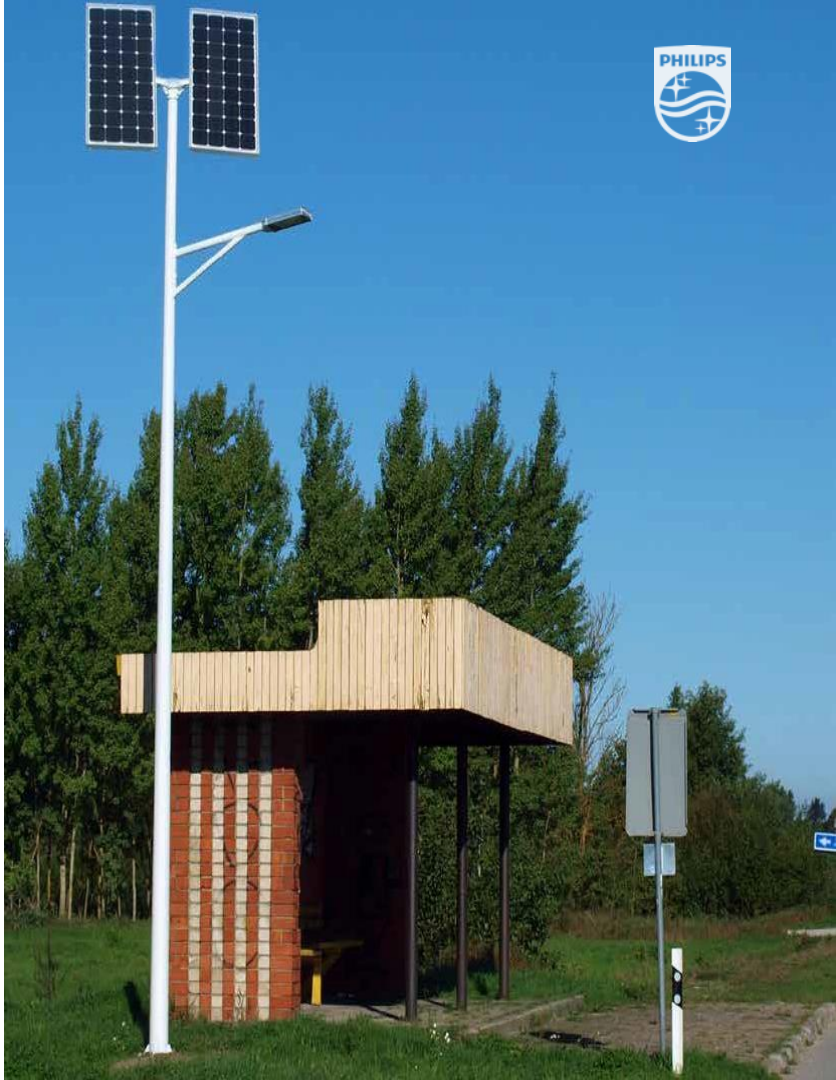

PHILIPS
www.philips.com
Make roads safer and sustainable
GreenVision Xceed Gen2
Solar | non-integrated systems
innovation you

