Solera SOLAR LIGHTING

MODULAR SOLAR AREA LIGHT | i-SERIES
INSTALL INSTRUCTIONS

PRIOR TO INSTALLATION, PLEASE READ THE ENTIRE INSTALLATION INSTRUCTIONS

CAUTION — THIS MANUAL CONTAINS IMPORTANT INSTRUCTIONS THAT SHALL BE FOLLOWED DURING INSTALLATION, OPERATION AND MAINTENANCE OF THE UNIT. INSTALLATION REQUIRES BASIC KNOWLEDGE OF SOLAR LIGHTING; IF NOT QUALIFIED, DO NOT ATTEMPT INSTALLATION AND CONTACT A QUALIFIED PERSONNEL.

CAUTION — INSTALLATIONS SHALL COMPLY WITH ANY LOCAL RULES AND REGULATIONS AND BE PERFORMED BY A QUALIFIED PROFESSIONAL.

CAUTION — THIS EQUIPMENT IS MOUNTED TO THE GROUND WHERE FAILURE TO SECURE PROPERLY COULD LEAD TO PROPERTY DAMAGE OR INJURY. MAKE SURE TO FOLLOW LOCAL AND REGIONAL REGULATIONS REGARDING SOIL CONDITIONS, WIND, SNOW LOADING AND OTHER MECHANICAL OR STRUCTURAL ISSUES.

CAUTION — EPA & WEIGHT – THE SL-MA2 FULLY-ASSEMBLED FIXTURE WEIGHS 124 LBS AND HAS AN EPA OF 14.0 FT². TWO-PERSON INSTALLATION AND A LIFT OR BUCKET TRUCK ARE REQUIRED. CONFIRM THAT THE POLE, TENON ADAPTER AND FOUNDATION ARE RATED FOR THESE VALUES IN YOUR SITE WIND ZONE BEFORE LIFTING.

PRODUCT INFORMATION

MODEL	SL-MA2-OG-1501234DB1
LIGHT OUTPUT	UP TO 15,000 LUMENS
DIMENSIONS	54.8 IN (H) × 47.3 IN (D) × 34.0 IN (W) (TYPICAL INSTALLATION)
LED RATED LIFE	100,000 HRS (L70)
BATTERY	$LiFePO_4$ / 94 AH / 1200 WH
SOLAR PANEL	(1) 200W MONOCRYSTALLINE
OPERATION	4G BI-DIRECTIONAL CELLULAR CONNECTIVITY FOR MONITORING AND CONTROL OF THE LIGHT. PROGRAMMABLE WITH MOTION SENSOR AND TIMER.
CCT	ADJUSTABLE 3000K / 4000K / 5000K
MATERIAL	MULTIPLE
CHARGING TIME	6 HOURS OF FULL SUN
OPTICS	T3 OPTICS STANDARD (T2, T4, T5 AVAILABLE)
INGRESS PROTECTION	IP65
WEIGHT / EPA	124 LBS / EPA 14.0 FT²
TENON REQUIREMENT	4 IN TENON
BATTERY TEMP	CHARGING −4°F TO 140°F DISCHARGING −40°F TO 140°F

