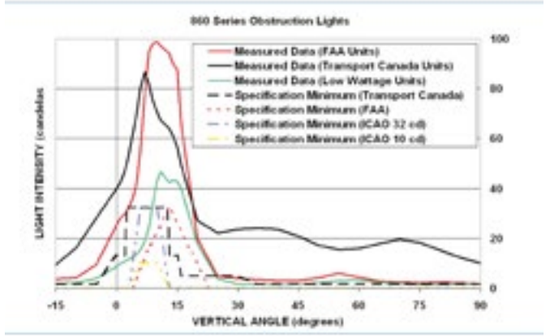
DIMENSIONS SINGLE OBSTRUCTION LIGHT



DIMENSIONS DOUBLE OBSTRUCTION LIGHT



PHOTOMETRY (ISOTROPIC INTENSITY CHART)



DWT-OBS LED S EX

LED Single Obstruction Light for Hazardous Areas

- Certified for hazardous areas
- The unique design of the glass provides an enhanced LED-performance and 360° visibility
- Modern SMS-LED technology
- Corrosion-resistant

Typical Application

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Low Intensity Obstruction Light (ICAO Type A or ICAO Type B)

The DWT-OBS-LED S is light certified to meet both the ICAO requirements for red LED obstruction lights and Class I, Division 2 for hazardous area lighting locations. It is available in 120VAC or 230VAC versions and can be ordered as single or dual units.

Cerfications and Ratings:

- ✓ Class I, Div 2, Groups A, B, C, D hazardous environments T4 rated w ATEX certified, equipment group II (surface industries), category 3 (Zone 2), T4 rated
- ✓ FAA AC No. 150/5345-43F
- ✓ Compliant to: ICAO (Annex 14 - Fourth Edition, July 2004), DGAC Mexico
- ✓ Canadian Aviation Regulation CAR 621.9(Transport Canada)
- ✓ ETL Listed in compliance with UL1598 and UL844 for use in Class I,
- ✓ Div 2 hazardous locations

LED Double Obstruction Light for Hazardous Areas

The DWT-OBS-LED S Double Obstacle Warning Light is identical to the single version, but if the main lamp fails, the stand-by lamp is automatically switched on (optional).

MECHANICAL CHARACTERISTICS

Material	
Housing	Aluminum
Hardware	Stainless Steel
Optic	Glass
Mounting	metric or 1“
Operating Temperature	-55° C to + 55°C
Height	
Single	283 mm
Doublel	369 mm
Width	395 mm
Diameter Single = Lenght Double	147 mm
Protection Class	IP65 / IP66 / NEMA 4X

Corrosion resistant integrated LEDs

ELECTRICAL CHARACTERISTICS (DEPENDENT ON VERSION)

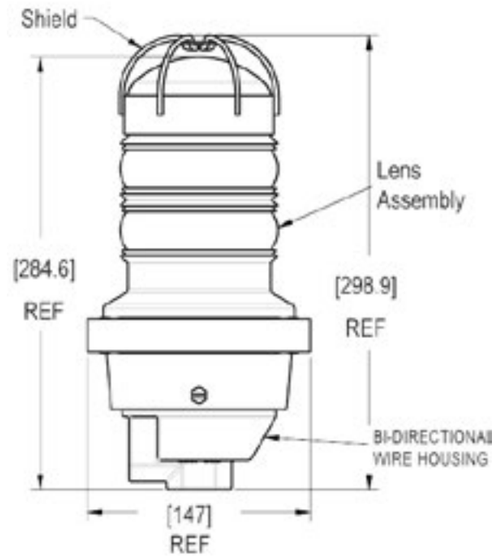
Nominal Operating Voltage	◦220 VAC (50/60 Hz) ◦120 VAC
Input Power	
120 VAC Version	14,5 W
230 VAC Version	16,0 W
Volt Amps	
120 VAC Version	44 VA
230 VAC Version	57 VA

Modern SMD-LED technology

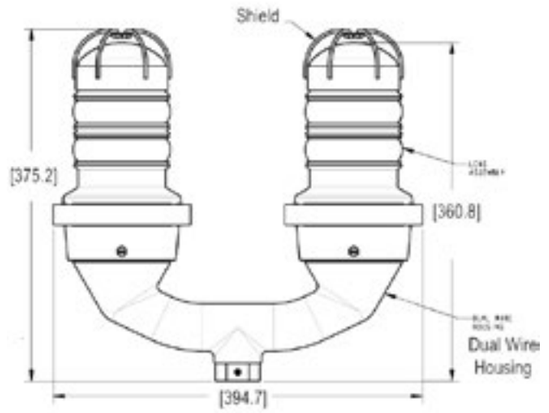
OPTICAL CHARACTERISTICS

Light Source	High Power LEDs
Light Color	Red (others optional)
Light intensity	
Type A	> 10 Candela
Type B	> 32 Candela
Horizontal Output	360°
Vertical Divergence	- 10° to + 20°
Flashing	Optional with control

DIMENSIONS SINGLE OBSTRUCTION LIGHT



DIMENSIONS DOUBLE OBSTRUCTION LIGHT



MULTICOLOR VERSION

DWT-OBS-ATEX

LED Single Obstruction Light for ATEX Zone II

- ATEX Ex i for Zone II
- ATEX Ex i [intrinsically safe]
- EcoLed LED Lamp
- Simple but sturdy design
- Easy installation and maintenance

Typical Application

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Low Intensity Obstruction Light (ICAO Type A or ICAO Type B)

The DWT-OBS ATEX light is designed to meet both the ICAO demands for red LED obstruction lights and ATEX Zone II for hazardous area lighting locations. The light fulfills the requirements for Protection Class IP68.

Obstruction lighting is intended to reduce the hazards to aircraft by indicating the presence of obstructions. The color is fully obtained by the LED module. The tightness is guaranteed by a special O-Ring system. The LED lamps are characterized by long life and even light distribution. The extraordinary quality and reliability of all our range are due to the particular care in manufacturing and to many tests done during the manufacturing procedure. The aluminum body and tempered glass exclude all the disagreements of synthetic products (plastic, PMMA). These materials keep their physical properties in all climate conditions (high and very low temperature).

ATEX homologation (pending) EX II 3 G / Eex i IIx T5.

Compliant to:
✓ ICAO Annex 14

MECHANICAL CHARACTERISTICS

Material	
Body	Aluminum
Optic	Glass
Body Color	Yellow RAL 1021
Dimensions	
Height	245 mm
Diameter	140 mm
with mounting plate	165 mm
Weight	Approx. 2.5 kg
Mounting	◦ Tripod ◦ Frangible Coupling
Protection Class	IP68

Corrosion resistant integrated LEDs

ELECTRICAL CHARACTERISTICS

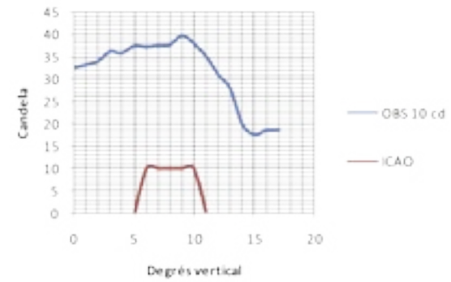
Operating Voltage	12 V via DWT-PS ATEX power supply

Modern SMD-LED technology

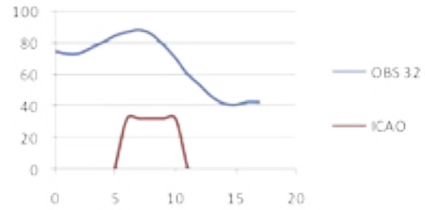
OPTICAL CHARACTERISTICS

Light Source	High-Power LEDs
Light Color	Red (standard)
Light intensity	
Type A	> 10 Candela
Type B	> 32 Candela
Horizontal Output	360°