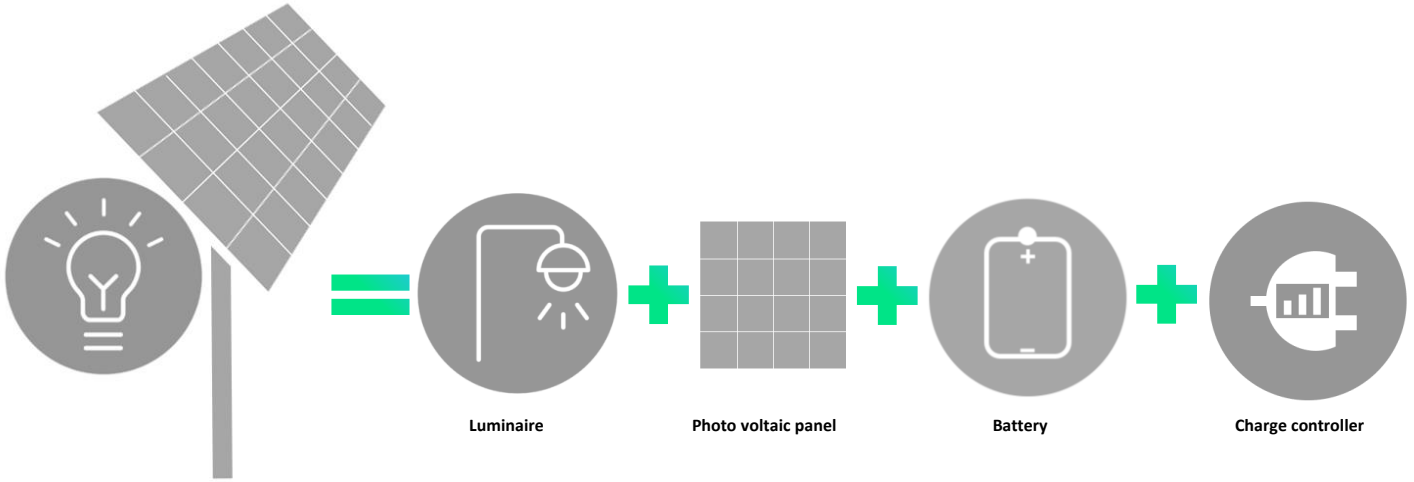
Why solar lighting

Rapid urbanization and population growth are putting more pressure on resources. This is reflected in the environmental impact of cities; as they consume over two thirds of the world's energy and account for more than 70% of global CO2 emissions. Cities must now reduce their environmental impact.

Solar lighting is **sustainable, green, and clean.**
Solar lighting apart from being free and renewable has several other benefits. While on one hand it alleviates people with no access to grid, hybrid solar on the other hand covers large population and gives them an opportunity to reduce their carbon footprint. Thereby resulting in greener and healthier world.

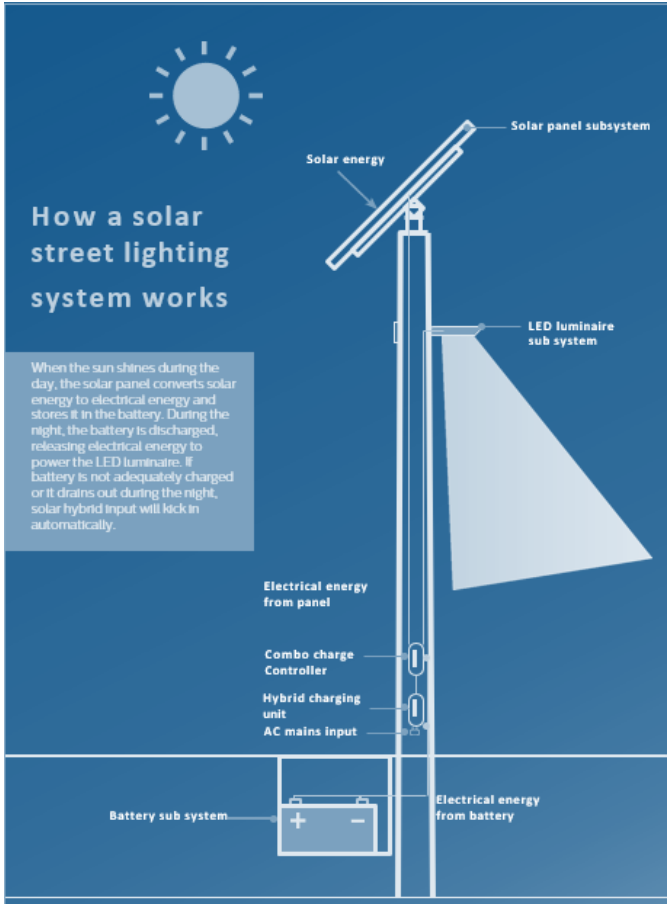


What is non-integrated solar lighting



A reliable solar LED lighting system consists of well-designed LED luminaire (with LED chips, optics, heat management, housing and driver), photovoltaic panel, battery, charge controller, connectors and embedded software.

How non-integrated system works



Mandatory sub-systems

Gen 4.0 Combo Charge controllers

Cables and connectors subsystem

PV panel subsystem

Battery subsystem

GreenVision Xceed Gen2 solar : **high efficiency solar streetlights**

Optics Energy Savings
> 30K lumen with high efficacy upto 190 lm/w to optimize battery and panel

Reliability
World class components combined with most durable design

Easy Installation
Toolless access to gear compartment for easy installation, compatible with Combo cc

BRP38x – high efficiency range

DESIGN AWARD 2020

PHILIPS

BRP384

31250
175W

BRP383

29800 lumen
173W

BRP382L

28200 lumen
173 W

BRP382

28200 lumen
139 W

BRP381

16000 lumen
100W

- *Standard version with 5700K CCT*
- *Lumen and W are at highest drive current*
- *At low drive, eff. Goes beyond 190 lm/w (ref configuration file)*

