

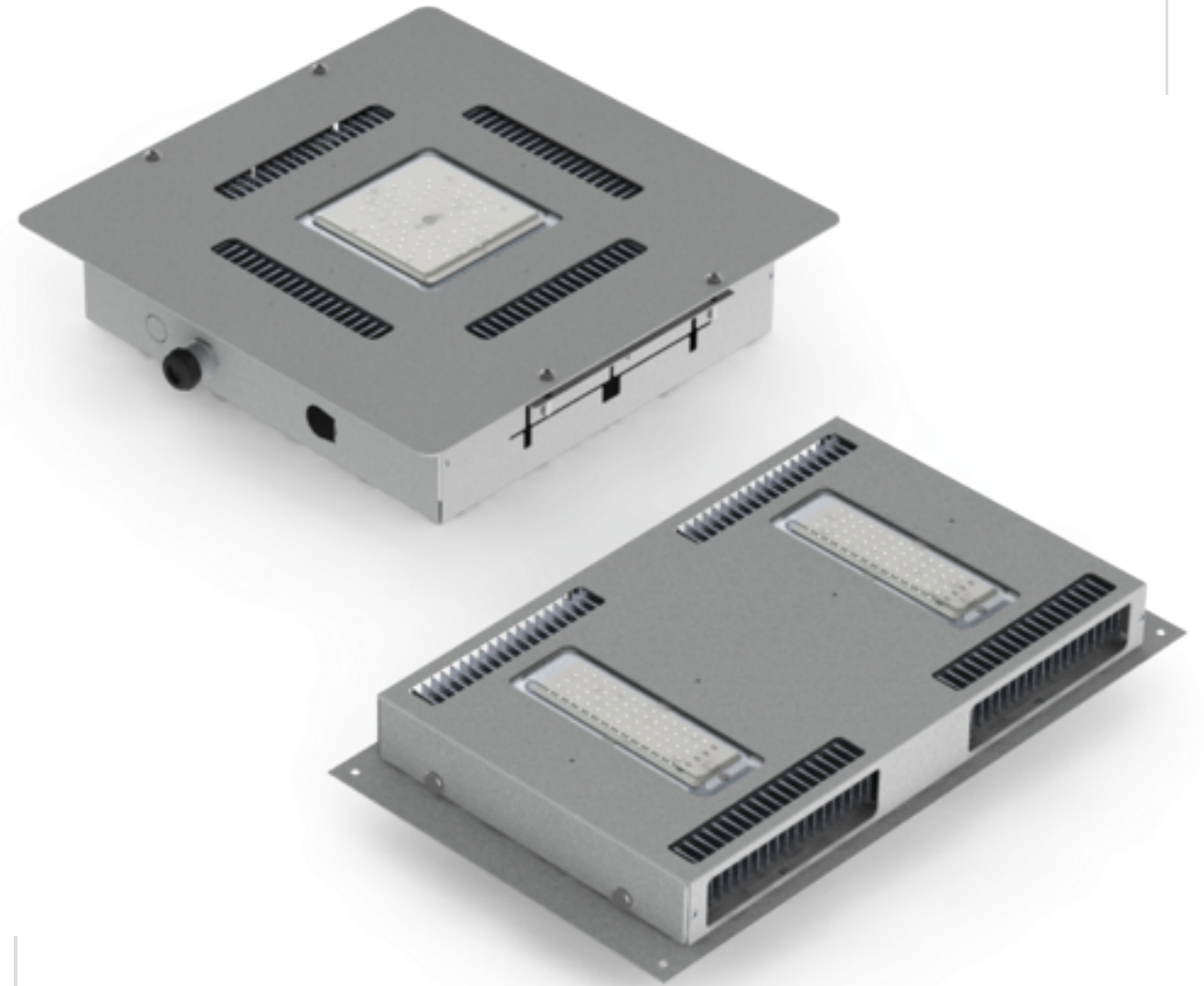
### overview

The TSA is a range of 150w LED Luminaires, designed to meet all International petroleum standards in Safety and Durability with unsurpassed even light distribution. This is achieved using primary LED optics which ensure that light is distributed to its intended location.