INSTALLATION NOTES

1. THE PERFORMANCE OF SOLAR LIGHTS WILL DEPEND ON THE ENVIRONMENT, SETUP, MAINTENANCE AND OTHER FACTORS. THE OUTPUT MAY HAVE TO BE ADJUSTED TO LOWER LEVELS UNDER CERTAIN CONDITIONS. SOLAR LIGHTS ARE GENERALLY NOT DESIGNED TO OPERATE AT FULL POWER ALL NIGHT.
2. THE BATTERY ON SOLAR LIGHTS WILL DETERIORATE IF THE PRODUCT IS IN STORAGE FOR AN EXTENDED PERIOD OF TIME. TYPICALLY, THE BATTERY WILL MAINTAIN GOOD PERFORMANCE FOR 3-6 MONTHS AFTER PURCHASE. IF THE LIGHT IS STORED LONGER THAN 6 MONTHS, THEN THE LIGHT WILL NEED TO BE RECHARGED.
3. THE SOLAR PANEL ON THE LIGHT FIXTURE ALSO ACTS AS A PHOTOCELL. IF THERE IS A LIGHT SHINING ON THE SOLAR PANEL DURING NIGHT-TIME HOURS, THE LIGHT WILL NOT OPERATE.
4. SOLAR LIGHTS WILL OPERATE UNDER MANY CONDITIONS BUT MAY NOT OPERATE AS DESIRED UNDER ADVERSE CONDITIONS. IN SOME CASES, THE POWER OUTPUT MAY NEED TO BE REDUCED DURING WINTER MONTHS.
5. GENERALLY, THE SOLAR PANELS ARE MOUNTED FACING SOUTH AND INCLINED AT A 45 DEGREE ANGLE. THIS WILL TYPICALLY YIELD THE BEST RESULTS AND ALLOW THE RAIN TO CLEAN THE SOLAR PANELS. HOWEVER, IF SOLAR PANELS ARE NOT CLEAN, THEY WILL NOT CHARGE THE SYSTEM PROPERLY. FOR ADDITIONAL INFORMATION, PLEASE SEE THE SOLAR BEST PRACTICES GUIDE ON THE SOLERA WEBSITE UNDER RESOURCES / MARKETING MATERIALS. IN RARE OCCASIONS, SOLAR PANELS WILL NEED TO BE CLEANED WITH WATER AND A NON-ABRASIVE CLOTH.
6. IT IS NECESSARY TO CHECK CONDITION OF THE MOUNTING POLE OR STRUCTURE AS WELL AS THE CONDITION AND TIGHTNESS OF ALL BOLTS, BRACKETS, ETC. AT ROUTINE INTERVALS. THIS WILL DEPEND ON THE TYPE OF INSTALLATION AND THE CONDITIONS AT THE SITE AND IS THE RESPONSIBILITY OF THE INSTALLER OR SITE MAINTENANCE.
7. SOLAR LIGHTS MAY NOT BE FULLY CHARGED WHEN FIRST INSTALLED. PLEASE ALLOW 2-3 DAYS OF OPERATION FOR THE LIGHT TO START OPERATING NORMALLY.
8. SOLAR LIGHTS COME PROGRAMMED WITH THE DEFAULT PROGRAM. THIS HAS 2 HOURS AT 80% CONSTANT FOLLOWED BY SENSOR MODE FOR THE REST OF THE NIGHT. IN SENSOR MODE, THE FIXTURE OPERATES AT 20% LIGHT OUTPUT WHEN NO MOTION IS DETECTED. WHEN MOTION IS DETECTED, THE OUTPUT INCREASES TO 80% AND REMAINS AT THAT LEVEL UNTIL NO MOTION IS DETECTED FOR 1 MINUTE. IF ALTERNATE SETTINGS ARE REQUIRED, PLEASE CONTACT TECH SUPPORT.
9. SOLAR LIGHTS ARE HEAVY AND HAVE A LARGE EFFECTIVE PROJECTED AREA (EPA). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE POLE OR SELECTED MOUNTING STRUCTURE IS APPROPRIATE FOR THE LIGHT FIXTURES SELECTED, WIND ZONE AND ANY OTHER ENVIRONMENTAL OR SITE-SPECIFIC FACTORS. THE SL-MA2 EPA IS 14.0 FT² — VERIFY THESE AGAINST YOUR POLE'S WIND-ZONE RATING BEFORE INSTALLATION.

MAINTENANCE NOTES

THE MAINTENANCE INTERVAL WILL DEPEND ON THE ENVIRONMENT AND SITE-SPECIFIC FACTORS.

1. THE LIGHTS SHOULD BE CHECKED AND CLEANED AT LEAST ONCE PER YEAR.
2. THE SOLAR PANEL SHOULD BE CLEANED OF DUST AND DEBRIS USING WATER AND A NON-ABRASIVE CLOTH.
3. CHECK ALL MOUNTING BOLTS TO ENSURE THEY ARE PROPERLY INSTALLED AND TIGHT.
4. CONFIRM THAT THE POLE, TENON ADAPTER, AND/OR MOUNTING STRUCTURE ARE IN GOOD CONDITION.
5. ENSURE THAT THE FOUNDATION OR MOUNTING SURFACE IS IN GOOD CONDITION.

CONTENTS

THIS PRODUCT IS SHIPPED IN MULTIPLE BOXES. A TYPICAL SL-MA2 SHIPMENT CONTAINS:

BOX 1 — AREA LIGHT HEAD — SL-C-AL200-T3-4G, FIXTURE W/ AL-200 ENGINE AND 4G MODULE

BOX 2 — (1) 200W SOLAR PANEL — SL-C-200PANEL-SF, SOLAR PANEL W/ SLIP-FITTER

BOX 3 — LIGHT HEAD ARM (2 FT) — SL-C-2FTARM2-ST

BOX 4 — FIXTURE ARM + TENON MOUNT — SL-C-PTM2, MOUNTING POLE ASSEMBLY (W/ FACTORY PULL-WIRE PRE-INSTALLED)

BOX 5 — 120W BATTERY + ENCLOSURE — SL-C-BATBOX-2, BATTERY BOX (W/ 1200 WH $LiFePO_4$ BATTERY)

TOOLS AND MATERIALS NEEDED

NOTE: DUE TO THE SIZE AND WEIGHT OF THIS PRODUCT (124 LBS TOTAL), TWO-PERSON INSTALLATION IS REQUIRED. A LIFT OR BUCKET TRUCK IS REQUIRED FOR POLE-TOP MOUNTING.

3MM METRIC ALLEN WRENCH

6MM METRIC ALLEN WRENCH (TYPICALLY INCLUDED)

8MM METRIC ALLEN WRENCH

WIRE CUTTERS / STRIPPERS

#2 PHILIPS SCREWDRIVER

ELECTRICAL TAPE

TORQUE WRENCH (RECOMMENDED FOR TENON SET-SCREWS AND ARM-TO-PTM2 BOLTS)