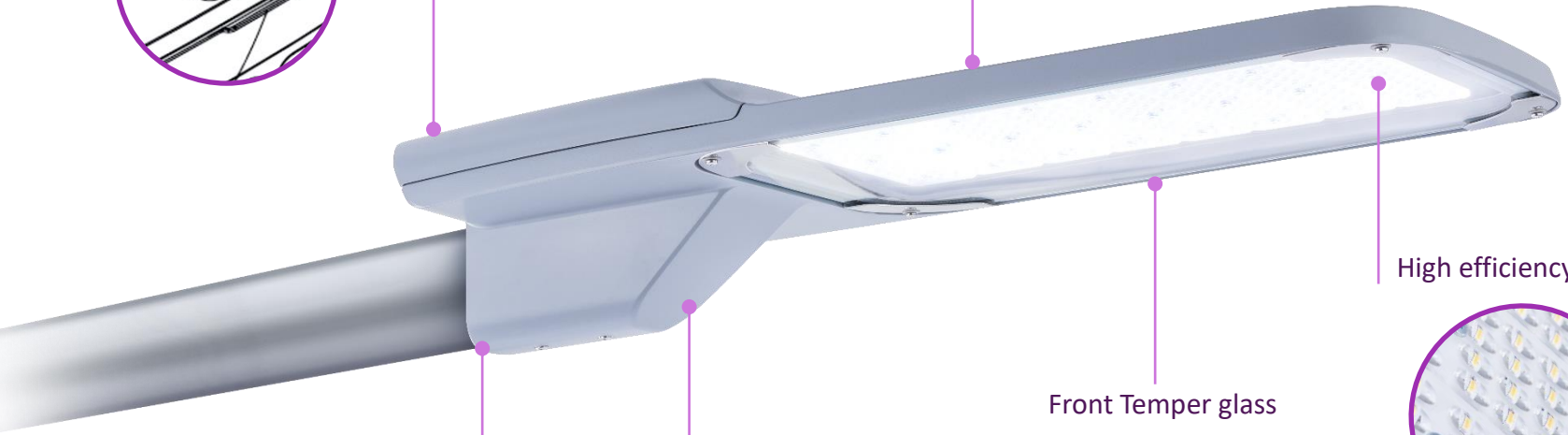
Different contexts need different light

Different areas of the city have **unique lighting needs.** With the broad lumen range GreenVision Xceed Gen2 solar can be effectively deployed in any environment and matched to its lighting needs.

Key Specifications

Toolless opening

without fins



High efficiency LEDs

Front Temper glass

48-60mm Spigot (Side entry)

ADC1 Aluminum housing

Fully IK08 & IP66 rated

Reliability and world class components

- Housing made from ADC1 high quality aluminum alloy with very low copper (Cu) content and power coated.
- Best in class High power LED’s from leading LED supplier to ensuring reliable quality.
- Transparent and weather resistant grade polycarbonate material for optical lenses. It can withstand extreme weather conditions (-40~+80 ° c) and have strong resistance to UV and yellowing.
- Highest specification Philips Combo CC (external) compatible

Comparing generations

GreenVision Xceed

GreenVision Xceed Gen2

Efficacy

Battery

Panel

Total system cost

Typical calculation for battery and panel

160 lm/w luminaire			190 lm/w luminaire		
Lumen pack	15000	lm	Lumen pack	15000	lm
Efficacy	150	lm/w	Efficacy	190	lm/w
Power	100.0000	w	Power	78.9474	w
Dimming level 1	100%		Dimming level 1	100%	
Duration level 1	12	hours	Duration level 1	12	hours
Dimming level 2	20%		Dimming level 2	20%	
Duration level 2	0	hours	Duration level 2	0	hours
Dimming level 3	70%		Dimming level 3	70%	
Duration level 3	0	hours	Duration level 3	0	hours
Dimming level 4	100%		Dimming level 4	100%	
Duration level 4	0	hours	Duration level 4	0	hours
Total duration of night	12	hours	Total duration of night	12	hours
Autonomy	2	self-support nights	Autonomy	2	self-support nights
Energy for one night	1200	Wh	Energy for one night	947	Wh
Total energy need	2400	Wh	Total energy need	1895	Wh
Battery voltage	25.6	V	Battery voltage	25.6	V
DoD	0.9		DoD	0.9	
Solar irradiance (peak sun hour)	4	hours	Solar irradiance (peak sun hour)	4	hours
Battery capacity	122	Ah	Battery capacity	96	Ah
Battery capacity	3119	Wh	Battery capacity	2462	Wh
Panel capacity	432	Wp	Panel capacity	341	Wp