Combining leading German manufacturer, OSRAM Opto LED's with solid thermal management, we extend the expected life span of the TSA Luminaires in the African climate. Furthermore, by eliminating moving parts, we have designed this Luminaire to be extremely durable.

The TSA range offers a significant increase in light performance while reducing energy usage by up to 75%. Additional savings are made with virtually no maintenance, lamp and labour replacement costs or pump down time being required.

The TSA range is Renewable Ready. It can run straight off renewable sources (DC) without the use of inverters making the entire range future proof!



### key advantages

- Surface mounted and recessed options
- Very reliable LED lamp in IP67 compartment
- Superior quality OSRAM LED's
- Product endorsed by OSRAM
- Very low maintenance
- 100% designed and manufactured in SA
- Lifespan of 80k/100k hrs, lumen depreciation of not more than 10%/20% (L90B10/L80B10)
- Suitable for temperatures up to 45°C
- Designed for easy retrofit and installation
- 5 or 8 year warranty options with 12 year design life
- Light engines can be replaced without removal of unit
- Cable entries via nickel-plated brass glands with polyamide clamping cage

### applications

- Fuel Station Canopies
- Warehouses
- Event Halls
- Industrial Areas & Workshops
- Refrigeration Rooms

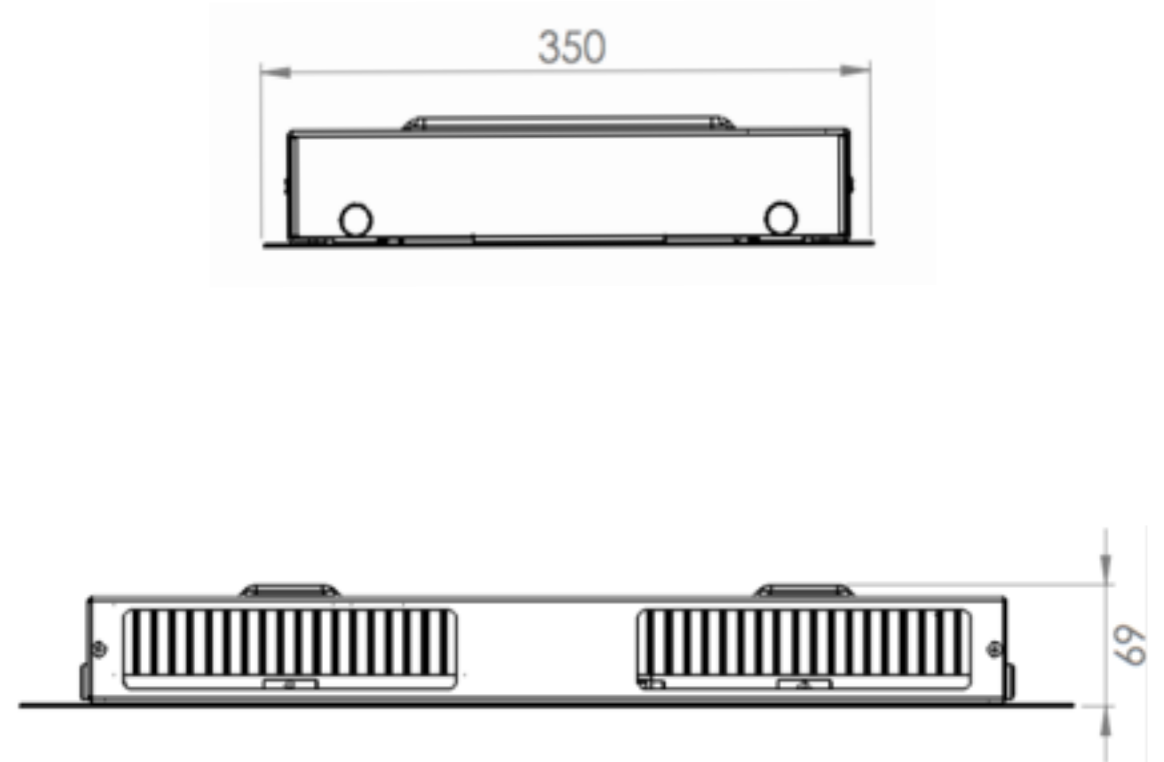
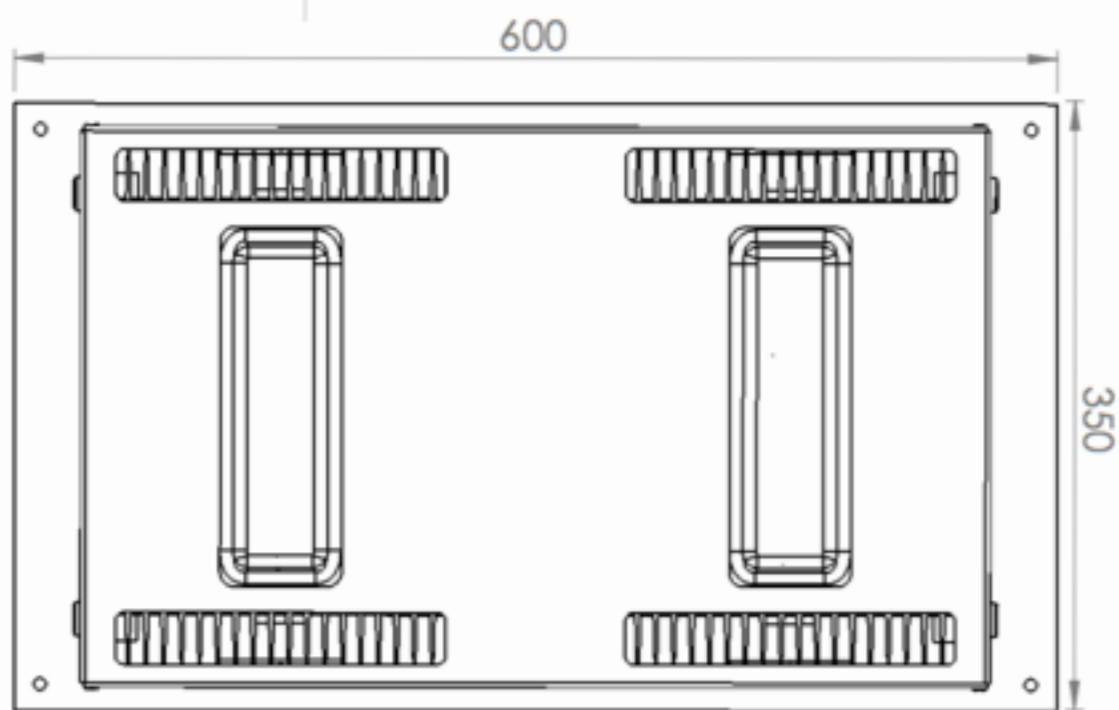
The TSA range was designed with retrofitting in mind. Therefore the standard base plate will cover most existing Luminaire footprints. Custom sizes can be ordered if needed. Installation is optimised with the use of easy to open clips. The luminaire is suspended from the base plate so that the entire installation can be done by one person.

The housing is manufactured from stainless steel (3CR12) and epoxy coated. The protector offers more vandal resistance than glass and the entire fitting is manufactured to the SANS 605-98 standard for safety. All cable entries are via nickel-plated brass glands with a clamping cage made from polyamide. The lifespan of the product is a minimum of 80 000 hrs at 45°C.

