WACO

INDUSTRIAL ELECTRICAL DISTRIBUTOR
& MANUFACTURER

Introducing our NEW
ENERGY EFFICIENT
Navigational LED Range

Sitelites/
Aviation Warning Beacons

AVIATION WARNING BEACONS

SOUTH AFRICAN CIVIL AVIATION AUTHORITY

Physical Address: Ikhaya Lokundiza Treur Close Waterfall Park Bekker Street Midrand

Postal Address: Private Bag X73 Halfway House 1685

Telephone Number: +27 11 545 1000

Fax Number: +27 11 545 1480

E-mail address: mail@caa.co.za

Website address: www.caa.co.za

AERODROME SAFETY INFRASTRUCTURE

Reference: CA 17/3/   **Tel:** (011) 545 1066
Enquiries: Koos Pretorius   **Fax:** (011) 545-1451

14 December 2006

WACO INDUSTRIES
P.O.Box 487
BERGVLEI
2012

Attention: Mr. Farley Joseph

Sir

"Sitelite Beacon" Obstruction light

You have submitted proof of compliance to the specification as laid down by **ICAO** in **ANNEX 14** Volume 1 Third addition, as amended, for your **"Sitelite Beacon"** Obstruction light as a Low Intensity Type A obstruction light.

The CAA has no objection to the use of the **"Sitelite Beacon"** Obstruction light as a **Low Intensity Type A** obstruction light in the Republic of South Africa.

The above applies for a 100-Watt incandescent lamp, a 20-Watt compact fluorescent or your **"NAVLED"** light emitting diode light source only.

Lights of this type may be used on structures not exceeding 45m.

The Commissioner reserves the right to withdraw this approval.

Yours faithfully

J.P. Pretorius
NAVAIDS & COMMS

Board Members: Mr D Mocrcsi (Chairman), Mr J Morrison, Ms M Magasa, Ms B Mohlala, Maj Gen T Ntsibande, Mr Z Myeza (CEO)

Procedure design and Cartography

Reference: CA 8/9/4   Tel: (011) 545 1232
Enquiries: Lizell Stroh   Fax: (011) 545-1481

08 November 2011

WACO INDUSRTRIES
P O Box 487
Bergvlei
2012
Johannesburg

Attention: Mr. Farley Joseph

Sir,

SITELITE BEACON NAVLED 32 TYPE B RED NAVIGATION LIGHT

You have submitted proof of compliance to the specification as laid down by **ICAO** in **ANNEX 14 Volume I** 3rd Edition, as amended, for your **"NAVLED 32"**, as a Low Intensity Type B obstruction light. This light is known as **"NAVLED 32"** obstruction light.

The CAA has no objection to the use of the **"NAVLED 32"** as a **Type B RED NAVIGATION LIGHT** in the Republic of South Africa as per the **"SABS TEST REPORT"** dated the 12-10-2011 **Reference no. O/No121123** here attached.

Lights of this type may be used on structures not exceeding 150m AGL as to the standards of SA-CATS-AH part 139.01.33

The Director reserves the right to withdraw this approval.

Yours truly,

Gary Newman

Gary Newman

Manager Procedure design and Cartography
For SA Civil Aviation Authority
Tel: 011 545 1202
Fax: 011 545 1282
Cell: 083 461 6660

Vision Ware ////

c/o Atlas & de Havilland Rd
Kempton Park, 1620
P O Box 16774 Atlasville 1465
South Africa
Tel: +27-11-921-4411
Fax: +27-11-921-4414

Waco Industries
Fax: (011) 677 2601
Attn: H Pieterse

Date: February 18, 2002

Technical Specifications: NAVLED

Supply Voltage   : 220V AC/DC; 115V AC/DC; 12V AC/DC; 24V
                                    AC/DC and 48V AC/DC.
Supply Voltage Limits   : ±15%
Supply Current   : 80m/A
Lamp Rating   : 20Watt maximum
Luminous Intensity   : 10+ Cd; 0-10' from horizontal omni-directional
Temperature Limits   : -20°C - +55°C
IEC Protection Class :   : IP30

- UV – Stable Poly-carbonate dome and body
- Expected lamp life: 10-15 years
- Edison screw or Bayonet base
- Protection mechanisms:
  1. LED Cluster/Array is made up by 16 clusters of 4LED's each, connected as a 4x4 serial/parallel array to total 64 LED's.