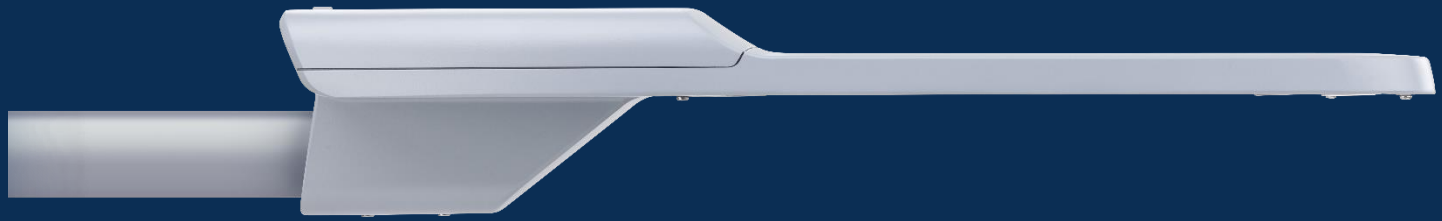
Indicative calculation, please use solar sizing tool for actual case

Product specifications-GreenVision Xceed Gen2 Solar

TYPE	BRP381 (Small) , BRP382 (Medium), **BRP382 (Med-large),** BRP383 (Large), BRP384 (XL)
LIGHT SOURCE	Built-in LED-module (Mid-power)
POWER	BRP384: up to 175W BRP383: up to 173W BRP382L: up to 173W **BRP382: up to 139W** BRP381: up to 100W Nominal power : actual configurable through Combo CC
LUMINOUS FLUX RANGES	**BRP384: up to 31350 lumen** **BRP383: up to 29844 lumen** **BRP382L: up to 28274 lumen** **BRP382: up to 22252 lumen** **BRP381: up to 16056 lumen**
LUMINAIRE EFFICACY	Upto 190 lm/w
CORRELATED COLOR TEMPERATURE	5700 K (3000K/4000K available on request)
COLOR RENDERING INDEX	>70 (CW, NW, WW)
IK RATING	IK08
IP RATING	IP66
USEFUL LIFE	100,000 hours min L70B50 at 35 °C ambient temperature
OPERATING TEMPERATURE RANGE	-40 to +50 ºC
DRIVER	External inside combo cc
BATTERY VOLTAGE	12V/24V system (depends on system design)
DIMMING	Through combo cc

Product specifications- GreenVision Xceed Gen2 Solar

OPTIC	DM (others on request)
OPTICAL COVER	Flat Glass
MATERIAL	Housing: die-casted (ADC1 alloy)
	Cover: Clear glass
	Spigot: die-cast aluminum
COLOR	RAL 7040
MAINTENANCE	Toolless access to gear compartment for cable connections
INSTALLATION	Side entry mounting Ø 48-60 mm
OPTIONS	Customized Color Lower CCT



Order book

12NC	Product Description	SupplierFunloc	Outerbox (GrossWt) cm	Outerbox (NetWt) cm	Outer box (Length) cm	Outer box (Width) cm	Outerbox (Height) kg
911401651808	BRP381 LED 220/757 140W DM A5	266001	5.09	4	48.5	38	21.7
911401651708	BRP382 LED 270/757 173W DM A5	266001	5.6	4.5	53.2	38	21.7
911401651608	BRP382L LED 290/757 174W DM A5	266001	5.79	5	66	38	21.7
911401651508	BRP383 LED 310/757 174W DM A5	266001	8.19	7	77.5	38	21.7
911401651408	BRP384 LED 320/757 174W DM A5	266001	15.4	12.5	98.5	45	33.5

Warranty : 3 years

Service class : not serviceable (charge controller, panel, battery, cable external)

Other details - subsystems

Combo Charge Controllers Gen4.0

The most comprehensive range of solar charge controllers.

~ 12V/24V selectable mode, 90W/180W load, 300Wp/600Wp panel capacity

Suitable for major, intermediate and minor roads for new points as well as grid connected renovation projects.