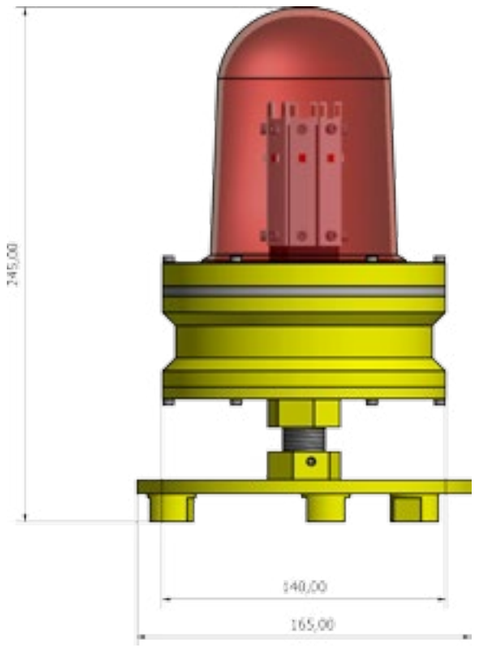
PHOTOMETRY ICAO TYPE A (10 CD MIN)



PHOTOMETRY ICAO TYPE B (32 CD MIN)



DIMENSIONS



DWT-OBS LED AOL 304.2006 A

Medium Intensity Obstruction Light

- 20 000 cd effective intensity
- Integrated heating system for protection against ice
- LEDs protected against UV-light and condensation

Typical Application

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Medium Intensity Obstruction Light ICAO Type A

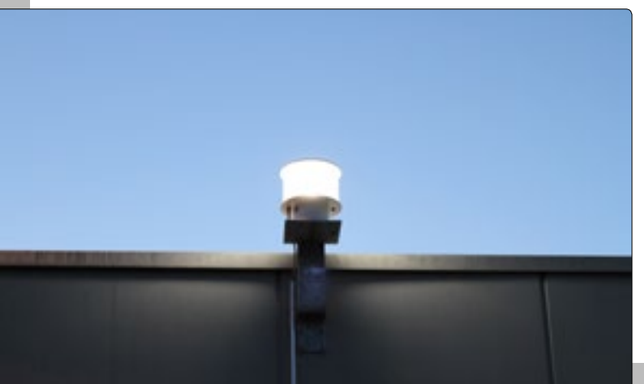
Certified according to No. 24 of the General Administrative Regulation for identification of obstacles to aviation (AVV marking) and CE.

The light has the ability to control brightness.

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light).

The electronic ballast unit compensates voltage losses due to long cable runs.

It is externally mounted in the cabinet.



Available Options::

- ✓ Steady light (ICAO Typ C)
- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Body material: stainless steel (V4A)

MECHANICAL CHARACTERISTICS LIGHT

Body	Powdercoated Aluminum, white
Operating Temperature	-40° C to + 60°C
Height	
Total	350 mm
Optics	230 mm
Diameter	330 mm
Weight	approx. 13 kg
Protection Class	IP 66
Installation	Base plate with 3 holes (8,5 mm diameter)

Impact and shock resistant, vibration proof

MECHANICAL CHARACTERISTICS JUNCTION BOX

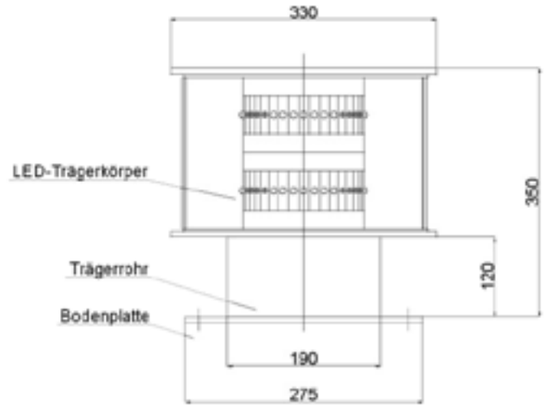
Body	AE 1050.500 - Steel
Length	500 mm
Width	500 mm
Height	210 mm
Weight	approx. 22 kg
Protection Class	IP 66

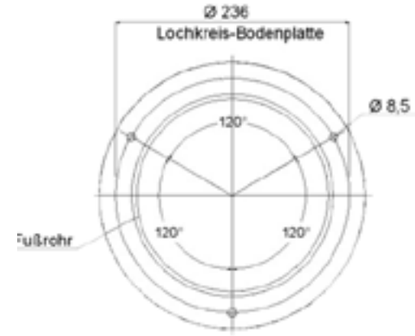
ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	60 W (Average)
Connection	Screw clamps up to 2,5 mm²
Cable Inlet	1xM16, 1xM20, 2xM25
Main Fuse	10 A

Electronic ballast unit must be mounted externally in the control cabinet, power loss is compensated for longer cable run through ballast

DIMENSIONS





OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	White
Intensity	20 000 cd ± 25%
Flash Frequenzy [on / off]	1,0 s / 2,0 s (20 / min) 0,2 s / 0,46 s (90 / min)
Horizontal Divergence	360°
Vertical Divergence	Compliant to ICAO

DWT-OBS-LED-AOL-304-2006-A/C

Medium Intensity Obstruction Light

- Combined medium-intensity obstruction light type A and type C
- 20 000 cd effective intensity white
- 2 000 cd effective intensity red
- Integrated heating system for protection against ice

Typical Application

➤ ➤ ➤

Medium Intensity Obstruction Light ICAO Type A and Type C

Certified according to No. 24 of the General Administrative Regulation for identification of obstacles to aviation (AVV marking) and CE.

The light has the ability to control brightness.

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light).

The electronic ballast unit compensates voltage losses due to long cable runs.

It is externally mounted in the cabinet. LEDs protected against UV-light and condensation

Available Options::

- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Body material: stainless steel

MECHANICAL CHARACTERISTICS LIGHT

Body	Powdercoated Aluminum, white
Operating Temperature	-40° C to + 60°C
Height	
Total	400 mm
Optics	320 mm
Diameter	330 mm
Weight	approx. 14 kg
Protection Class	IP 66
Installation	Base plate with 3 holes (8,5 mm diameter)

Impact and shock resistant, vibration proof

MECHANICAL CHARACTERISTICS JUNCTION BOX

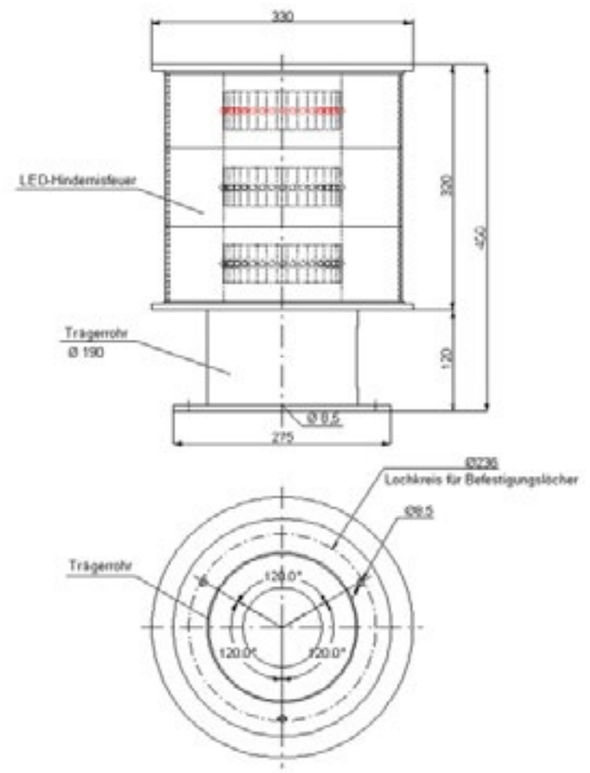
Body	AE 1050.500 - Steel
Length	500 mm
Width	500 mm
Height	210 mm
Weight	approx. 22 kg
Protection Class	IP 66