  For one LED failure, only one cluster will die, equaling **6.25%** of total light energy drop.

  2. Transient Protection:
  Navled use a 4500Amp (8/20@s) Mov, connected across the mains input as first stage protection and resistor protection Transorb of 1500W (10/10008s) as a second stage protection.

NAVLED 32-320	VNL-102
TECHNICAL SPECIFICATIONS	LOW INTENSITY TYPE B (FIXED OBSTACLE)
Test Specifications	ICAO ANNEX 14 VOL 1 3rd Edition SANS 60588-2-1 SABS 970-1971 (Class 1, Div 2 Locations)
Power Supply	220V/AC (also 110V/AC & 12V-60V/DC)
Peak Light Intensity	32 Candela Minimum
Light Colour	Aviation Red
Ingress Protection	IP 66
Dimension Overall	H: 175m Dia: 125mm
Weight	950g
Expected Lamp Life	100 000h
Lamp Degradation (intesity)	25% after 100 000h
Radiation Pattern: Horizontal Vertical	360° 6° - 10°
Power Consumption	10W maximum
Material: Housing Lens Fittings	AI LM6 Acrylic 304 Stainless Steel
UV Stability	UV Stabalized Powder Coating
Corrosion Resistant Plating	Zinc Nickel
Operation Temperature	- 20° - 80° C
Wind Load	250km/h
Day/Light Controller	Optional
Warranty	5 years

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AVIATION WARNING BEACONS

SiTELiTE
LIGHT YEARS AHEAD

PROUDLY
BIDVest

Technical Specifications

CHARACTERISTICS OF THE SITELITE
Toughened glass
Die-cast aluminium body
Vibration proof lamp holder
IP 66
Double units are equipped with die cast
aluminium or stainless steel boxes as well
as universal pole mounting brackets

APPLICATIONS OF THE SITELITE
High buildings, masts, towers and cranes
Can also be used in mining applications
Any structure where the height exceeds 20 meters
Applications can be made to suit your specific needs

Available in different voltages on request

AUTHORISED BY THE SOUTH AFRICAN CIVIL AVIATION AUTHORITY. SABS APPROVED.

The S2SL/DAY is a UV stabalised daylite sensor with
IP54 protection
Switching level ON ± -60 lux
Switching level OFF ± -90 lux
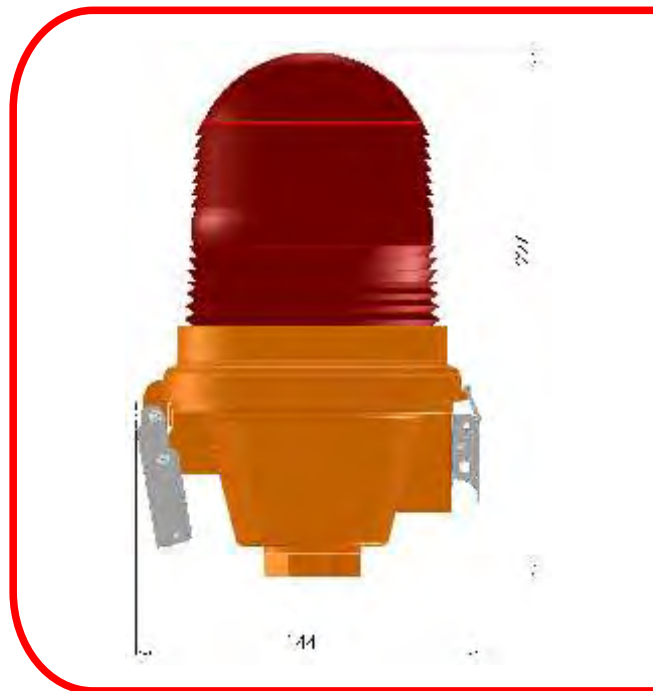Switching delay 20-30 sec
SABS 1777
Code: S2SL/DAY