PRE-INSTALLATION CHECKLIST

1. SELECT A LOCATION THAT RECEIVES PLENTY OF DIRECT, UNOBSTRUCTED SUNLIGHT. AVOID AREAS WITH SHADING FROM BUILDINGS, TREES OR OTHER OBJECTS.
2. SELECT A LOCATION WHERE ARTIFICIAL LIGHT DOES NOT SHINE ON THE SOLAR PANEL AT NIGHT.
3. CHECK THAT THE CCT SELECTION IS IN THE DESIRED POSITION. (SEE CCT ADJUSTMENT INSTRUCTIONS)
4. CONFIRM THAT THE POLE OR STRUCTURE WILL SUPPORT THE WEIGHT (124 LBS) AND EPA (14.0 FT^2) OF THE LIGHT.
5. CONFIRM THAT THE POLE OR STRUCTURE HAS A 4 IN TENON TO MOUNT THE LIGHT.
6. IF ANY ACCESSORIES SUCH AS SHIELDS OR OPTIONAL OPTICS NEED TO BE INSTALLED, PLEASE INSTALL BEFORE MOUNTING THE LIGHT. (SEE INSTRUCTIONS FOR SHIELD OR OPTIC INSTALLATION)

FOR 4G MODULE OPERATION, SEE INSTRUCTIONS FOR SOLERA CONNECT
WHEN THE 4G OPTION IS SELECTED, THE AREA LIGHT WILL INCLUDE A PRE-CONFIGURED MODULE WITH SIM CARD INSTALLED.

PRE-INSTALLATION PREPARATION

THE SL-MA2 CAN EASILY BE MODIFIED OR ADJUSTED TO MEET THE SPECIFIC SITE REQUIREMENTS.

PLEASE ADJUST THE CCT TO THE DESIRED LEVEL PRIOR TO INSTALLATION (SEE CCT ADJUSTMENT BELOW).

THE LENSES CAN BE CHANGED FROM TYPE 3 TO TYPE 2, 4, OR 5 OPTICS (SEE LENS CHANGE INSTRUCTIONS).

SHIELDING CAN BE ADDED AS WELL (SEE SHIELD INSTALLATION).

CCT ADJUSTMENT

THE SL-MA2 IS EASILY ADJUSTED TO 3000K, 4000K OR 5000K OUTPUT BY A SWITCH.

1. PERFORM THIS OPERATION IN A CLEAN AND DRY ENVIRONMENT. (PREFERABLY ON THE BENCH, BEFORE INSTALLING THE LIGHT)
2. USE A 3MM ALLEN WRENCH TO LOOSEN 4 SCREWS, AND THEN OPEN DRIVER COMPARTMENT. (SEE FIGURE 1)
3. ADJUST THE 3-POSITION SWITCH TO THE DESIRED CCT. (SEE FIGURE 2)
4. ENSURE THAT ALL WIRES AND CONNECTORS ARE SAFELY POSITIONED TO CLOSE THE DOOR.
5. CLOSE DRIVER COMPARTMENT DOOR AND CONFIRM THAT THE GASKET IS IN PLACE ALL THE WAY AROUND THE COMPARTMENT. TIGHTEN ALL 4 SCREWS SECURELY.

FIG 1

FIG 2

LENS CHANGE INSTRUCTIONS

THE SL-MA2 IS GENERALLY EQUIPPED WITH TYPE 3 OPTIC LENSES WHEN SHIPPED. THESE LENSES CAN BE REPLACED WITH TYPE 2, 3, 4 OR 5 OPTIC LENSES. LENSES CAN BE PURCHASED SEPARATELY.

NOTE: THE SL-MA2 LAMP HEAD CONTAINS FOUR (4) LED MODULES. REPEAT THE LENS-CHANGE STEPS FOR EACH MODULE.

1. PERFORM THIS OPERATION IN A CLEAN AND DRY ENVIRONMENT. (PREFERABLY ON THE BENCH, BEFORE INSTALLING THE LIGHT)
2. CLEAN THE LENS AND FIXTURE WITH WATER AND A SOFT CLOTH. (NOT NECESSARY IF INSTALLING ON A NEW LIGHT)
3. USING A #2 PHILIPS SCREWDRIVER, REMOVE THE 8 SCREWS AROUND THE LENS. (SEE FIGURE 3)
4. REMOVE THE OLD LENS.
5. ENSURE THAT THE GASKET IS CORRECTLY POSITIONED. (SEE FIGURE 4)
6. INSTALL THE NEW LENS ENSURING THAT THE ARROW IS POINTING AWAY FROM THE POLE, AND THAT THE GASKET IS SEATED PROPERLY AROUND THE ENTIRE LENS. (SEE FIGURE 5)
7. REINSTALL THE 8 SCREWS.
8. REPEAT THESE STEPS FOR THE OTHER THREE (3) MODULES.

FIG 3

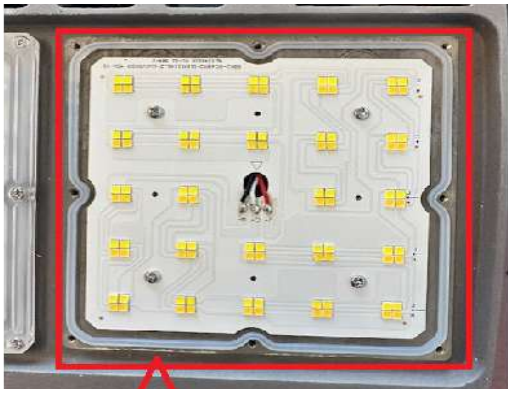

FIG 4

FIG 5

SHIELD INSTALLATION

IF DESIRED, OPTIONAL SHIELDS MAY BE INSTALLED TO CONTROL THE LIGHT DISTRIBUTION. (THESE CAN BE PURCHASED SEPARATELY)