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	
White	60 W
Red	50 W
Connection	Screw clamps up to 2,5 mm²
Cable Inlet	1xM16, 1xM20, 2xM25
Main Fuse	10 A

Electronic ballast unit must be mounted externally in the control cabinet, power loss is compensated for longer cable run through ballast

DIMENSIONS



OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	
Day	White (1s on / 2s off)
Night	Red (steady on)
Intensity	
White	20 000 cd ± 25%
Red	2 000 cd ± 25%
Horizontal Divergence	360°

DWT-OBS LED AOL 303.2006 B

Medium Intensity Obstruction Light

- 1-stage medium intensity obstruction light ICAO Type B (flashing)
- Integrated heating system for protection against ice
- LEDs protected against UV-light and condensation

Typical Application

➤ ➤ ➤

Medium Intensity Obstruction Light ICAO Type B

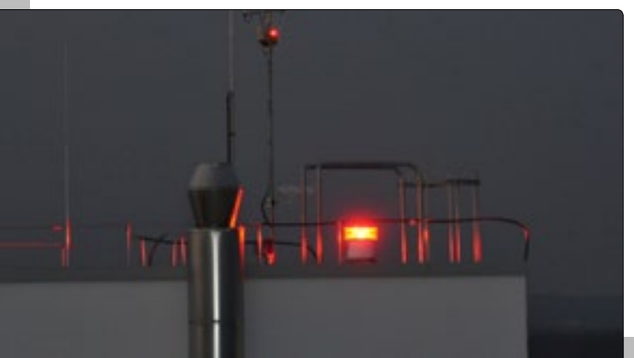
Certified according to No. 24 of the General Administrative Regulation for identification of obstacles to aviation (AVV marking) and CE.

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light).

The electronic ballast unit compensates voltage losses due to long cable runs.

They can be mounted externally in the cabinet or be integrated into the light.

Error messages occur as a collective report on potential free contacts.



Available Options::

- ✓ Steady light (ICAO Typ C)
- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Body material: stainless steel

MECHANICAL CHARACTERISTICS

Body	Powdercoated Aluminum, white
Operating Temperature	-40° C to + 60°C
Height	
Total	276 mm
Optics	116 mm
Diameter	330 mm
Weight	approx. 6,7 kg
Protection Class	IP 66
Installation	Base plate with 3 holes (8,5 mm diameter)

Impact and shock resistant, vibration proof

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	
Steady-on	50 W
Flashing	16 W

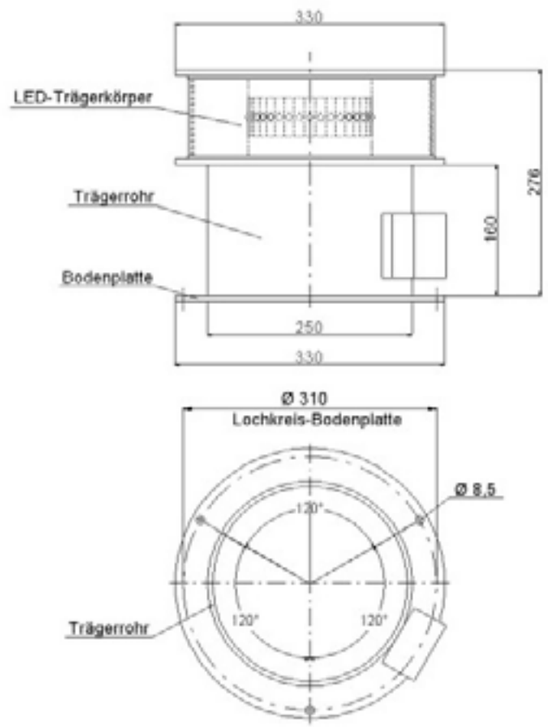
The electrical connection is carried out in a UV-resistant junction box made of plastic or aluminum (leads to 3 x 2.5 mm²)

OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	Aviation Red
Intensity	2000 cd ± 25%
Horizontal Divergence	360°
Flash Pattern	1s on / 2 s off (20 flashes per min)

Effective intensity complies with ICAO Type B

DIMENSIONS



Shown with integrated electronics, twilight switch and GPS module.

DWT-OBS LED AOL 303.2006 C

Medium Intensity Obstruction Light

- 1-stage medium intensity obstruction light ICAO Type B (flashing)
- Integrated heating system for protection against ice
- LEDs protected against UV-light and condensation

Typical Application

➤ ➤ ➤

Medium Intensity Obstruction Light ICAO Type B

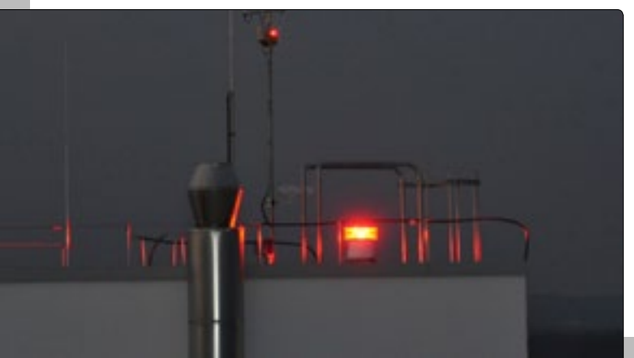
Certified according to No. 24 of the General Administrative Regulation for identification of obstacles to aviation (AVV marking) and CE.

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light).

The electronic ballast unit compensates voltage losses due to long cable runs.

They can be mounted externally in the cabinet or be integrated into the light.

Error messages occur as a collective report on potential free contacts.



Available Options::

- ✓ Steady light (ICAO Typ C)
- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Body material: stainless steel

MECHANICAL CHARACTERISTICS

Body	Powdercoated Aluminum, white
Operating Temperature	-40° C to + 60°C
Height	
Total	276 mm
Optics	116 mm
Diameter	330 mm
Weight	approx. 6,7 kg
Protection Class	IP 66
Installation	Base plate with 3 holes (8,5 mm diameter)

Impact and shock resistant, vibration proof

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	
Steady-on	50 W
Flashing	16 W

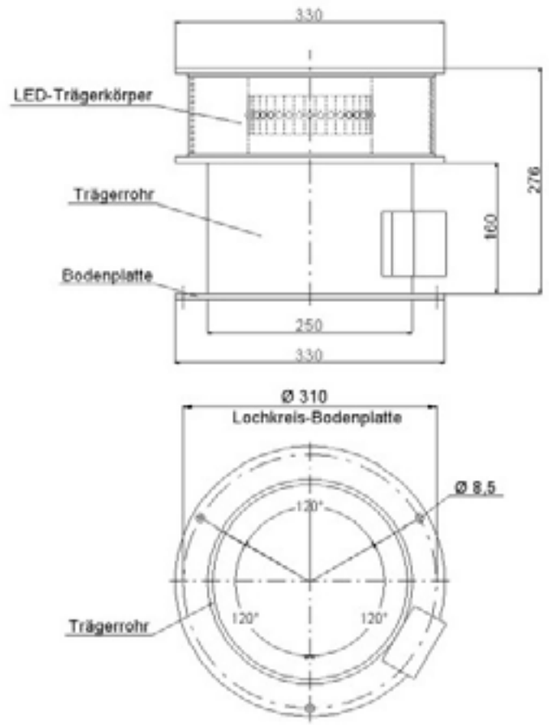
The electrical connection is carried out in a UV-resistant junction box made of plastic or aluminum (leads to 3 x 2.5 mm²)

OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	Aviation Red
Intensity	2000 cd ± 25%
Horizontal Divergence	360°
Flash Pattern	1s on / 2 s off (20 flashes per min)

Effective intensity complies with ICAO Type B

DIMENSIONS



Shown with integrated electronics, twilight switch and GPS module.