Available in:
12V
24V
48V
110V
Built to order

The S2SL/S1ES/G-R single SITELITE Beacon is supplied with an, ES lampholder & 20mm cable gland entry as standard. Max 100W lamp.
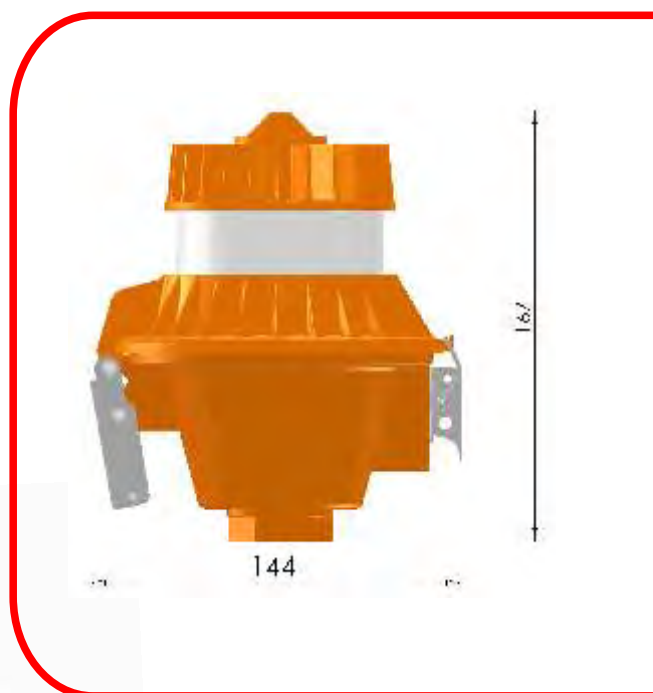Code: S2SL/S1ES/G-R
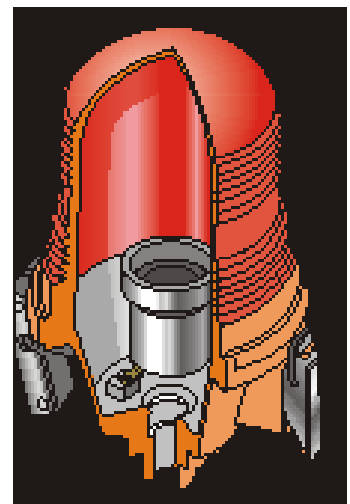
Single NAVLED SITELITE Beacon
standard

The S2SL/S1ES/G-R32 single SITELITE Beacon is a
complete 32CD Navled Lamp Unit.
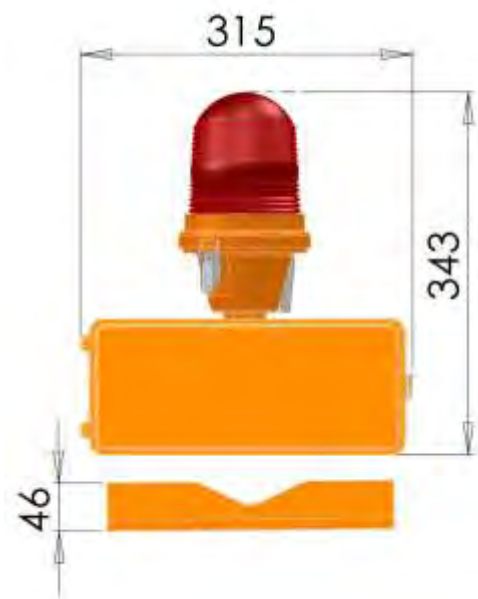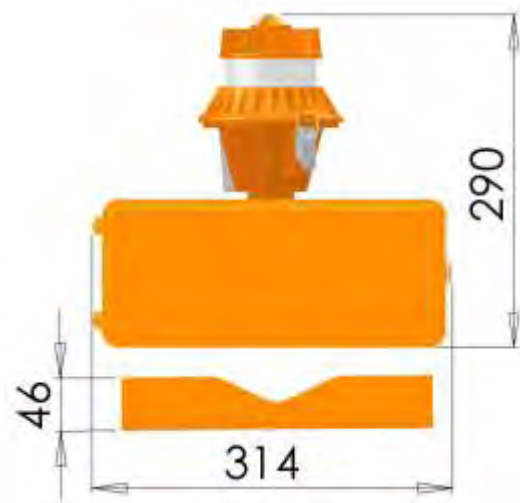Available in various voltages.
Code: S2SL/S1ES/G-R32

