tigerlight®

HIGH-PERFORMANCE
INDUSTRIAL LIGHTING

CORSO SOLAR ENGINES

INTRODUCING THE 4TH GENERATION CORSO SOLAR RANGE

For 15 years, Tigerlight's Corso range has set the standard in solar-powered off-grid LED lighting for government and industrial applications across Australia, and now the evolution continues with our most advanced solar engines yet.

The Corso solar engines combine a high-efficiency solar panel, smart controller, and long-life $LiFePO_4$ battery in one fully integrated unit. They generate, store, and supply clean energy to power Tigerlight's industrial-grade lighting with zero grid dependency.

Solar lighting gives you light where you need it, without the need for electrical infra-structure or trenching. And being off grid, there are no power bills.

COMPONENTS

Solar Panel
A-grade high efficiency monocrystalline panels

Batteries
LiFeP04 Battery with battery management system.

Solar Controller
MPPT fully programmable smart controller with microwave sensor

Mounting bracket
Stainless mounting bracket with adjustable tilt.

PAIRED SOLAR PANELS AND BATTERIES

Corso Solar Engines are available in 3 sizes to satisfy the requirements of each particular application as well as the location in terms of the solar zone:

Panel	55W	110W	175W
Battery	380Wh	1100Wh	1690Wh

APPLICATIONS

Car parks	Parks & paths	Private roads
Caravan parks	Civic spaces	Retirement villages
Mine camps	Muster points	Perimeter lighting
Wharves & jetties	Agricultrue	Shipping Container lighting

COMPATIBLE TIGERLIGHT LUMINAIRES

Corso Solar Engines are fully compatible with Tigerlight's customisable outdoor area lighting platform, and therefore, all options for mounting, optics and colour temperature are available to suit each specific application.
The output of Tigerlight luminaires is adjustable from 10W to 60W to suit local solar conditions.

MAKO

P/N: MLCORSO

MEGA FLOOD

FLCORSO

STREET LIGHT

SLCORSO

MAKO BULKHEAD

BLCORSO

SENTRY WALLPACK

WLCORSO

WIDE ARRAY OF PROGRAMMING & OUTPUT OPTIONS

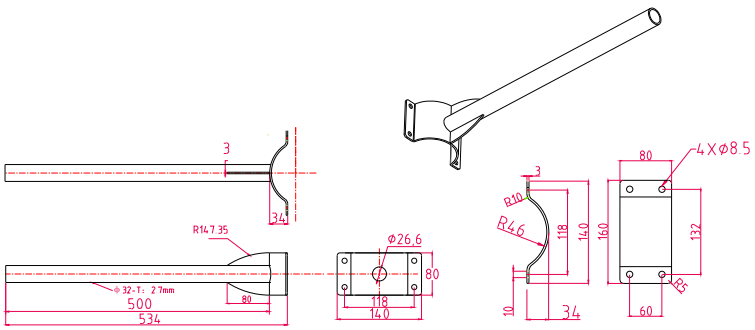
- Refer page 7 for 5 typical programming options available
- Corso Solar Engines can power a single light or multiple lights
- They are individually programmed to suit each specific application
- Microwave sensor available to maximise battery life and boost security
- 24 hour power availability for applications where light is required during daytime.

CORSO SOLAR ENGINE SPECIFICATIONS

Solar panel	55W 110W 175W
Battery rating	380 1100 1690Wh
Battery type	LiFePO4
Battery voltage	12.8V
Battery lifespan	>2000 cycles
Operating temp	-10 to +70°C
Panel spec	Monocrystalline - A grade
Panel Efficiency	Up to 25.5%
Controller	MPPT Smart Controller Direct 12.8V battery feed
Sensor	Microwave Motion Sensor
Sensor range	360°, 8m height 10m diam
Protection	Battery Management System BMS
Materials	Anodized aluminium alloy frame and battery housing, stainless steel brackets & fixings
Bracket	95mm internal diameter (84mm available - special order)
Tiltable Panel	0, 15, 30, 45 degree settings
IP / IK Rating	IP65 / IK08
Warranty	5 years, Battery 3 years
Bird spikes	Included in packaging.
Poles	POLES ARE NOT INCLUDED