DWT-OBS LED AOL 304.2012 A

High Intensity Obstruction Light

- 200,000 cd effective intensity
- Integrated heating system for protection against ice
- LEDs protected against UV-light and condensation

Typical Application

➤ ➤ ➤

High Intensity Obstruction Light ICAO Type A (flashing)

The DWT-OBS LED AOL 304.2012 A complies with ICAO Annex 14

High Intensity Obstruction Lights type A Table 6-3 and is CE certified

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light).

The electronic ballast unit compensates voltage losses due to long cable runs. The light has the ability to control brightness, optional regulation required. It is externally mounted in the cabinet.

An integrated array of cooling elements provides efficient cooling of the high-power LEDs during operation.

Available Options::

- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Brightness Control

MECHANICAL CHARACTERISTICS LIGHT

Body Material	Aluminum, powdercoated
Body Color	White
Dimensions	
Height	840 mm
Width	550 mm
Length	245 mm
Operating Temperature	-40 to + 60°C
Weight	approx. 30 kg
Protection Class	IP 66
Installation	6 mounting angle bracket with 2 x 13 mm holes each

Impact and shock resistant, vibration proof

MECHANICAL CHARACTERISTICS JUNCTION BOX

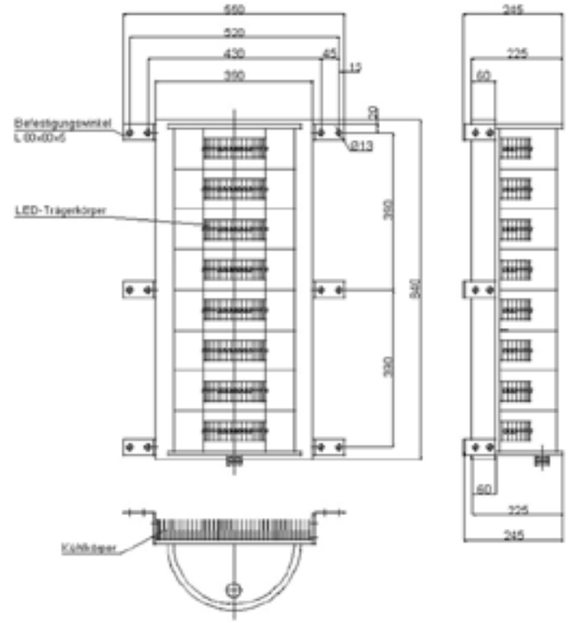
Body	AE 1050.500 - Steel
Length	500 mm
Width	500 mm
Height	210 mm
Weight	approx. 22 kg
Protection Class	IP 66

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	180 W (Average)
Connection	Screw clamps up to 2,5 mm²
Cable Inlet	1xM16, 1xM20, 2xM25
Main Fuse	10 A

Electronic ballast unit must be mounted externally in the control cabinet, power loss is compensated for longer cable run through ballast

DIMENSIONS



OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	White
Intensity	200 000 cd ± 25%
Horizontal Divergence	90°
Flash pattern	0,5 s on / 1,0 s off
Optics	Optical system

DWT-OBS LED AOL 304.2012 B

High Intensity Obstruction Light

- 100,000 cd effective intensity
- Integrated heating system for protection against ice
- LEDs protected against UV-light and condensation

Typical Application

➤ ➤ ➤

High Intensity Obstruction Light ICAO Type B (flashing)

The DWT-OBS LED AOL 304.2012 A complies with ICAO Annex 14

High Intensity Obstruction Lights type A Table 6-3 and is CE certified

A surge protector is integrated in the light (EN 61643-11:2001 in Type 2 SPD for control and light).

The electronic ballast unit compensates voltage losses due to long cable runs. The light has the ability to control brightness, optional regulation required. It is externally mounted in the cabinet.

An integrated array of cooling elements provides efficient cooling of the high-power LEDs during operation.

Available Options::

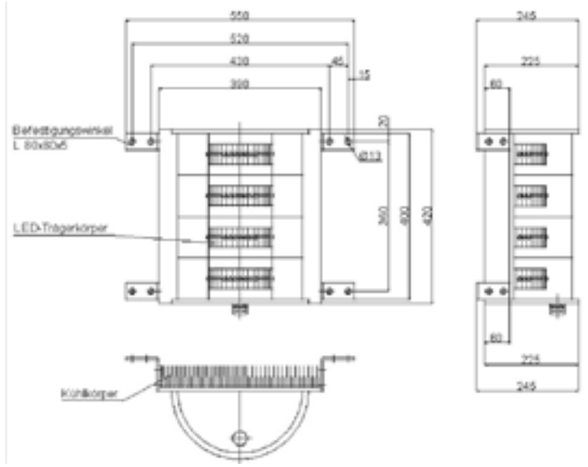
- ✓ Twilight switch
- ✓ GPS Module for synchronization
- ✓ Body colors in RAL-colors
- ✓ Brightness Control

MECHANICAL CHARACTERISTICS LIGHT

Body Material	Aluminum, powdercoated
Body Color	White
Dimensions	
Height	420 mm
Width	550 mm
Length	245 mm
Operating Temperature	-40 to + 60°C
Weight	approx. 30 kg
Protection Class	IP 66
Installation	4 mounting angle bracket with 2 x 13 mm holes each

Impact and shock resistant, vibration proof

DIMENSIONS



MECHANICAL CHARACTERISTICS JUNCTION BOX

Body	AE 1050.500 - Steel
Length	500 mm
Width	500 mm
Height	210 mm
Weight	approx. 22 kg
Protection Class	IP 66

ELECTRICAL CHARACTERISTICS

Operating Voltage	◦ 100 - 240 V AC 50/60 Hz ◦ 88 - 375 V / DC ◦ 21 - 27 V / DC
Power Consumption	100 W (Average)
Connection	Screw clamps up to 2,5 mm²
Cable Inlet	1xM16, 1xM20, 2xM25
Main Fuse	10 A

Electronic ballast unit must be mounted externally in the control cabinet, power loss is compensated for longer cable run through ballast

OPTICAL CHARACTERISTICS

Light Source	LED
Light Color	White
Intensity	100,000 cd ± 25%
Horizontal Divergence	120°
Flash pattern	0,5 s on / 1,0 s off
Optics	Optical system

AUTHORISED DISTRIBUTOR

DeWiTec GmbH
Flugplatz 7 - 9
44319 Dortmund
Germany

www.dewitec.de
contact@dewitec.de
Tel: +49 (0) 231 - 56 55 88 50
Fax: +49 (0) 231 - 56 55 88 51

Intelligent Obstruction Light w/ Solarpanel Connector

- LED-based optics
- In-built battery
- Charging port for external solar panel, charging unit or cable
- Wireless connection with range of 100 m optional
- EU manufactured

Low Intensity Obstruction Lighting ICAO Type A

Intelligent aviation light DWT-SP-401 for obstruction lighting according to Low Intensity ICAO Type A. Autonomous operation thanks to internal rechargeable battery and solar panel connector.

The aviation light DWT-SP-401 features various advanced functions and operation modes. These include a built in battery featuring 50 hours of operations or 14 days of stand-by. The built-in microprocessor provides protection against excessive over/discharge of the battery enable reliable operation. The lighting unit microcontroller runs self-diagnostics and provides an integrated radio module for wireless activation (built-in MESH protocol). This way, the lighting system can be activated whenever it is necessary. Autonomous operation (automatic activation / deactivation at dusk / dawn) is possible with optional solar panel Users benefit from maximum flexibility for installations due to external, optional solar panel.