~ Available in off-grid and hybrid options.

~ Can drive luminaires upto 180W (check panel/battery from system design)

High system efficacy, optimized design and long life for low cost of ownership.

~ Integrated LED driver enables system efficacy.

~ Integrated protection and control modules.

~ Metal weatherproof housing with several layer of protections

Flexible and easy to operate

~ Onsite programming and configuration with remote for panel, battery and dimming profile.

https://www.lighting.philips.com/main/prof/outdoor-luminaires/solar/building-blocks/combocc-gen-4.0 - check for ZJS403

Inground battery subsystem Gel

Connectors

Features

- Wide range of 65-250Ah.
- Wide range of temperature for application.
- Weatherproof underground system with integrated IP67 connectors
- Underground system ensures lesser load on pole compared to on-pole battery subsystem.

Benefits

- Wide application range in-terms of luminaire load and autonomy needs.
- Sealed connection sealed and proper terminal positioning keep battery in good environment for longer application time.
- Plug and play design for easy wiring.
- Tactile and audible mating feedback
- Lower CAPEX per point as poles can be optimized without battery box load.

https://www.lighting.philips.com/main/prof/outdoor-luminaires/solar/building-blocks/solar-battery-sub-system

Inground battery subsystem LFP

Features and benefits

- Wide range of 50Ah to 180Ah in 12.8/25.6V
- IP68 enclosure.
- IP67 connectors.
- Integrated device ensures connection sealed and terminal positioning
- Large current handling ability.
- Plug and play design for easy wiring
- Tactile and audible mating feedback

https://www.lighting.philips.com/main/prof/outdoor-luminaires/solar/building-blocks/solar-battery-sub-system

Solar panels subsystem

Connectors

Features

- Wide range including panel, cables and connectors.
- Plug and play design for simple crimp-and-poke application.
- Designed for excellent aging resistance and UV endurance.
- Factory fitted cables and connectors environmentally sealed to IP67
- Ambient température range -40^{0}C+85^{0}C

Benefits

- Suitable for wide range of application in-terms of luminaire load and battery autonomy needs.
- Easy connection and installation
- Suitable for application in harsh environmental condition.

https://www.lighting.philips.com/main/prof/outdoor-luminaires/solar/building-blocks/solar-panel-sub-system

Cable sub-systems

Cables and connectors

- **For connection of luminaires and charge controller and Charge controller and panel**

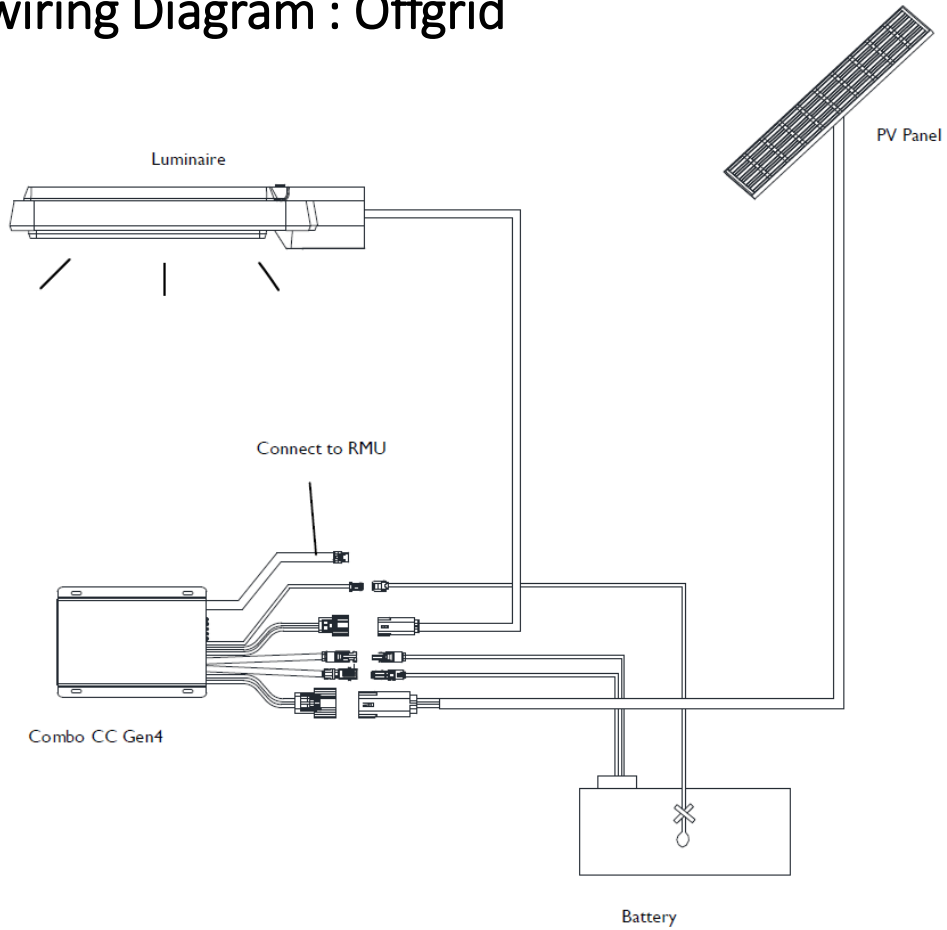
- **Waterproof IP67 connectors**
- **Plug and play, easy installation**
- **Error-proof to avoid the mistake of onsite installation**
- **Different length of cables are available for various application**

