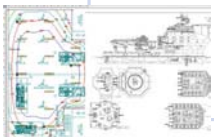
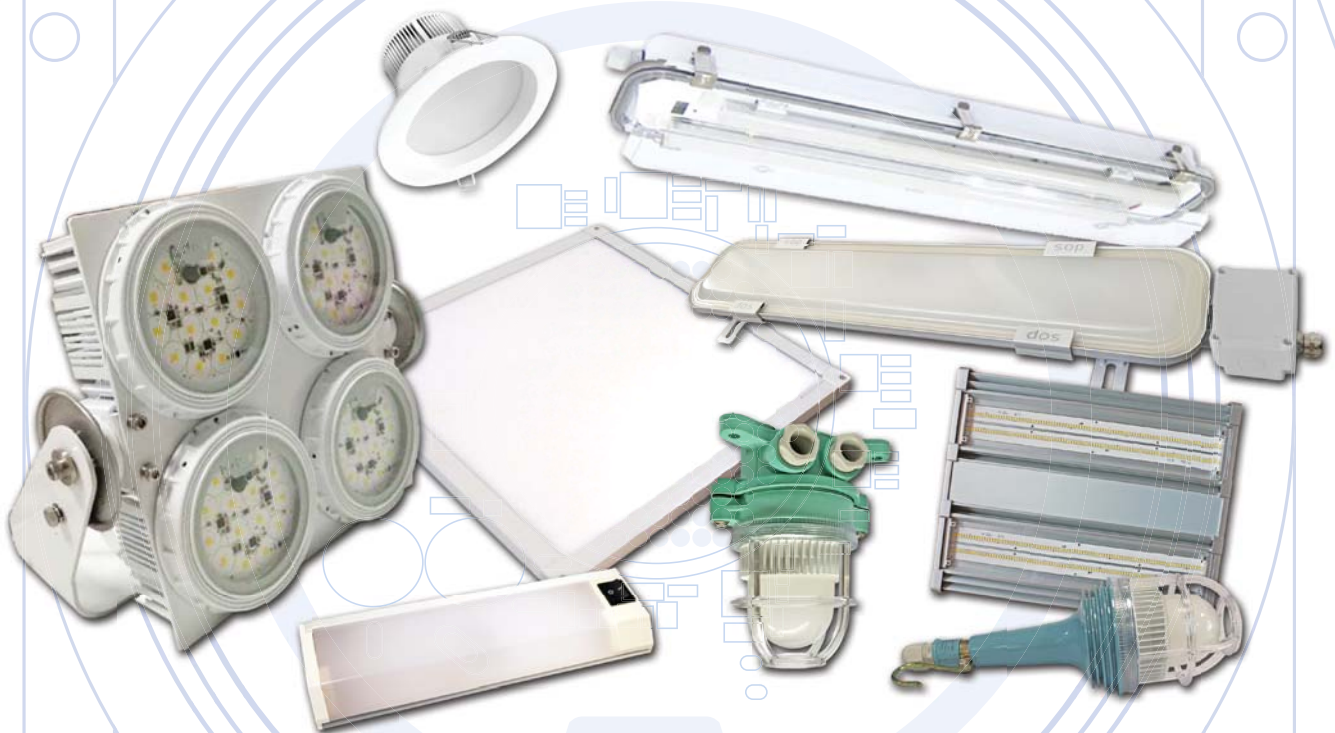


Marine, Offshore and Industrial Green Lighting Solutions



Complimentary Lux Calculation

For initial stages of planning/ Design up to completion
Summary reports of light levels, luminaries to use etc.
Accurate simulation



Product Demonstration and Mock up

Evaluate Quality and Performance prior to specification or purchase
Samples provided to install for mock up area



Calculate Your ROI

Cost savings from Retrofitting or Replacement of Lightings
Reduced maintenance and spares
Time taken for Return of Investment