The S2SL/S1ES/BS-COM single SITELITE Beacon is
supplied complete with a die-cast aluminium
enclosure and universal pole clamp.
Max 100W lamp.
For use with Annunciator Box.
Code: S2SL/S1ES/BS-COM

AVIATION WARNING BEACONS

The S2SL/S1ES/BS-COM32 single SITELITE Beacon is
supplied complete with a die-cast aluminium
enclosure and universal pole clamp.
This is a complete 32 candela standard unit.
Available in various voltages.
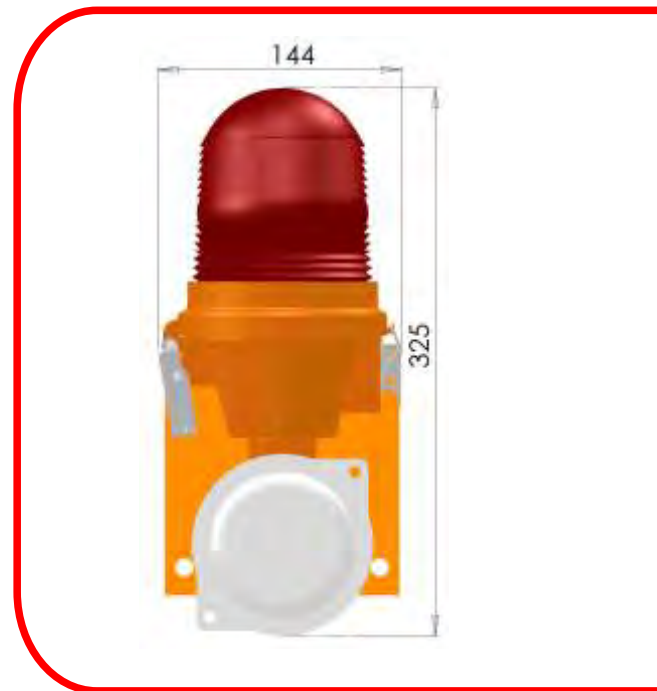For use with Annunciator Box.
Code: S2SL/S1ES/BS-COM32

The S2SL/S1ES/U-R single SITELITE Beacon is supplied complete with a 20mm CCG cable box and universal pole clamp.
Max 100W lamp.
Code: S2SL/S1ES/U-R

The S2SL/S1ES/U-R32 single SITELITE Beacon is supplied complete with a 20mm CCG cable box and universal pole clamp.
This is a complete 32 candela standard unit.
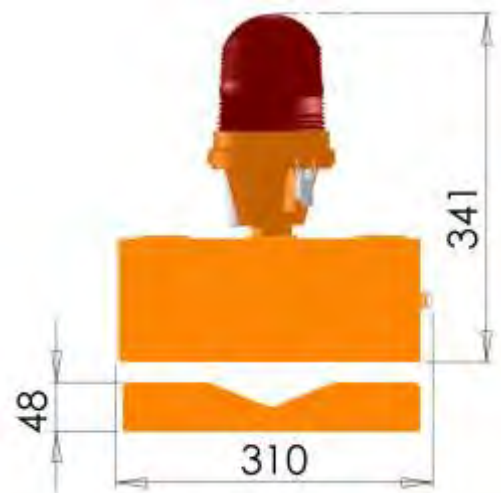Available in various voltages.
Code: S2SL/S1ES/U-R32

The Stainless Steel single SITELITE Beacon is supplied complete with a 3CR12 or 304 stainless steel enclosure and universal pole clamp.
For use with Annunciator Box.
Max 100W lamp.
Code: S2SL/S1ES/BS (3CR12 Stainless Steel)
        S2SL/S1ES/BS304 (304 Stainless Steel)