An additional on/off switch button allows for manual operation.

Fittings / Options:

- ✓ GSM Monitoring & Activation
- ✓ VHF Activation
- ✓ Solar Panel
- ✓ Mounting Accessories

MECHANICAL CHARACTERISTICS

Material	
Body	Composite technology, RTM
Lens	UV-stabilized Polycarbonate, Grade 2407
Body Colour	Yellow
Dimensions	
Width	228 mm
Length	178 mm
Body Height	271 mm excl. antenna
Height	365 mm incl. antenna
Weight	4 kg
Mounting	4 x M5
Protection Class	IP65 (waterproof)
Operating Temperature	-20°C to + 50°C

OPTICAL CHARACTERISTICS

Light Source	LED
Light Colour	Red (acc. to ICAO Annex 14)
Intensity Settings	◦ Low ◦ Medium ◦ High
Horizontal Divergence	360°

ELECTRICAL CHARACTERISTICS

Battery	
Type	Deep-cycle, VLRA, ISO 9001, ISO14001
Capacity at 25°C	9 Ah
Capacity at 0°C	7,7 Ah
Capacity at -15°C	5,9 Ah
Voltage	12 V
Stand-by time	14 days
Operating time	25-50 hours depending on selected intensity (fully charged battery)
Charging Options	◦ Stationary charging unit ◦ External solar panel ◦ Electrical cable grid
Charging Time	
Stationary Charging Unit	7 hours
Solar Panel	20 min per 1 hour operation
Solar Panel	
Cell Technology	Monocrystalline
Maximum Power	20 W (10 W optional)
Operation Nominal Voltage	12 V
Model Efficiency	13 - 17 %
Dimensions	580 x 289 x 18 mm
Weight	2.3 kg

Intensity setting subject to solar availability

DWT-OBS-LED-SP-401

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Germany

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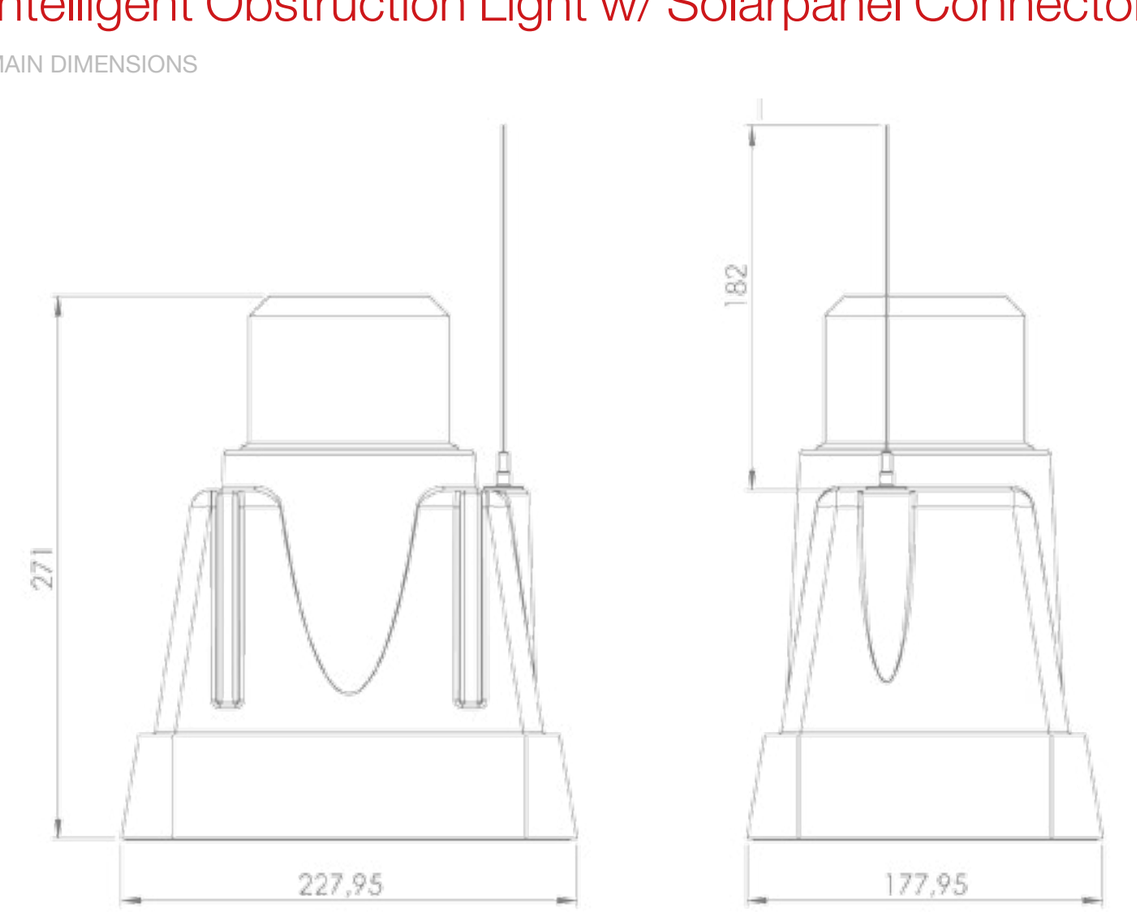
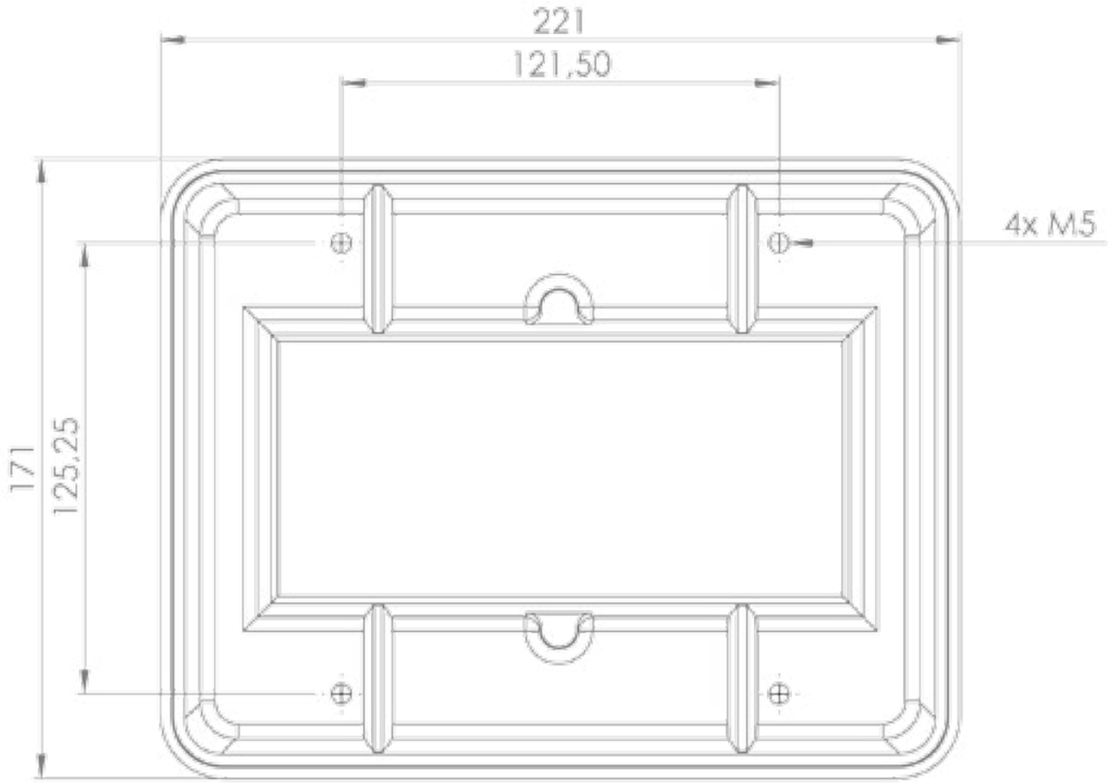
Tel: +49 (0) 231 - 56 55 88 50
Fax: +49 (0) 231 - 56 55 88 51