Extended Warranty

Up to 5 years

Saving with SOP LED Lighting Solutions

Comparison of Traditional Lighting with SOP LED Light

Type / Description	Total No of Lamps	System Power	Operation Hours	kWh/year
Electricity Consumption for Traditional Lighting				
2 Feet Fluorescent Fitting, 18W T8 Fluorescent Tube	100	*32	24	28,032
4 Feet Fluorescent Fitting, 36W T8 Fluorescent Tube	100	*48	24	42,048
Electricity Consumption for LED Lighting				
2 Feet LED Luminaire, 12.5W 2 Feet SOP LED Linear Lamp	100	12.5	24	10,950
4 Feet LED Luminaire, 24W 4 Feet SOP LED Linear Lamp	100	24	24	21,024

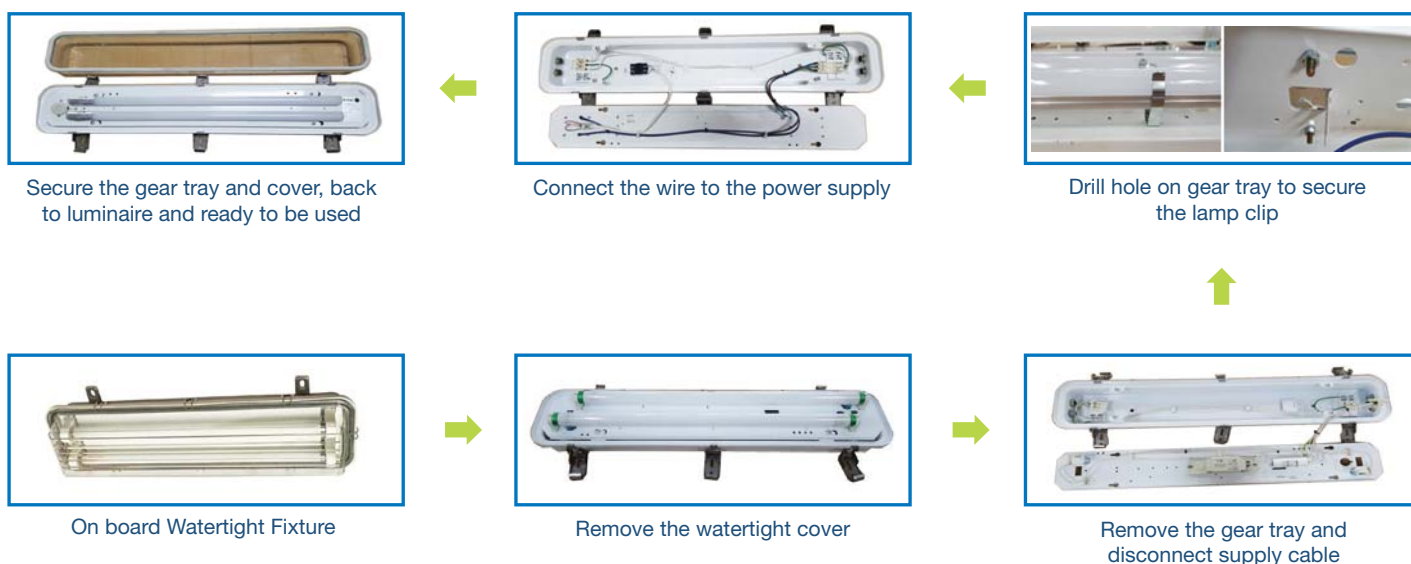
*Ballast Loss based on Magnetic Ballast

	Fluorescent Tube (2Ft 18W)	SOP LED Lamp (2Ft 12.5W)	Fluorescent Tube (4Ft 36W)	SOP LED Lamp (4Ft 24W)
Energy Consumption (kWh) Per year	28,032	10,950	42,048	21,024
Energy Savings (kWh) per year	17,082		21,024	
Savings of Energy (Annually)	SGD 2,562.30		SGD 3,153.60	

*Above calculation based on example of 100 lamps with Energy Cost : S\$0.15 per kWh

- Energy saving up to 60%
- Long service life of 50,000 hours at 45°C operating temperature
- Reduced maintenance & operation costs
- Minimize spares on board

Easy Retrofitting and Installation onboard Vessel



PORTABLE WORK LIGHT (13W)



Key Features

- Complete solution with heat sink, driver and polycarbonate diffuser
- Triac dimming compatible (220-240VAC & 100-120VAC only)
- Vibration-resistant
- Energy savings of up to 90% compared to 100W incandescent bulb
- Long service life of 50,000 hours L70 @ 45°C (Ta)
- Safety, EMC and IEC compliance