1. PERFORM THIS OPERATION IN A CLEAN AND DRY ENVIRONMENT. (PREFERABLY ON THE BENCH, BEFORE INSTALLING THE LIGHT)
2. CLEAN THE LENS AND FIXTURE WITH WATER AND A SOFT CLOTH. (NOT NECESSARY IF INSTALLING ON A NEW LIGHT)
3. USING A #2 PHILIPS SCREWDRIVER REMOVE THE SCREWS INDICATED (SEE FIGURE 6 FOR FULL CUTOFF SHIELD AND FIGURE 7 FOR PARTIAL CUTOFF SHIELD) NOTE: PARTIAL CUTOFF SHIELD CAN BE INSTALLED IN 2 ORIENTATIONS FOR BACK-LIGHT SHIELD OR VISOR.
4. ENSURE THAT THE GASKET IS CORRECTLY POSITIONED.
5. INSTALL SHIELD AND REINSTALL SCREWS, ENSURING THAT THE GASKET REMAINS IN THE CORRECT POSITION.

FIG 6

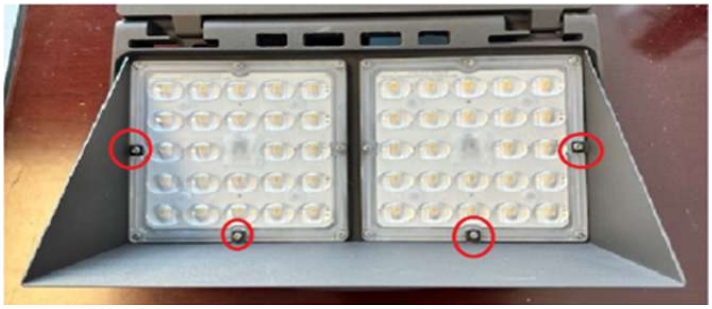

FIG 7

BATTERY REPLACEMENT

THE SL-MA2 BATTERY IS A $LiFePO_4$ 1200 WH / 94 AH MODULE WEIGHING APPROXIMATELY 42 LBS.

1. OPEN THE BATTERY BOX (ENCLOSURE) — PRESS THE LATCH BUTTON AND ROTATE THE HANDLE.
2. DISCONNECT BATTERY. (LEVER CONNECTOR — SEE FIGURE 8)
3. REMOVE BATTERY RETAINER. (2 SCREWS)
4. INSTALL NEW BATTERY. (SEE WIRING DIAGRAM IN FINAL WIRING & POWER-UP SECTION)
5. REINSTALL BATTERY RETAINER.
6. RE-CONNECT BATTERY.

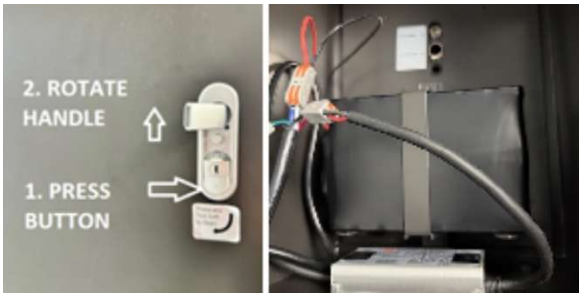

FIG 8

INSTALLATION INSTRUCTIONS

NOTE: DUE TO THE SIZE AND WEIGHT OF THIS PRODUCT (124 LBS TOTAL), TWO-PERSON INSTALLATION IS REQUIRED. A LIFT OR BUCKET TRUCK IS REQUIRED FOR POLE-TOP MOUNTING.

PREPARATION

1. INSTALLATION SHOULD ONLY BE CARRIED OUT BY QUALIFIED PERSONNEL UNDER SAFE CONDITIONS.
2. READ ENTIRE INSTRUCTIONS BEFORE INSTALLATION. ENSURE THAT ALL ITEMS LISTED IN THE PRE-INSTALLATION CHECKLIST HAVE BEEN COMPLETED OR ACCOUNTED FOR.
3. PLEASE CONFIRM THAT THE CCT IS SET, AND THAT THE APPROPRIATE LENSES AND/OR SHIELDING HAS BEEN INSTALLED ON THE LIGHT FIXTURE PRIOR TO INSTALLATION.
4. INSPECT EACH CARTON FOR SHIPPING DAMAGE BEFORE BEGINNING.

GROUND SUB-ASSEMBLY (AREA LIGHT HEAD, LIGHT HEAD ARM, FIXTURE ARM/TENON MOUNT AND BATTERY/ ENCLOSURE)

NOTE: PERFORM STEPS 1–8 ON THE GROUND IN A CLEAN, LEVEL AREA. ASSEMBLING THE LAMP HEAD, ARM, PTM2 AND BATTERY BOX AT GROUND LEVEL BEFORE LIFTING IS STRONGLY RECOMMENDED FOR SAFETY, GIVEN THE SIZE AND WEIGHT OF THE SL-MA2.