<b>Type:</b>	<b>Surface Mounted LED Luminaire</b>
<b>Product Code :</b>	<b>TSA</b>
<b>Optical compartment protection:</b>	<b>IP66</b>
<b>Control gear protection:</b>	<b>IP67</b>
<b>Impact resistance (Polycarbonate):</b>	<b>IK10</b>
<b>Control gear Voltage:</b>	<b>90V – 295VAC 50Hz as well as 127-417VDC</b>
<b>Lamps:</b>	<b>2 x High Power 70W LED modules</b>
<b>Colour Temperature:</b>	<b>5700K &gt;70 CRI</b>
<b>Luminosity:</b>	<b>TSA-01 - 19 000lm   TSA-02 - 21 000lm</b>
<b>Typical 1m AFL Lux Level @5m Mounting:</b>	<b>TSA-01 - 650lux   TSA-02 - 550lux</b>
<b>Housing Material:</b>	<b>Coated Stainless Steel 3CR12 or 316</b>
<b>Weight:</b>	<b>9,5Kg</b>
<b>Light engine:</b>	<b>Anodised Aluminium &amp; Polycarbonate</b>
<b>Standard Colour:</b>	<b>RAL 9003 (White)</b>
<b>Total Power Consumption:</b>	<b>153W</b>
<b>Temperature Range:</b>	<b>-30°C to 45°C</b>
<b>LED Lifespan (L90B10)*:</b>	<b>80 000 Hrs @45°C ambient 100 000 Hrs @35°C ambient</b>

\* Lumen depreciation not more than 10% in accordance with LM-80 – TM-21

## housing dimensions



## ordering details

PART	OPTICS	CHASSIS	LED COLOUR	LIFETIME	
				RESIDUAL FLUX @45°C @80 000	@100 000
TSA-01 – C	Standard Beam	Stainless Steel 3CR12	5700K CRI>70	90%	80%
TSA-01 – S	Standard Beam	Stainless Steel 316	5700K CRI>70	90%	80%
TSA-02 – C	Wide Beam	Stainless Steel 3CR12	5700K CRI>70	90%	80%
TSA-02 – S	Wide Beam	Stainless Steel 316	5700K CRI>70	90%	80%

approved distributor





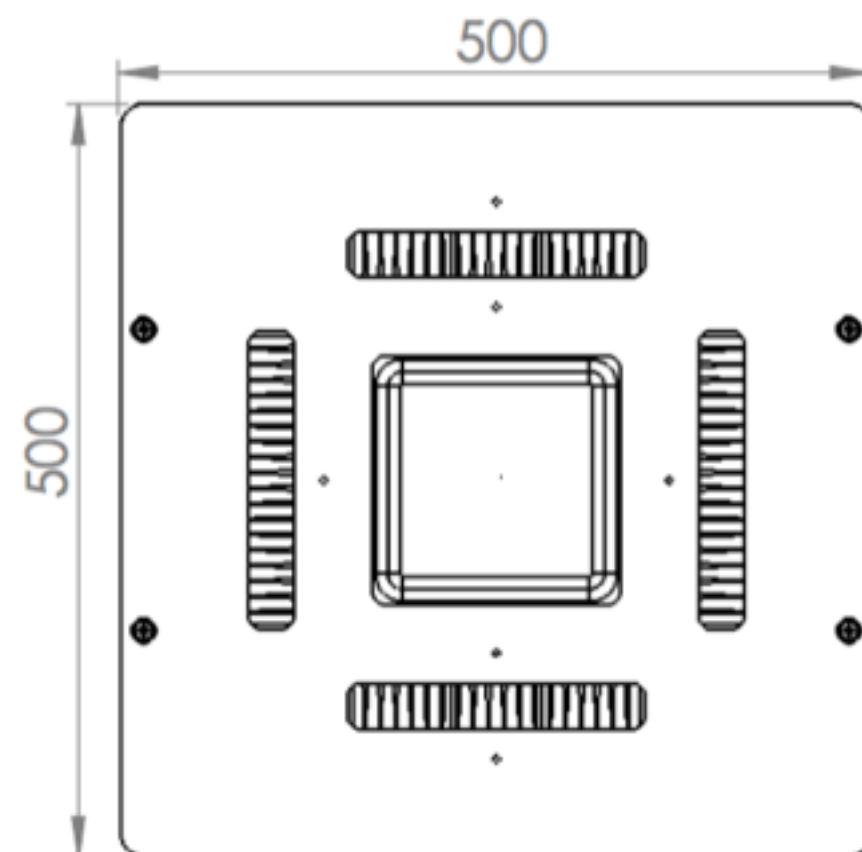
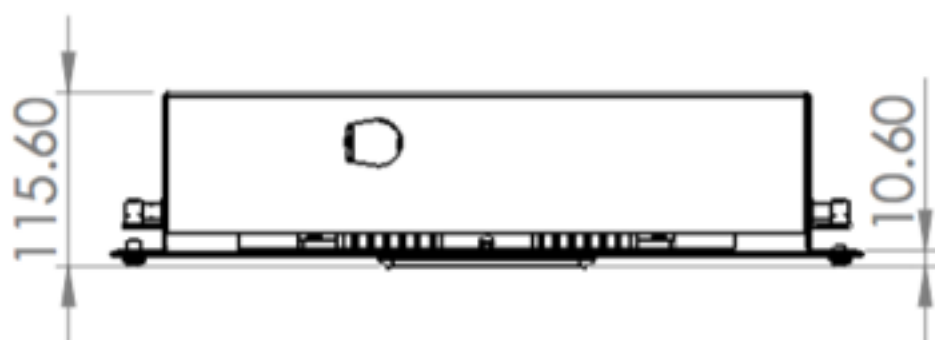
The TSA range was designed with retrofitting in mind. Therefore the standard insert will fit most existing Luminaire cutouts. Custom sizes can be ordered if needed. Installation is optimised with the use of easy to adjust roof clamp. It can accommodate a roof sheet from 3mm to 40mm. The luminaire is suspended from the roof insert so that the entire installation can be done by one person.