WACO   AVIATION WARNING BEACONS   **SITELITE** LIGHT YEARS AHEAD   BIDVest

The Stainless Steel single NAVLED SITELITE Beacon is supplied complete with a 3CR12 or 304 stainless steel enclosure and universal pole clamp.
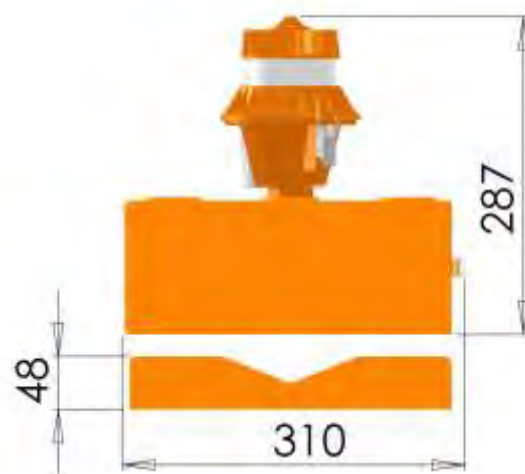This is a complete 32 candela standard unit.
Available in various voltages.
For use with Annunciator Box.
Code: S2SL/S1ES/BS32CD (3CR12 Stainless Steel)
        S2SL/S1ES/BS304/32 (304 Stainless Steel)

The S2SL/S2ES/BS-COM double SITELITE Beacon is supplied complete with a die-cast aluminium enclosure and universal pole clamp.
Max 100W lamp.
For use with Annunciator Box.
Code: S2SL/S2ES/BS-COM
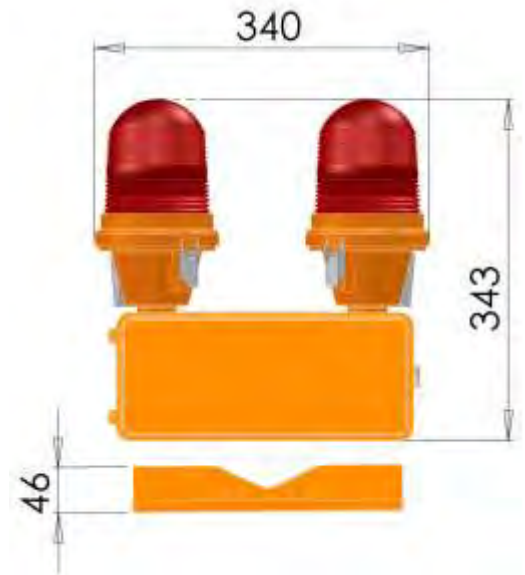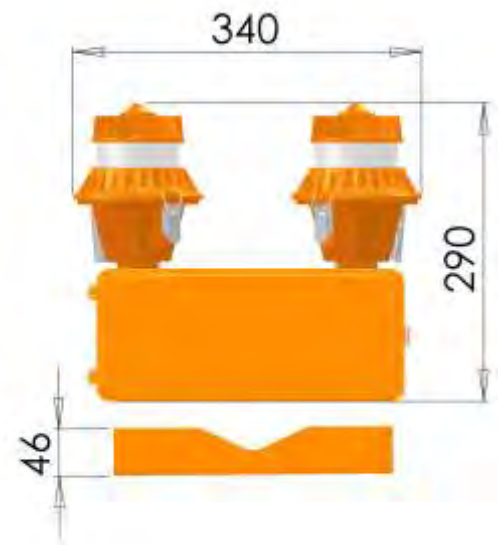
Double NAVLED SITELITE Beacon
with enclosure & pole clamp

The S2SL/S2ES/BS-COM32 double SITELITE Beacon is
supplied complete with a die-cast aluminium
enclosure and universal pole clamp.
This is a complete 32 candela standard unit.
Available in various voltages.
For use with Annunciator Box.
Code: S2SL/S2ES/BS-COM32
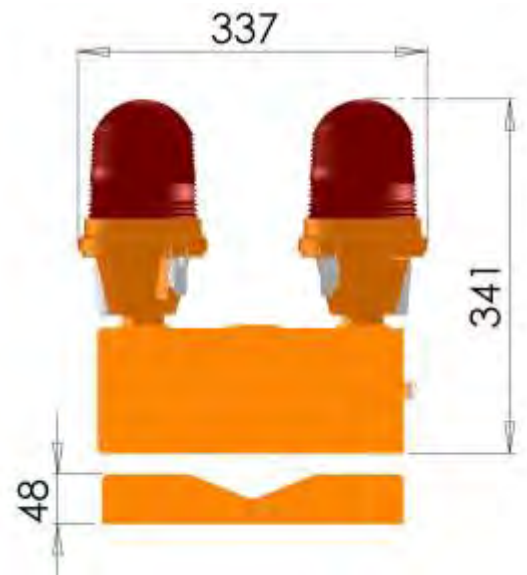