Intelligent Obstruction Light w/ Solarpanel Connector

MAIN DIMENSIONS



BASE DIMENSIONS



FEATURES

Manual On/Off Push Button

and Battery Status Indicator

Waterproof Charging Port for

Solar Panel, Charging Unit or Cable

ADDITIONAL CONTROL UNIT

DWT-UR-201 (Optional)

Key Features:

- Remote activation of Lighting Sytem via GSM / Air-Band Radio (optional)
- Adjustable lighting intensity
- Time out adjustable from 10, 15, 30 or 60 min (via GSM)
- Main source of power: 230 V / Backup Source of Power - 18 Ah, 12 V battery
- Solar powered version (optional)

Solar-Powered Obstruction Light

- Integrated solar/battery system
- User-replaceable battery and solar modules
- IP68 waterproof rating
- Available in two power supply sizes to suit various locations

Typical Application

➤ ➤ ➤

Low Intensity Obstruction Light (ICAO Type A)

Avlite's Solar powered ICAO LIOL Type A is a robust, completely self-contained solar powered LED obstruction light.

The solar array charges an internal battery during daylight hours, and at dusk the light will automatically begin operation.

The rugged design of this self-contained light ensures up to 12 years of reliable service with minimal ongoing maintenance. Specifically designed for the harshest of environments, this light features a 7-stage, powder-coated aluminum top, base and internal chassis in high visibility colors for daytime recognition. The rubber, extruded corners provide additional impact resistance.

The advanced light optic uses a single power LED. The tough polycarbonate aviation lens is specifically designed for use with LEDs to maximize light intensity and uniformity. The light optic is interchangeable between units, and can be replaced on site in the unlikely event of damage.

Available Options:

- ✓ GPS Module for synchronisation
- ✓ External On/Off-Switch
- ✓ External Charging Port (for DWT-ASB 10 / 20 SolarBooster)
- ✓ External IR Controller
- ✓ IR LED

MECHANICAL CHARACTERISTICS

Material	
Body	7-stage powder-coated Aluminum
Lens	LEXAN® Polycarbonate – UV stabilized
Dimensions	
Height	375 mm
Width	233 mm
Weight	9,1 kg
Lens Diameter	107 mm
Mounting	4 x 17mm holes on 200mm PCD
Temperature Range	-40 to 80 °C
Protection Class	IP 68
Wind Speed	Max. 44 m/s

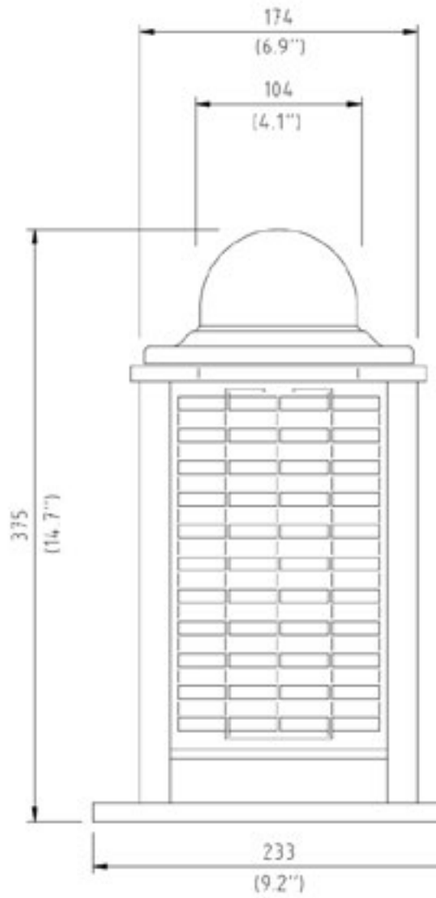
OPTICAL CHARACTERISTICS

Light Source	Single high-power LED
Available Colors	Red as standard, other colors on request
Peak Intensity	Compliant to ICAO
Horizontal Output	360 degrees
Vertical Divergence	as
Intensity Adjustment	In 25% increments
Available Flash Characteristics	>250 including steady-on (user-adjustable)
Intensity Adjustments	25 % - 50 % - 100 %

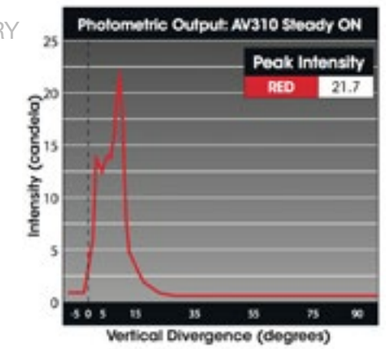
ELECTRICAL CHARACTERISTICS

Current Draw	39 mA (steady on)
Circuit Protection	Integrated
Operating Voltage	12 V
Autonomy (days)	>20 (14 hour darkness, 12.5% duty cycle)
Battery Capacity	12 Ah
Typical Autonomy	> 20 nights (steady-on)
Output Solar Module	12 W (4 x 3 W)
Approx. daily kw/h to maintain full autonomy	2.1

DIMENSIONS AV 310



PHOTOMETRY



Solar-Powered Obstruction Light

- Integrated solar/battery system
- User-replaceable battery and solar modules
- IP68 waterproof rating
- Robust 7-stage powder-coated aluminum chassis with rubber extruded corners

Typical Application

➤ ➤ ➤

Low Intensity Obstruction Light (ICAO Type A)

Avlite's Solar powered ICAO LIOL Type A is a robust, completely self-contained solar powered LED obstruction light.

The solar array charges an internal battery during daylight hours, and at dusk the light will automatically begin operation.

The rugged design of this self-contained light ensures up to 12 years of reliable service with minimal ongoing maintenance. Specifically designed for the harshest of environments, this light features a 7-stage, powder-coated aluminum top, base and internal chassis in high visibility colors for daytime recognition. The rubber, extruded corners provide additional impact resistance.

The advanced light optic uses a single power LED. The tough polycarbonate aviation lens is specifically designed for use with LEDs to maximize light intensity and uniformity. The light optic is interchangeable between units, and can be replaced on site in the unlikely event of damage.

Available Options:

- ✓ GSM Cell Phone Monitoring
- ✓ GPS Module for synchronisation
- ✓ External On/Off-Switch
- ✓ External Charging Port
- ✓ SolarBooster
- ✓ External IR Controller
- ✓ IR LED

MECHANICAL CHARACTERISTICS

Material	
Body	7-stage powder-coated aluminum
Lens	LEXAN® Polycarbonate – UV stabilized
Dimensions	
Height	470 mm
Width	233 mm
Weight	13,9 kg
Lens Diameter	107 mm
Mounting	4 x 17mm holes on 200 mm PCD
Temperature Range	-40 to 80 °C
Protection Class	IP 68
Wind Speed	Max. 44 m/s