1. **TAKE OUT THE AREA LIGHT HEAD FROM THE OUTER CARTON** REMOVE THE SL-MA2 LAMP HEAD FROM ITS OUTER CARTON. VERIFY THE FACTORY WHIP (LAMP-HEAD CABLE) IS INTACT AND THE SLIP-FITTER KNUCKLE HARDWARE IS PRESENT. (SEE FIGURE 9)
2. **TAKE OUT THE LIGHT HEAD ARM FROM THE OUTER CARTON** REMOVE THE LIGHT HEAD ARM FROM THE OUTER CARTON AND LAY IT NEXT TO THE AREA LIGHT HEAD, ORIENTED FOR ASSEMBLY. (SEE FIGURE 10)

FIG 9

FIG 10

INSTALLATION INSTRUCTIONS

3. **CONNECT THE LIGHT HEAD AND ARM AND FEED THE CABLE** (SEE FIGURE 11)

   POSITION THE SL-MA2 SLIP-FITTER AGAINST THE END OF THE LIGHT HEAD ARM.

   ALIGN THE CONNECTORS AND FIRMLY PUSH THEM TOGETHER.

   FEED THE LAMP-HEAD CABLE INTO THE OPEN END OF THE ARM AS YOU JOIN THE TWO PARTS.

   SLIDE THE SLIP-FITTER FULLY ONTO THE ARM UNTIL IT BOTTOMS OUT.

   HAND-THREAD THE FOUR MOUNTING BOLTS; DO NOT TORQUE YET.

FIG 11

4. **TAKE OUT THE FIXTURE ARM (PTM2) + TENON MOUNT FROM THE OUTER CARTON** REMOVE THE FIXTURE ARM FROM CARTON 2 AND LAY IT ALONGSIDE THE LIGHT HEAD / ARM SUB-ASSEMBLY. NOTE THE UPPER AND LOWER ACCESS HOLES ON THE LIGHT HEAD ARM (A FACTORY PULL-WIRE IS PRE-INSTALLED INSIDE). (SEE FIGURE 12)

FIG 12

INSTALLATION INSTRUCTIONS

5. **ROUTE THE CABLE THROUGH THE FIXTURE ARM (PTM2)** FEED THE FREE END OF THE LIGHT HEAD CABLE (EXITING THE LOWER END OF THE LIGHT HEAD ARM) INTO THE UPPER PTM2 ACCESS OPENING, WHERE THE ARM WILL BE BOLTED. (SEE FIGURE 13)

6. **PULL THE CABLE FROM TOP ACCESS TO BOTTOM ACCESS OF THE PTM2** ATTACH THE LIGHT HEAD CABLE TO THE FACTORY-INSTALLED PULL-WIRE INSIDE THE PTM2. GENTLY PULL THE WIRE SO THE CABLE TRAVELS FROM THE UPPER ACCESS (WHERE THE ARM ATTACHES) DOWN TO THE LOWER ACCESS (WHERE THE BATTERY BOX WILL ATTACH). (SEE FIGURE 14)

CAUTION — DO NOT YANK THE PULL-WIRE. FEED SLOWLY TO AVOID STRIPPING CONDUCTOR INSULATION AGAINST THE PTM2 GROMMETS.

FIG 13

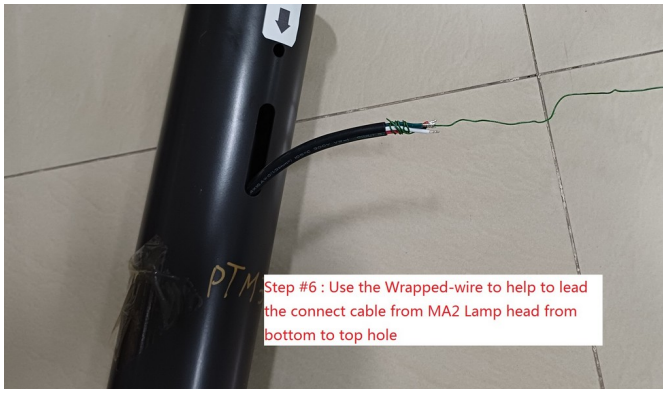

FIG 14

7. **FULLY BOLT THE LIGHT HEAD ARM TO THE FIXTURE ARM (PTM2) AND SECURE ALL LAMP-HEAD HARDWARE**

   USING THE PROVIDED BOLTS, ATTACH THE LIGHT HEAD ARM TO THE PTM2 AND FIRMLY TIGHTEN.

   TORQUE THE FOUR (4) MOUNTING BOLTS AT THE LIGHT HEAD SLIP-FITTER (STEP 3).

   ADJUST THE TILT OF THE AREA LIGHT USING THE LARGE BOLT AT THE CENTER OF THE SLIP-FITTER KNUCKLE. ONCE ADJUSTED, LOCK IT IN PLACE BY FIRMLY TIGHTENING THE BOLT. (SEE FIGURE 15)

FIG 15

INSTALLATION INSTRUCTIONS

8. **MOUNT THE BATTERY BOX TO THE FIXTURE ARM (PTM2) AND ROUTE BOTH CABLES THROUGH THE GLANDS**

ON THE PTM2, ENSURE THAT ALL 8 SET SCREWS (TENON SET-SCREWS) ARE PRESENT AND LOOSENED SO THEY WILL EASILY FIT OVER THE EVENTUAL 4 IN TENON.