AVIATION WARNING BEACONS

The Stainless Steel double SITELITE Beacon
comes standard with a 3CR12 or 304 stainless
steel enclosure and universal pole clamp.
For use with Annunciator Box.
Max 100W lamp.
Code: S2SL/S2ES/BS (3CR12 Stainless Steel)
          S2SL/S2ES/BS304 (304 Stainless Steel)

WACO   AVIATION WARNING BEACONS

The Stainless Steel double SITELITE Beacon is supplied
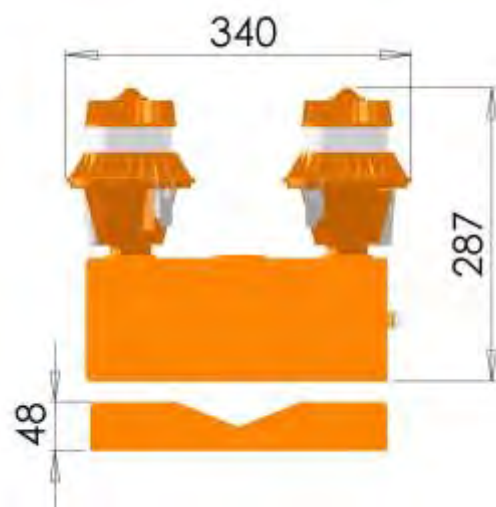complete with a 3CR12 or 304 stainless steel enclosure and
universal pole clamp.
This is a complete 32 candela standard unit.
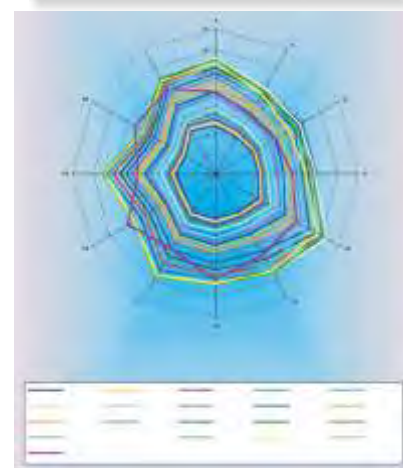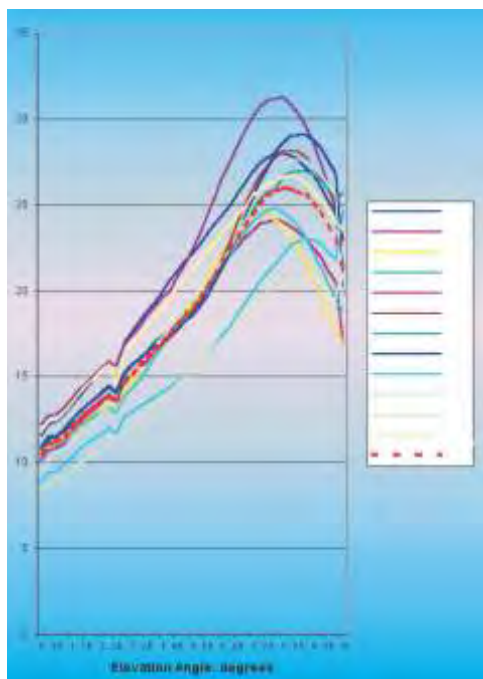Available in various voltages.
For use with Annunciator Box.
Code: S2SL/S2ES/BS32CD (3CR12 Stainless Steel)
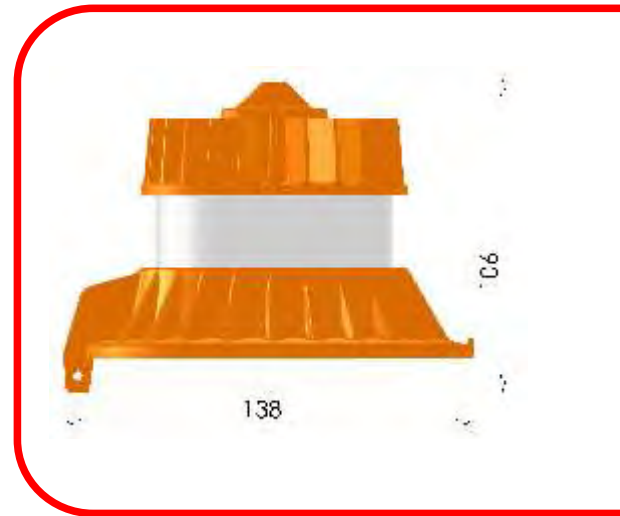   S2SL/S2ES/BS304/32 (304 Stainless Steel)