OPTIONAL OUTREACH BRACKETS FOR MAKO LUMINAIRES

Support arm/spigot 34mm diameter to suit Mako series
Mounting clamp suits poles of 76 - 90mm diameter.
P/N: SSML-BKT

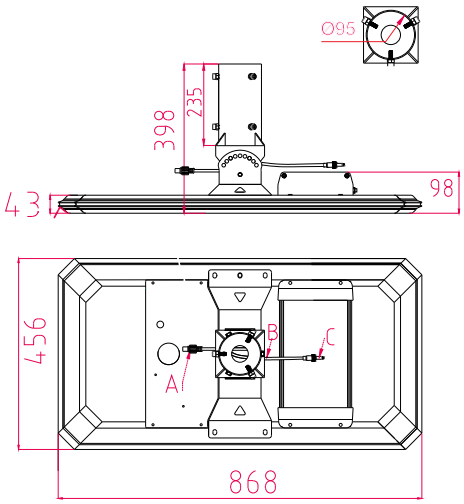


SSCORSO55
55W SOLAR PANEL
380Wh BATTERY

Poles not included

CORSO
SOLAR ENGINE

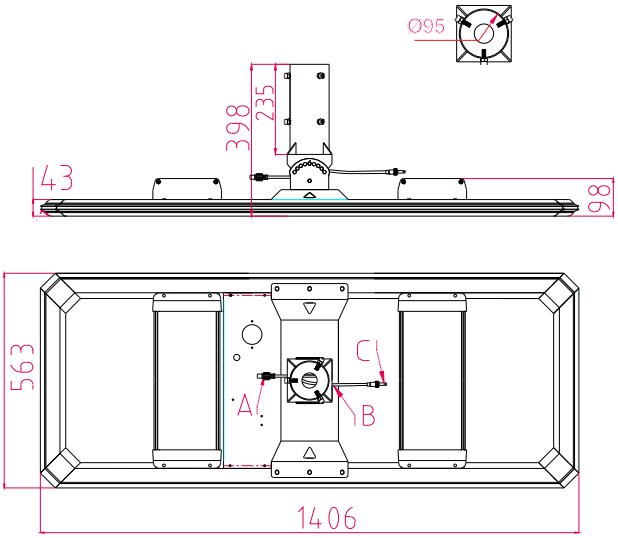
Dimensions	868x456x398mm
Weight	14kg



SSCORSO110
110W SOLAR PANEL
1100Wh BATTERY

Poles not included

Dimensions 1406x563x398mm
Weight 33.6kg

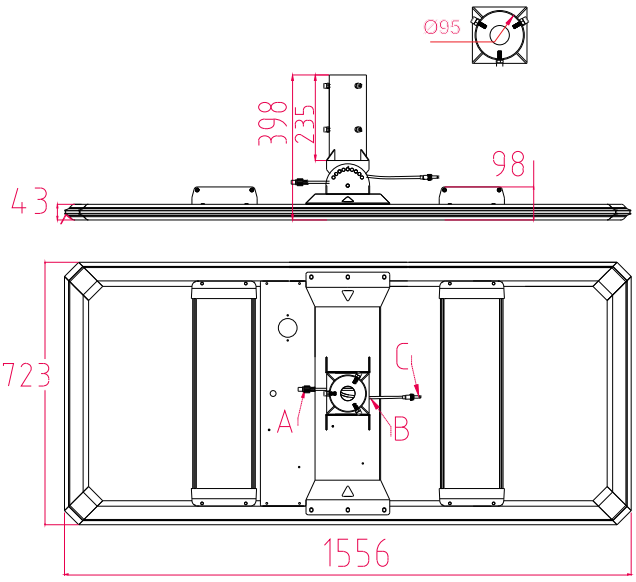


SSCORSO175
175W SOLAR PANEL
1690Wh BATTERY

Poles not included

CORSO
SOLAR ENGINE

Dimensions 1556x723x398mm
Weight 41.9kg



HOW TO SELECT THE CORRECT CORSO SOLAR ENGINE AND LIGHT HEADS TO SUIT YOUR INSTALLATION

Corso solar lighting systems are designed to reliably deliver 72 hours (3 days) autonomy. Tigerlight's specifications also aim to maximise battery performance over the long term by limiting the frequency of full battery discharges, which can adversely affect battery service life.