CHECK THAT THE CABLES FOR THE SOLAR PANEL AND THE LAMP HEAD ARE PRESENT AT THE LOWER PTM2 ACCESS. THE SOLAR PANEL CABLE SHOULD HAVE A SHORT LENGTH WITH A CONNECTOR COMING OUT THE TOP OF THE PTM2; THE LIGHT HEAD CABLE SHOULD BE EXITING THE LOWER PTM2 WHERE IT WILL ENTER THE BATTERY BOX. (SEE FIGURE 16)

POSITION THE BATTERY BOX CLOSE TO THE PTM2 IN THE PROPER ORIENTATION.

LOOSEN THE CABLE GLAND NUTS; REMOVE AND SLIDE THE NUT AND SEAL ASIDE IF NECESSARY.

FEED THE LIGHT HEAD CABLE AND THE SOLAR-PANEL CABLE THROUGH THE CORRECT LABELED GLANDS ON THE BATTERY BOX (SEE FIGURE 17), ENSURING THAT THE PTM2 GROMMETS STAY IN PLACE.

ALIGN THE MOUNTING SCREWS AND MOUNT THE BATTERY BOX TO THE PTM2 WHILE PULLING CABLE SLACK INTO THE BATTERY BOX.

USE THE PROVIDED WASHERS AND NUTS TO FIRMLY SECURE THE BATTERY BOX TO THE PTM2.

TIGHTEN THE NUTS ON BOTH CABLE GLANDS.

NOTE: THE BATTERY BOX HAS TWO CABLE GLANDS LABELED INSIDE (VISIBLE WHEN THE DOOR IS OPEN):
"SOLAR PANEL" (UPPER GLAND) — FOR THE CABLE FROM THE 200W PANEL ABOVE
"LAMP ENGINE" (LOWER GLAND) — FOR THE LIGHT HEAD CABLE COMING UP FROM THE PTM2 / ARM

CAUTION — MAKE SURE EACH CABLE ENTERS THE CORRECT GLAND. REVERSING THEM WILL RESULT IN INCORRECT TERMINATIONS INSIDE THE BATTERY BOX.

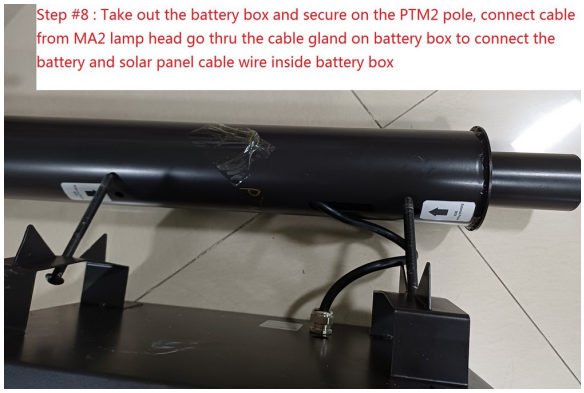

FIG 16

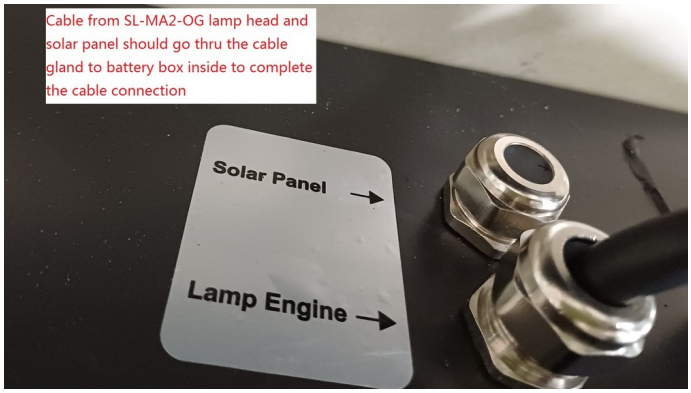

FIG 17

INSTALLATION INSTRUCTIONS

8. **POLE-TOP MOUNTING OF SUB-ASSEMBLY**

VISUALLY INSPECT THE ENTIRE GROUND SUB-ASSEMBLY (LIGHT HEAD + LIGHT HEAD ARM + FIXTURE ARM (PTM2) + BATTERY BOX) FOR TIGHT FASTENERS AND PROPER CABLE ROUTING BEFORE LIFTING. (SEE FIGURE 18)

CONFIRM THAT THE POLE SPEC IS APPROPRIATE FOR THE SL-MA2 (124 LBS, EPA 14.0 FT², 4 IN TENON).

CONFIRM THAT THE TENON ADAPTER (IF USED) IS WELL SECURED AND IN GOOD CONDITION.

USING A LIFT OR BUCKET TRUCK, RAISE THE SUB-ASSEMBLY INTO POSITION WITH AT LEAST TWO PEOPLE.

PLACE THE FIXTURE ARM (PTM2) ONTO THE 4 IN TENON AND ADJUST THE ORIENTATION OF THE ARM TO THE APPROPRIATE DIRECTION.

FIRMLY TIGHTEN THE 8 MOUNTING SET-SCREWS AT THE BOTTOM OF THE FIXTURE ARM (PTM2) SO THAT THEY FIRMLY ANCHOR THE FIXTURE ARM (PTM2) TO THE TENON.

FIG 18

9. **SOLAR PANEL INSTALLATION** THE SL-MA2 SHIPS WITH A SINGLE 200W MONOCRYSTALLINE PANEL (46.0 IN × 34.0 IN × 3.0 IN, 52 LBS). THE PANEL MOUNTS ON A SLIP-FITTER AT THE TOP OF THE PTM2.