The S2SL/NAV/___-R NAVLED - Navigational L.E.D.
Lamp E27 comes red as standard and is available in
voltages 12V, 24V, 480V, 110V and 230V.
Code: S2SL/NAV/___-R NAVLED

AVIATION WARNING BEACONS

The S2SL/NAV32/___-R NAVLED
Lamp E27 comes red as standard and is available
in voltages 12V, 24V, 48V and 230V.
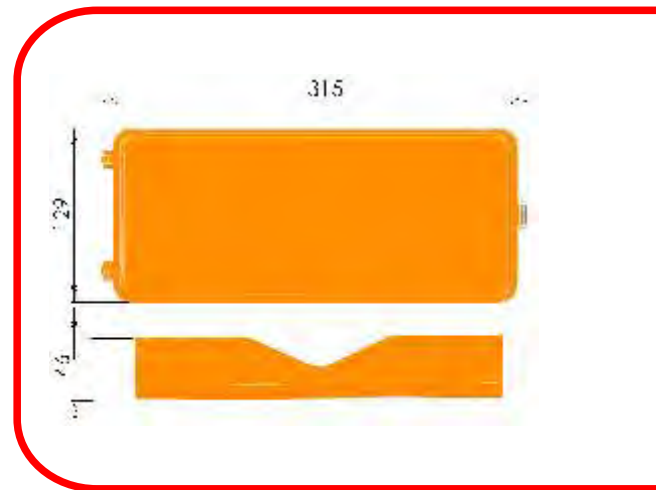Code: S2SL/NAV32/___-R NAVLED

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- This unit is a retrofit and is interchangeable with our existing models in order to upgrade it from low to medium intensity
- Available in various voltages
- Light emitted is rated at 32 candela

This unit cannot be upgraded with the old annunciator based units.

Die-cast Aluminium Control Box

Control box manufactured from LM6 die-cast aluminium
Comes complete with Isolator, daylite sensor and
universal pole clamp
Can be made up in various voltages on request
Code: S2SL/ACC/DC-CTRL

Control box manufactured from 3CR12 or 406
Stainless Steel
Comes complete with Isolator, daylite sensor and
universal pole clamp
Can be made up in various voltages on request
Code: S2LS/ACC/BS-CTRL or
         S2LS/ACC/BS406-CTRL

AVIATION WARNING BEACONS
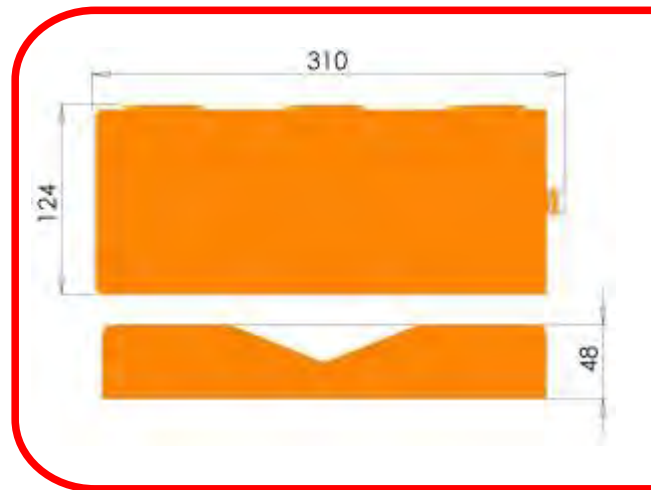
The Annunciator Box uses a photo diode to monitor operation of the main lamp. In the event of the lamp failing the Annunciator will switch over to the second SITELITE.
The fault light will come on and a set of alarm contacts in the box will close. The faulty lamp must be replaced and the reset button pushed to cancel the alarm condition.
The day/night switch circuit is also built into the box with a convenient remote mounting sensor.
All voltages are available.

AVIATION WARNING BEACONS

The S2SL/BH/Q920 Internal Mast Beacon is also available with a wire protective grid.
Code: S2SL/BH/Q920

145mm

280mm

AVIATION WARNING BEACONS