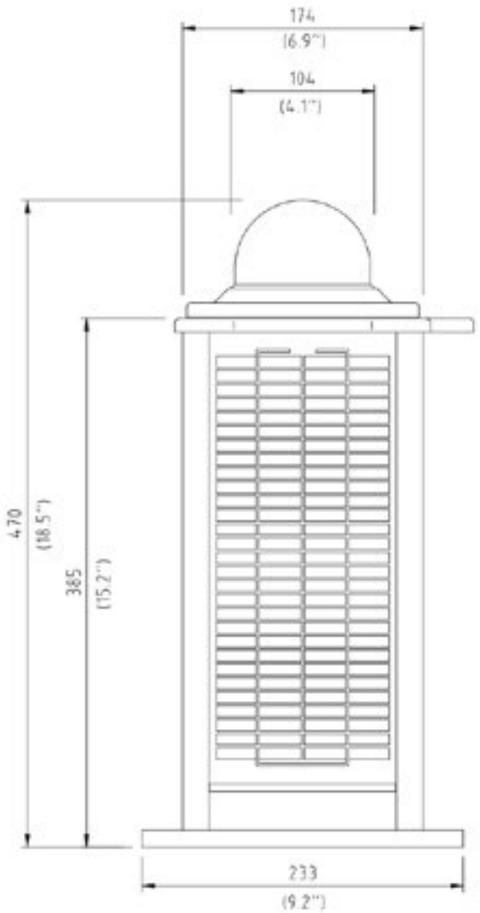
OPTICAL CHARACTERISTICS

Light Source	Single high-power LED
Available Colors	Red as standard, other colors on request
Peak Intensity	Compliant to ICAO
Horizontal Output	360 degrees
Vertical Divergence	+4° to +13°
Intensity Adjustment	In 25% increments
Available Flash Characteristics	>250 including steady-on (user-adjustable)
Intensity Adjustments	25 % - 50 % - 100 %

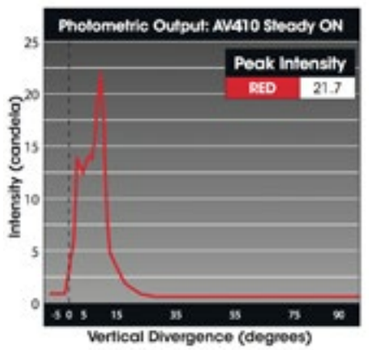
ELECTRICAL CHARACTERISTICS

Current Draw	39 mA (steady on)
Circuit Protection	Integrated
Operating Voltage	12 V
Autonomy (days)	> 20 (14 hour darkness, 12.5% duty cycle)
Battery Capacity	24 Ah
Typical Autonomy	> 40 nights (steady-on)
Output Solar Module	20 W (4 x 5 W)
Approx. daily kw/h to maintain full autonomy	1.4 (0.7 with Solar Booster)

DIMENSIONS



PHOTOMETRY



Solar-Powered Obstruction Light

- Integrated solar/battery system
- User-replaceable battery and solar modules
- 10 watt solar module
- Single LED Optic: Bright and efficienty

Typical Application

➤ ➤ ➤

Low Intensity Obstruction Light (ICAO Type A)

During daylight hours the solar module will charge the battery through an advanced switch-mode regulator incorporated into the flasher unit.The light will automatically begin operation at dusk once the ambient light threshold drops sufficiently.

The light is built from heavy-duty cast aluminum - subject to 7-stage powder-coating, and offers users enormous impact and weather resistance.

This completely self-contained unit with integrated solar module and battery system saves users considerably in power, cabling and on-going maintenance associated with traditional incandescent systems.

The DWT-AV 23 has been independently tested to be in accordance with the requirements of the photometric and colormetric specifications for a Low Intensity Type A Obstacle Light listed in table 6-3 of ICAO Annex 14 Volume 1,'Aerodrome Design and Operations', Fourth Edition July 2004.

Available Options:
- ✓ 200 mm bolt pattern mounting plate
- ✓ IR LED
- ✓ External IR Controller

MECHANICAL CHARACTERISTICS

Material	
Body	7-stage powder-coated Aluminum
Lens	LEXAN® Polycarbonate – UV stabilized
Dimensions	
Height	365 mm
Width	295 mm
Weight	5.5 kg
Lens Diameter	107 mm
Temperature Range	-40 to 80 °C
Mounting	50 mm (OD) pole

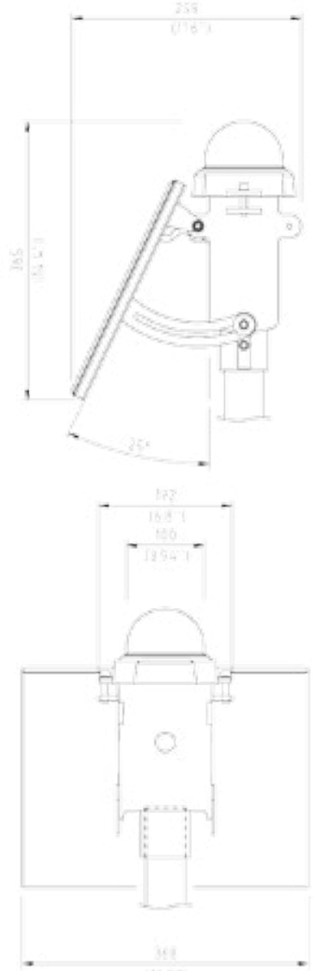
OPTICAL CHARACTERISTICS

Light Source	Single high-power LED
Available Colors	Red as standard, other colors on request
Peak Intensity	Compliant to ICAO
Horizontal Output	360 degrees
Vertical Divergence	+4° to +13°
Available Flash Characteristics	>250 including steady-on (user-adjustable)
Intensity Adjustments	25 % - 50 % - 100 %

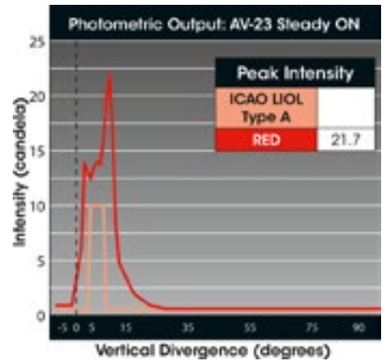
ELECTRICAL CHARACTERISTICS

Current Draw	39 mA (steady on)
Circuit Protection	Integrated
Operating Voltage	12 V
Autonomy (nights)	> 10 (14 hour darkness, 12.5% duty cycle)
Battery Type	SLA (Sealed Lead Acid)
Battery Capacity	7.5 Ah
Battery Service Life	Average 5 years
Output Solar Module	1 x 10 W

DIMENSIONS



PHOTOMETRY



DWT-AV 60

Solar-Powered Obstruction Light

- Integrated solar/battery system
- IP68 Rating
- High-Performance LED with aviation optic
- 8 Ah rechargable battery
- User-replaceable battery

Typical Application

➤ ➤ ➤

FAA Construction & Barricade Lighting

The DWT-AV-60 solar LED light provides up to 5.7km visible range (flashing).

The positive divergence, wide angle lens makes it suitable for a variety of applications including taxiway, general hazard, barricade and low-intensity obstruction lighting.

Designed to be maintenance-free and have a service life of up to 12 years, the popular AV-60 model boasts user-adjustable intensity settings and can be set onsite to either steady-on or flashing operation.

The light is simply switched ‘ON’, and the unit is ready for immediate operation. Once installed, the AV-60 requires no operator intervention.

The internal solar module charges the battery during daylight hours, and at dusk the light will automatically begin operation once the ambient light threshold drops sufficiently. The battery is housed in a sealed compartment allowing it to be changed after years of service.