The housing is manufactured from stainless steel (3CR12) and epoxy coated. The protector offers more vandal resistance than glass with an IK10 impact rating and the entire fitting is manufactured to the SANS 605-98 standard for safety. All cable entries are via nickel-plated brass glands with a clamping cage made from polyamide. The lifespan of the product is a minimum of 80 000 hrs at 45°C.

<b>Type:</b>	<b>Recessed LED Luminaire</b>
<b>Product Code :</b>	<b>TSA</b>
<b>Optical compartment protection:</b>	<b>IP67</b>
<b>Control gear protection:</b>	<b>IP67</b>
<b>Impact resistance (Polycarbonate):</b>	<b>IK10</b>
<b>Control gear Voltage:</b>	<b>90V – 295VAC 50Hz as well as 127-417VDC</b>
<b>Lamps:</b>	<b>1 x High Power 130W LED module</b>
<b>Colour Temperature:</b>	<b>5700K &gt;70 CRI</b>
<b>Luminosity:</b>	<b>TSA-31 - 19 000lm   TSA-32 - 21 000lm</b>
<b>Typical 1m AFL Lux Level @5m Mounting:</b>	<b>TSA-31 - 650lux   TSA-32 - 550lux</b>
<b>Housing Material:</b>	<b>Coated Stainless Steel 3CR12 or 316</b>
<b>Weight:</b>	<b>12.5Kg</b>
<b>Light engine:</b>	<b>Anodised Aluminium &amp; Polycarbonate</b>
<b>Standard Colour:</b>	<b>RAL 9003 (White)</b>
<b>Total Power Consumption:</b>	<b>153W</b>
<b>Temperature Range:</b>	<b>-30°C to 45°C</b>
<b>LED Lifespan (L90B10)*:</b>	<b>80 000 Hrs @45°C ambient 100 000 Hrs @35°C ambient</b>

\* Lumen depreciation not more than 10% in accordance with LM-80 – TM-21

## housing dimensions



## ordering details

PART	OPTICS	CHASSIS	LED COLOUR	LIFETIME	
				RESIDUAL FLUX @45°C @80 000	@100 000
TSA-31-C-150	Standard Beam	Stainless Steel 3CR12	5700K CRI>70	90%	80%
TSA-31-S-150	Standard Beam	Stainless Steel 316	5700K CRI>70	90%	80%
TSA-32-C-150	Wide Beam	Stainless Steel 3CR12	5700K CRI>70	90%	80%
TSA-32-S-150	Wide Beam	Stainless Steel 316	5700K CRI>70	90%	80%