This is achieved by carefully balancing the size of the panel and accompanying battery, the light output required and the hours of operation.

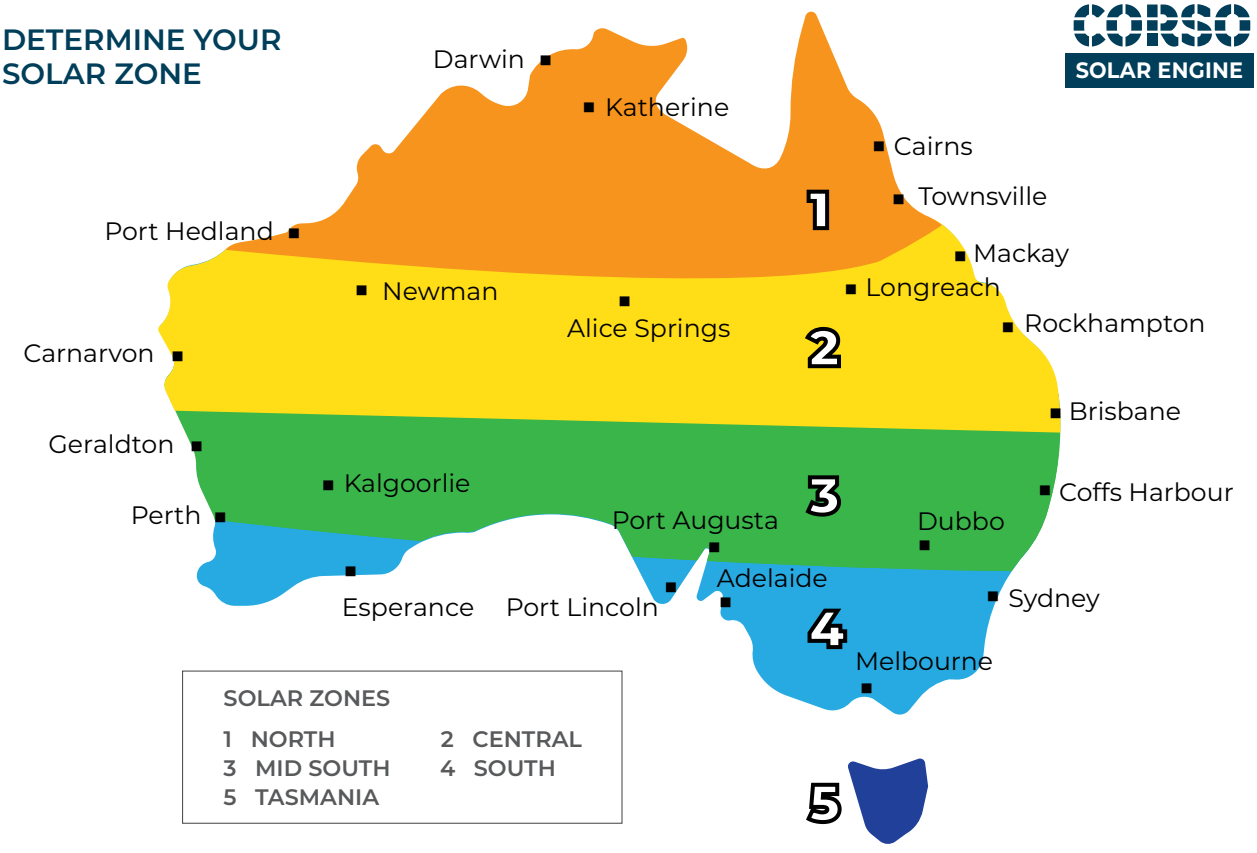
There are 3 steps in this process:

1 **Region where they are to be installed.**
Australia's northern states generate more solar energy as they have greater average solar exposure than the southern states. The map of Australia's solar zones, below, is based on total sunlight hours from Bureau of Meteorology statistics. This base information underpins the specification of all the system's components.