ENSURE THAT THE SOLAR PANEL CABLE IS EXITING THE TOP OF THE PTM2.

RAISE THE SOLAR PANEL INTO POSITION ABOVE THE PTM2.

ALIGN THE CONNECTORS AND FIRMLY PUSH THEM TOGETHER. TIGHTEN THE LOCK NUT FIRMLY.

LOWER THE SLIP-FITTER ONTO THE TENON WHILE ENSURING THAT THE WIRE DOES NOT GET PINCHED BETWEEN THE TWO COMPONENTS.

ADJUST THE ORIENTATION OF THE SOLAR PANELS (TYPICALLY FACING SOUTH), THEN FIRMLY TIGHTEN THE 4 MOUNTING BOLTS.

ADJUST THE TILT OF THE SOLAR PANELS USING THE LARGE BOLT IN THE CENTER OF THE KNUCKLE ON THE SLIP-FITTER (TARGET ~45° INCLINATION). ONCE ADJUSTED, LOCK IN PLACE BY FIRMLY TIGHTENING THE BOLT.

INSTALLATION INSTRUCTIONS

10. **FINAL WIRING & POWER-UP** OPEN THE BATTERY-BOX DOOR. THE DECORATIVE LIGHT HEAD (4-CONDUCTOR) CABLE, THE BATTERY LEADS AND THE SOLAR-PANEL LEADS ALL CONVERGE ON THE FACTORY-SUPPLIED LEVER CONNECTORS AT THE SOLAR CONTROLLER. FOLLOW THE CABLE-COLOR INFORMATION BELOW TO MAKE EACH CONNECTION:

    RED BATTERY WIRE TO RED WIRE ON 4-CONDUCTOR CABLE

    BLACK BATTERY WIRE TO GREEN WIRE ON 4-CONDUCTOR CABLE

    SOLAR PANEL BLACK WIRE TO BLACK WIRE ON 4-CONDUCTOR CABLE

    SOLAR PANEL WHITE WIRE TO WHITE WIRE ON 4-CONDUCTOR CABLE

CAUTION — ALWAYS OBSERVE POLARITY. A REVERSED BATTERY CONNECTION CAN DAMAGE THE MPPT SOLAR CONTROLLER AND VOID THE WARRANTY.

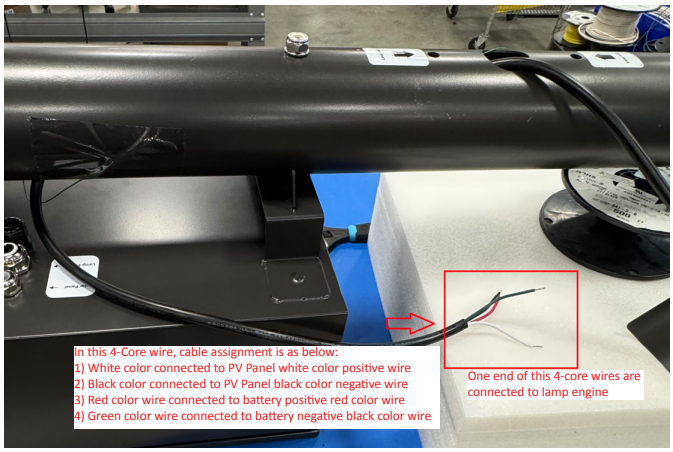

FIG 19

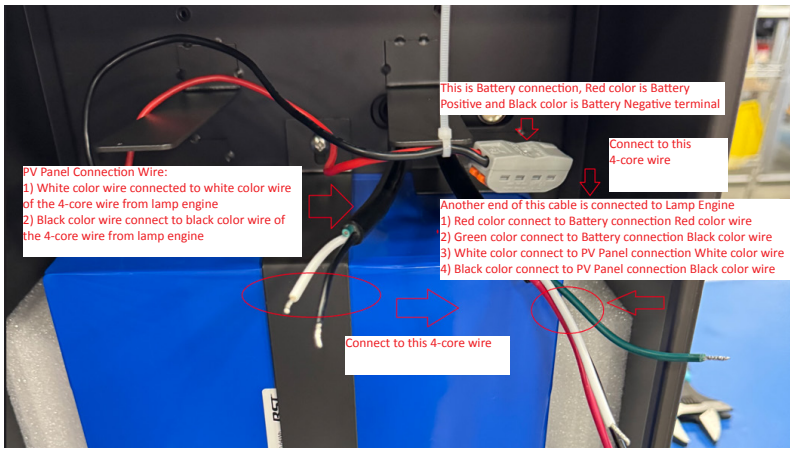

FIG 20

11. **FINAL CHECK & POWER-UP**

    VISUALLY INSPECT THE ENTIRE FIXTURE.

    DOUBLE CHECK THAT ALL MOUNTING BOLTS ARE TIGHT.

    CONFIRM THE CABLE GLANDS ON THE BATTERY BOX ARE TIGHTENED AND THE DOOR GASKET IS FULLY SEATED.

    CLOSE AND LATCH THE BATTERY-BOX DOOR.

    ALLOW 2–3 DAYS OF DAYLIGHT EXPOSURE FOR THE SYSTEM TO CHARGE AND BEGIN OPERATING NORMALLY.