Available Option:
- ✓ External On-/Off Switch
- ✓ IR LED

MECHANICAL CHARACTERISTICS

Material	LEXAN® Polycarbonate, UV stabilized
Dimensions	
Width	231 mm
Height	120 mm
Diameter Optic	140 mm
Weight	1,1 kg
Mounting	6 x 17 mm on 200 mm bolt pattern
Temperature Range	- 40 to + 80 °C

OPTICAL CHARACTERISTICS

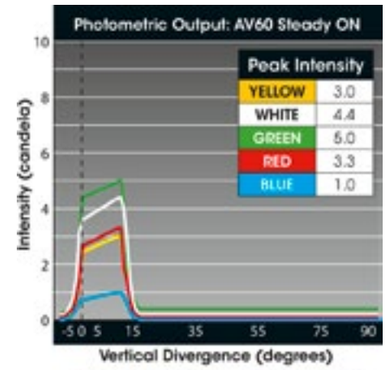
Light Source	6 High-Power LEDs
Light Colors	◦ Red ◦ Green ◦ White ◦ Yellow ◦ Amber ◦ Blue
Flash Pattern	> 250 incl. steady on
Intensity Adjustments	25%, 50%, 75%,100%

ELECTRICAL CHARACTERISTICS

Operating Voltage	3,6 V
Battery Capacity	8 Ah, NiMH-Battery
Solarpanel	
Typ	Multicrystalline
Power	1,4 W
Efficiency	14 %
Charging Regulation	Mikroprocessor
Autonomy	
Steady On	20 Nights
Flashing	40 Nights

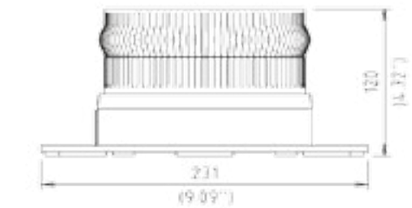
Intensity setting subject to solar availability

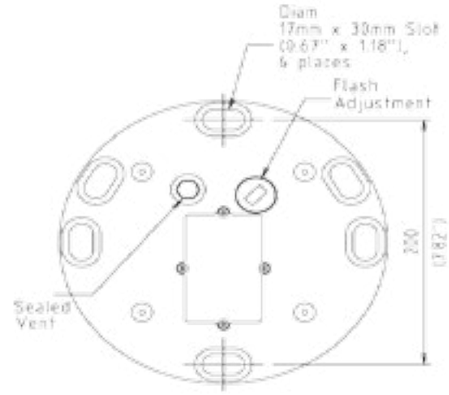
PHOTOMETRY



Steady ON, low intensity, wide angle lens

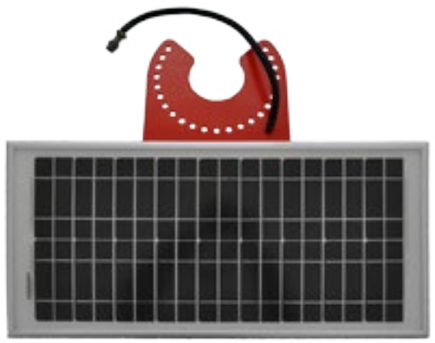
DIMENSIONS





DWT-ASB10 / ASB20

Solar Booster



- Increases battery charging current for solar powered lights
- Microprocessor controlled
- Increased reliability
- Easy installation and connection

MECHANICAL CHARACTERISTICS

Mounting	4 hole bolt pattern on 200 mm OD base
Operating Temperature	-40° C to + 80°C
Height	150 mm
Length	560 mm
Width	370 mm
Weight	approx 3,2 kg
Protection Class	IP 68
Installation	Connected to base plate of light

Up to 12 years product life expectancy

ELECTRICAL CHARACTERISTICS

Voltage	12 V
Amperage	max 1 600 mA
Type Solar Panel	Multicrystalline
Output	20 W

Typical Application

➤ ➤ ➤

Solar Power Supply (Boosts Charging Current)

The Solar Booster provides additional solar collection to charge the battery.
The Solar Booster can be used in areas of reduced sunlight to help ensure optimum battery charge or where longer periods of high intensity mode is required.

The solar panel is connected to the light via the external charge port and the panel is mounted at an angle to maximise solar collection during daylight hours.

The panel captures as much sunlight as possible during the day.
For detailed solar profiling of your region please contact DeWiTec.

Usable with:

- ✓ DWT-AV 410
- ✓ DWT-AV 425
- ✓ DWT-AV 70
- ✓ DWT-AV 72

Solar Booster™ DWT-ASB 20 with DWT-AV425 RF and base plate with frangible coupling

In use with DWT-AV 410

LED-Inset for obstruction lights type RTO 25

- Modernization of convenetional obstruction lights by simply „changing the bulb“
- Decreased power consumption lowers operation costs

MECHANICAL CHARACTERISTICS	
Socket	E27
Operating Temperature	-30° C to + 60°C
Dimensions	
Height without socket	65 mm
Height with socket	100 mm
Width	80 mm
Protection Class	IP 20
Material	Aluminum
Weight	0,21 kg
Stress	Vibration-proof
OPTICAL CHARACTERISTICS	
Light Source	High-Power-LED
Color	Aviation Red
Light Intensity	> 10 cd
Horizontal Divergence	360°
ELECTRICAL CHARACTERISTICS	
Operation Voltage	95 - 240 V AC 50 / 60 Hz
Power Consumption	approx. 6 W
Overvoltage Protection	Integrated

Typical Application

➤ ➤ ➤

Modernization of conventional obstruction lights

The LED-Inset offers all advantages of a genuine LED-Obstruction Light.

There is no better way to modernize your existing obstruction lights and make them fit for the future.

You do not have to worry any more about changing your bulbs and you decrease the power consumption.

The LED-Inset is CE certificated and approved for use as light source for obstruction lights type RTO 25 by the german ministry of transport. Other operating voltages are available upon request.

Available Fittings:

- ✓ Fail Safe Relay
- ✓ Changeover Relay
- ✓ External electronics unit

DWT-LED 5NQ 32 / 33

LED-Inset for obstruction lights type RTO 25

- Modernization of convenetional obstruction lights by simply „changing the bulb“
- Decreased power consumption lowers operation costs

Typical Application

➤ ➤ ➤

Modernization of conventional obstruction lights

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OPTICAL CHARACTERISTICS	
Light Source	4 High-Power-LED
Color	Aviation Red
Light Intensity	20 cd
Horizontal Divergence	360°

MECHANICAL CHARACTERISTICS	
Socket	E27 or clip
Operating Temperature	-30° C to + 60°C
Dimensions	
Height	100 mm
Diameter	80 mm
Protection Class	IP 20
Color Socket	White
Weight	0,2 kg

ELECTRICAL CHARACTERISTICS	
Operation Voltage	95 - 240 V AC
Power Consumption	5 W

Available Fittings:

- ✓ Fail Safe Relay
- ✓ Changeover Relay
- ✓ Self Regulating Heater

Installation Accessories for Obstruction Lights

The best way to mount obstruction lights above buildings is often by using a mast, so visibility is guaranteed from every direction. Masts with connections / mounting possibilities are available for all lights:

- In Stainless Steel
- In Aluminum

- From 100 mm to 1500 mm (height)
- With frangible coupling

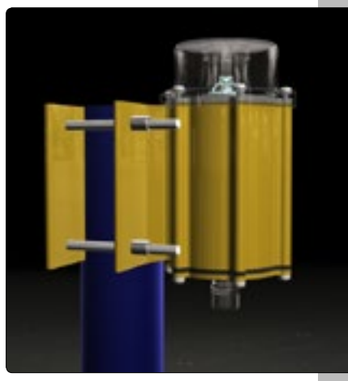
In other cases, mounting can be achieved by means of wall mounting (angle brackets, retainers, ..).

Custom Made Solutions

DeWiTec offers you purpose-built items for your buildings / application.

So please provide us with all the relevant information about where the lights are to be installed and any useful drawings.

We can then find the best solution for your task.



Mast Mounting
for DWT-OBS-LED A

Wall Mounting
for DWT-OBS-LED A

Mast Mounting
for DWT-OBS-LED S

Custom Made Solutions
for all products

Obstruction Lighting

Rev 1.2 / 29 08 15 JWI

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