2 **Program options for illumination requirements**
Corso Solar Engines and complementary Tigerlight light heads are programmable to meet your operational requirements, while maximising battery autonomy.
Inbuilt controls manage operating timing, percentage of maximum output and sensor operation, which must consider expected traffic levels.

3 **Match the panel size to the light head/s to suit your needs**
Refer to the table on the next page for lamp power possible for each size Corso Solar Engine in each solar zone. Please refer to the example highlighted within the table.

1 DETERMINE YOUR SOLAR ZONE

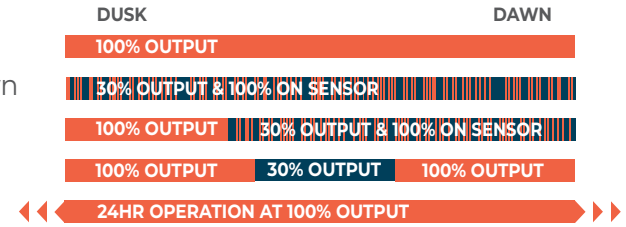


2 CHOOSE FROM FIVE PROGRAMMING OPTIONS

Operational requirements need to be determined next, in terms of both light output and hours of operation. The optimum light output and a lighting timetable are determined to balance maximum illuminance with battery autonomy to ensure reliability and performance.

Typical Programming options include:

P1 100% output - dusk to dawn
P2 30% output /100% with sensor - dusk to dawn
P3 100% 4 hrs then 30%/100% sensor to dawn
P4 100% 5 hrs, 30 % 4 hours, 100% 5 hours
P5 24hr operation without sensor



3 MATCH PANEL & OUTPUT OPTIONS FOR EACH SOLAR ZONE

		PROGRAMMING OPTIONS				
		P1	P2	P3	P4	P5
		W	W	W	W	W
ZONE 1 - NORTH	CORSO 55	13	26	19.5	16.25	6.5
	CORSO 110	25	50	37.5	31.25	12.5
	CORSO 175	40	60	60	50	20
ZONE 2 - CENTRAL	CORSO 55	10	20	15	12.5	5
	CORSO 110	20	40	30	25	10
	CORSO 175	33	60	50	40	16.5
ZONE 3 - MID SOUTH	CORSO 55	9	18	13.5	11.25	4.5
	CORSO 110	17	34	25.5	21.25	8.5
	CORSO 175	27	54	40.5	33.75	13.5
ZONE 4 - SOUTH	CORSO 55	7	14	10.5	8.75	3.5
	CORSO 110	13	26	19.5	16.25	6.5
	CORSO 175	20	40	30	25	10
ZONE 5 - TASMANIA	CORSO 55	5	10	7.5	6.25	2.5
	CORSO 110	9	18	13.5	11.25	4.5
	CORSO 175	15	30	22.5	18.75	7.5

NB Wattage data shown in table cross-references the projected solar power input by each size panel/battery in each zone, against the power output required by each program. These are estimates only and detailed calculations will be made in consultation with your Tigerlight representative.

The example highlighted in table above refers to a sample installation in Rockhampton, Qld. Solar Zone will be Zone 2 - Central.
In the example, program P2 is selected - 30% base output, and 100% upon sensor activation.
The 3 output options are highlighted for this example:

- CORSO 55 will power a 20W light for 3 days/nights
- CORSO 110 will power a 40W light (or 2 x 20W lights).
- CORSO 175 will power a 60W light (or 2 x 30W lights).

CORSO
SOLAR ENGINE

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