Application

Engine rooms, Low visibility areas, Decks, Warehouses, Yards

Material

Marine grade aluminium alloy with powder coating and polycarbonate body, diffuser and guard

Options

Polycarbonate red guard (PR)
100V~120VAC (12W) or 24VDC (10W)

Weight

1.0Kg

PENDANT LIGHT (30W)



Key Features

- Complete solution with heat sink, driver and polycarbonate diffuser
- Vibration-resistant
- Energy savings of up to 90% compared to 300W incandescent bulb
- Long service life of 30,000 hours L70 @ 45°C (Ta)
- Safety, EMC and IEC compliance

Application

Engine rooms, Low visibility areas, Decks, Warehouses, Yards

Material

Marine grade aluminium alloy with powder coating and PBT fiberglass reinforced body, polycarbonate diffuser and guard

Options

Polycarbonate red (PR)

Weight

1.5Kg

TECHNICAL SPECIFICATIONS IP 56

Ideal Replacement:  
13W for 100W 30W for 300W

Type	Main Voltage	Power	CCT	Beam Angle	Ambient Temp (Ta)	System Lumen
PORTABLE WORK LIGHT (13W)						
HG-LS10A2PC	220V ~ 240V AC	13W	5,000K	160°	-30°C ~ +45°C	900lm
PENDANT LIGHT (30W)						
EG-LMU03050PC	100V ~ 240V AC/DC	30W	5,000K	180°	-30°C ~ +45°C	2,900lm

Also available in other CCT.

ULTRA-VIOLET
ZEROMERCURY **RoHS** **CE**

Also Available in:



Ideal Replacement:



100W



300W

MFL SERIES



Key Features

- Triac dimming compatible (220V-240VAC & 100V-120VAC only)
- Designed with reliable AC driver on board to enhance the service life
- Rapid heat-dissensing design to prolong lamp life and optimise lumen output
- Compact and light weight design
- Long service life of 100,000 hours @ 50°C (Ta)
- Interchangeable module
- Safety, EMC and IEC compliance

Application

Decks, Marinas, Docks, Ports, Warehouses

Material

Marine grade aluminium alloy with powder coating, comes with 4mm tempered glass front cover

Options

100V~120VAC or 24VDC

45° Beam Angle

Weight

1.9Kg

TECHNICAL SPECIFICATIONS IP 66

Ideal Replacement: 150W
MH 250W
MERCURY 500W
HALOGEN

Type	Main Voltage	Power	CCT	Beam Angle	Ambient Temp (Ta)	System Lumen
MFL1FA2	220V ~ 240V AC	56W	5,000K	115°	-40 ~ +50°C	5,500lm

Also available in other CCT and beam angle upon request.



Also Available in:



MFL 2 Series

MFL 3 Series

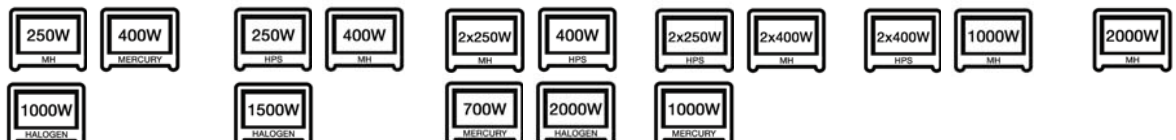
MFL 4 Series

MFL 6 Series

MFL 8 Series

MFL 16 Series

Ideal Replacement:



WATERTIGHT WS SERIES



Key Features

- Triac dimming compatible
- Built-in with high thermal efficient linear module that allows lighting to operate at ambient temperature of up to 45°C
- Special designed clear polycarbonate diffuser to optimize the LED light transmission
- Long service life of 50,000 hours L70 @ 45°C (Ta)
- Safety, EMC and IEC compliance
- Available with battery backup system and emergency lighting

Application

Decks, Engine rooms, Yards, Coldrooms

Mounting Method

Surface mounted

Material

Diffuser: Polycarbonate
Housing: Stainless steel or Zinc coated steel, Powder coated white