Luminaire cables

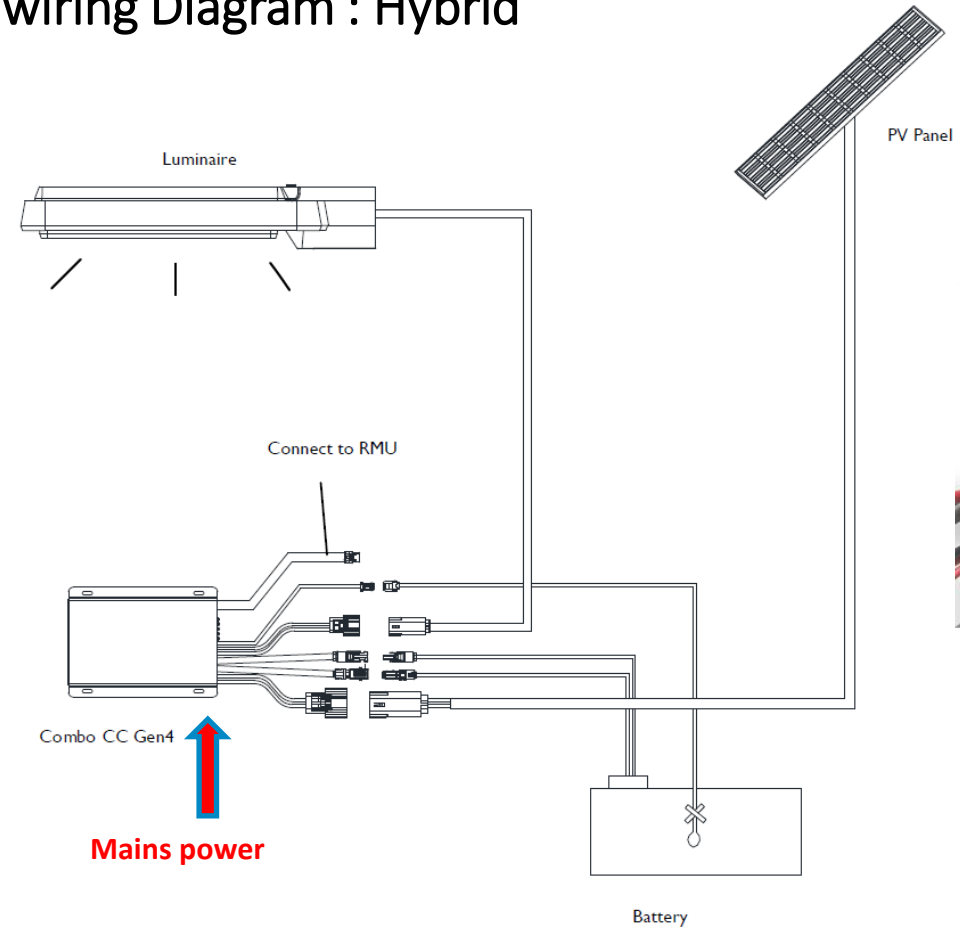
911401826202	luminaire cable 4m/2.5mm2x2C
911401825902	luminaire cable 8m/2.5mm2x2C
911401826002	luminaire cable 10m/2.5mm2x2C
911401826102	luminaire cable 12.5m/2.5mm2x2C

Panel cables : existing 12ncs

Typical wiring Diagram : Offgrid



Typical wiring Diagram : Hybrid




PHILIPS