Electrical

Flexible wiring, Heat resistant up to 105°C

Options

100V ~ 120VAC / with battery backup / with DC24V emergency LED

Weight

WS21: 3.3Kg WS22: 3.6Kg

RECESSED RC SERIES



Key Features

- Triac dimming compatible
- Integrated with LED linear module(s) to provide high illumination performance
- Long service life of 50,000 hours L70 @ 45°C (Ta)
- Safety, EMC and IEC compliance
- Available with battery backup system and emergency lighting

Application

Accommodation areas, Passageways, Cabins

Mounting Method

4 mounting brackets, Hole cut out: 638 X 211 mm

Material

Diffuser: PMMA ice crystal
Housing: Zinc coated steel, Powder coated white

Electrical

Flexible wiring, Heat resistant up to 105°C

Protection Class

IP44 in conjunction with ceiling

Options

100V ~ 120V AC / with battery backup / with DC24V emergency LED

Weight

RC21: 3.7Kg RC22: 4.0Kg

TECHNICAL SPECIFICATIONS

Ideal Replacement:

Type	Dimensions (LxWxH)	Main Voltage	Power	CCT	Ambient Temp (Ta)	IP Rating	System Lumen
WATERTIGHT WS SERIES							
WS22	730x153x110mm	220V ~ 240V AC	2x12.5W	5,000K	-30 ~ +45°C	IP 67	1,940lm
RECESSED RC SERIES							
RC22	662x262x75.6mm	220V ~ 240V AC	2x12.5W	5,000K	-30 ~ +45°C	IP 44	1,900lm

Also available in other CCT.

* Ambient Temperature not applicable for Battery Backup System and Emergency Lighting.



Also Available in:

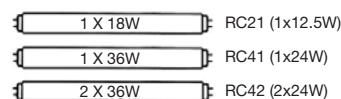


2 feet: WS21
4 feet: WS41, WS42



2 feet: RC21
4 feet: RC41, RC42

Ideal Replacement:



LMWS SERIES (IEC)



Key Features

- Super thin light weight design
- Superior thermal design to allow the luminaire to operate at high ambient temperature
- Designed with reliable AC driver on board to enhanced the service life
- Designed with junction box for fast termination
- Dual voltage design
- Long service life of 50,000 hours @ 50°C (Ta)
- Marine class compliance

Application

Decks, Marinas, Docks, Ports, Warehouses

Mounting Method

Surface mounted

Material

Diffuser: Polycarbonate
Housing: Zinc coated steel or SUS316 stainless steel, Powder coated white

Electrical

Flexible wiring, Heat resistant up to 105°C

Options

20V ~ 30VDC / with battery backup / with DC24V emergency LED

Weight

2.0kg

LMWS SERIES (JIS)



Key Features

- Super thin light weight design
- Superior thermal design to allow the luminaire to operate at high ambient temperature
- Designed with reliable AC driver on board to enhanced the service life
- Designed with junction box for fast termination
- Dual voltage design
- Long service life of 50,000 hours @ 50°C (Ta)
- Marine class compliance

Application

Decks, Marinas, Docks, Ports, Warehouses

Mounting Method

Surface mounted

Material

Diffuser: Polycarbonate
Housing: Zinc coated steel or SUS316 stainless steel, Powder coated green

Electrical

Flexible wiring, Heat resistant up to 105°C

Options

20V ~ 30VDC / with battery backup / with DC24V emergency LED

Weight

2.0kg

TECHNICAL SPECIFICATIONS

Ideal Replacement:

Type	Dimensions (LxWxH)	Main Voltage	Power	CCT	Ambient Temp (Ta)	IP Rating	System Lumen
LMWS SERIES (IEC)							
LMWS2010	724x180x51.7mm	100V ~ 120VAC / 220V ~ 240VAC	20W	5,000K	-30 ~ +50°C	IP 67	2,000lm
LMWS SERIES (JIS)							
LMWS2050	650x229x51.7mm	100V ~ 120VAC / 220V ~ 240VAC	20W	5,000K	-30 ~ +50°C	IP 67	2,000lm

Also available in other CCT.

* Ambient Temperature not applicable for Battery Backup System and Emergency Lighting.



Also Available in:



4 feet: LMWS40 Series (IEC)



4 feet: LMWS40 Series (JIS)

Ideal Replacement:



LMWS40 (40W)



LMWS40 (40W)

DOWNLIGHT



Application

Cabins, Passageways, Galleys, Meeting rooms

Material

Marine grade aluminium alloy with powder coating,
Glass diffuser (DL7A Series)
Polycarbonate diffuser (DL12 Series, DL15 Series)

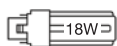
Protection Class

IP44 in conjunction with ceiling

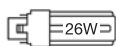
Ideal Replacement



DL7A Series
for 50W Halogen



DL12 Series
for 18W CFL



DL15 Series
for 26W CFL

BERTH LIGHT



Application

Passageways, Cabins, Lounges, Dining rooms,
Accommodation areas

Mounting Method

2 mounting holes $\varnothing 5.5\text{mm}$

Material

Diffuser: Polycarbonate
Housing: Galvanized steel, Powder coated white

Electrical

Flexible wiring, Heat resistance up to 105°C

Protection Class

IP20

PANEL LIGHT



Application

Office, Cabins, Passageways, Galleys, Cafeterias

Material

Marine grade aluminium for (PL353353, PL625257, PL625625
& DP600600A Series) and Aluminium housing for (P46A Series),
comes with high-efficiency light guide

Protection Class

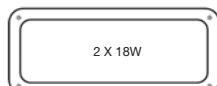
IP20: P46A & DP600600A Series

IP22, IP44: PL353353, PL625257 & PL625625 Series

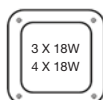
Ideal Replacement



PL353353 for
1x18W fluorescent
lighting system



PL625257 for
2x18W fluorescent
lighting system



PL625625, DP600600A & P46A
for 3x18W / 4x18W
fluorescent lighting system

HIGH BAY



Application

Warehouses, Manufacturing facilities, Gymnasiums,
Conventions center, Large open commercial spaces

Mounting Method

Surface mounted

Material

Housing: Extruded aluminium, Polycarbonate
Lens: Optical clear or diffused acrylic

Options

Control: Dimming (0-10V) / Zigbee / Wifi / Bluetooth
Mounting: Hook & Chain / Aircraft cable / Rigid stem
Sensor: Motion / Daylight
24V DC emergency system

Protection Class

IP20

Ideal Replacement



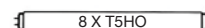
HBAYI Series (HB88)



HBAYII Series (HB176)



HBAYI Series (HB127)



HBAYII Series (HB264)



About SOP

S.O.P (Save Our Planet) assures quality and brings energy efficiency to our innovative lighting designs. Our vision is to supply lightings that can withstand harsh environments and to achieve sustainable development through energy optimisation and waste minimization. S.O.P LED lightings are designed to operate constantly under high operating temperatures and are developed in accordance to stringent specifications - providing reliable LED solutions with long service life which reduces maintenance and replacement. With the compliance to also EMC requirements, S.O.P is indeed an ideal choice of LED lightings solutions.

With over 20 years of experience in LED Solutions, we have built our competencies in:

- Developing corrosion and vibration resistant outdoor lightings - extended service life
- Creating comfortable, high performance indoor lightings for the ideal lighting effect
- Stringent quality management to ensure best quality lightings are delivered

We are focused and committed in the development of a wider range of industrial, marine and offshore lighting. Be it a new vessel or an upgrade, 'Go Green' with S.O.P.

Project references: Shipyards, Contractors, Consultants, Owners, - AHTS, PSV, Dredgers, Tankers, Accommodation barges, Ferries, Tug and crew Boats, Floating dock, Conversions, Ports and Other Land-based projects

For more references, please visit: sop-led.com/projects/



Manufacturing & R&D Capabilities

- In-house: LED engine, Luminaire, electronic, optical and mechanical design
- Control - Hardware /software development
- Advanced digital production and automation process facilities



Quality Assured

- Japan JIS 5600 7-1 standard
- Vibration resistance
- EMC compliance - IEC 55015, EN61000-3-2, EN61547, EN60533
- Safety - EN60598
- Degrees of protection - EN60529



Long Service Life

- 100,000 hours' service life at operating temperature of 50°C for ACIC driver on board technology.



Maximum Performance

- High energy-efficient LED packages from Samsung, Lumiled, Osram and LG.



www.sop-led.com



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