OPERATING NOTES

PLEASE NOTE BELOW IN REFERENCE TO THE CHARGE LED AND SENSOR WINDOW. THE CHARGE LED WILL OPERATE AS FOLLOWS:

1. FAST BLINK – BOOST CHARGING. BATTERY LEVEL IS LOW, SOME FUNCTIONALITY WILL BE LIMITED UNTIL BATTERY RECHARGES.
2. SLOW BLINK – CHARGING. NORMAL CHARGING STATE.
3. SOLID – BATTERY HAS REACHED MAXIMUM CHARGE.

THE LIGHTS WILL COME ON AT DUSK, BASED ON THE LIGHT LEVEL DETECTED BY THE SOLAR PANELS. THE LED PANEL WILL TURN OFF AT DAWN, AS THE LIGHT LEVEL DETECTED BY THE SOLAR PANELS INCREASES. THERE IS A STANDARD 1-MINUTE SENSOR DWELL TIME WHEN THE LIGHT IS OPERATING IN SENSOR MODE.

NOTE: FOR 4G-ENABLED UNITS, ALL OPERATIONAL SETTINGS (GROUPS, SCHEDULES, DIMMING PROFILES, ALARM THRESHOLDS) CAN BE CONFIGURED REMOTELY THROUGH SOLERA CONNECT. SEE THE SOLERA CONNECT DOCUMENTATION FOR APP AND PORTAL SETUP.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	RECOMMENDED ACTION
LIGHT DOES NOT COME ON AT DUSK	SOLAR PANEL EXPOSED TO ARTIFICIAL NIGHT-TIME LIGHT; BATTERY DEEPLY DISCHARGED; SENSOR OBSTRUCTED	REPOSITION TO AVOID STRAY LIGHT; ALLOW 2–3 DAYS FOR RECHARGE; CLEAR OBSTRUCTION FROM SENSOR WINDOW
LIGHT FLICKERS OR SHUTS OFF IN THE MIDDLE OF THE NIGHT	BATTERY LOW; OUTPUT SET TOO HIGH FOR SITE CONDITIONS; LOOSE TERMINAL	VERIFY CHARGE LED STATUS; CONTACT TECH SUPPORT TO LOWER OUTPUT PROFILE; RE-SEAT LEVER-CONNECTOR TERMINATIONS (FIGURE 17)
CHARGE LED — FAST BLINK, PERSISTENT	BOOST CHARGING DUE TO LOW BATTERY; INSUFFICIENT DAILY SOLAR HARVEST	VERIFY PANEL ORIENTATION (SOUTH-FACING, ~45°); CLEAN PANELS; CHECK FOR SHADING OR STRAY NIGHT-TIME LIGHT ON PANELS
CHARGE LED — OFF ENTIRELY	NO BATTERY CONNECTION; TRIPPED BMS PROTECTION	INSPECT LEVER-CONNECTOR TERMINATIONS; VERIFY POLARITY; IF UNRESOLVED, CONTACT TECH SUPPORT
OUTPUT NOTICEABLY REDUCED (WINTER)	REDUCED SOLAR HARVEST IN WINTER MONTHS	EXPECTED BEHAVIOR; CONSIDER LOWERING SCHEDULED OUTPUT VIA SOLERA CONNECT (4G UNITS)
SOLAR PANEL FACE DIRTY / STREAKED	DUST, POLLEN, SALT SPRAY, BIRD DROPPINGS	CLEAN WITH WATER AND A NON-ABRASIVE CLOTH
WATER INSIDE BATTERY BOX	CABLE-GLAND NUT LOOSE; DOOR GASKET DISPLACED	RE-TIGHTEN GLAND NUTS; VERIFY DOOR-GASKET SEATING; REPLACE GASKET IF DAMAGED
4G UNIT NOT REPORTING TO SOLERA CONNECT	SIM NOT ACTIVATED; CELLULAR OUTAGE; ANTENNA OBSTRUCTED (4G IOT MODULE ON TOP SIDE OF BATTERY BOX)	CONFIRM WITH TECH SUPPORT THAT SIM IS PROVISIONED; RE-POWER FIXTURE; ENSURE NO METAL OBSTRUCTION ABOVE THE IOT ANTENNA; IF PERSISTENT, CONTACT SUPPORT

FOR ALL UNRESOLVED ISSUES, CONTACT SOLERA-TS@LED-LLC.COM WITH: MODEL NUMBER, INSTALL DATE, PHOTOS OF THE FIXTURE AND CHARGE LED, AND A DESCRIPTION OF THE ISSUE.

SPECIFICATIONS

LIGHT ENGINE

ENGINE	AL-200
LED	384 LED. 3030 HIGH EFFICACY
MAX. POWER	100W
EFFICACY	160+ LUMENS PER WATT
CRI	70+
MAX. LUMENS	15,000 LUMENS
CCT	3000K, 4000K, 5000K SELECTABLE
CONTROLLER	MPPT CHARGE CONTROLLER
HYBRID OPTION	AC HYBRID POWER
4G OPTION	4G MODULE FOR SOLERA CONNECT
STANDARD OPTICS	TYPE 3
OPTICS OPTIONS	TYPE 2, TYPE 3, TYPE 4, TYPE 5
SHIELD OPTIONS	BACK LIGHT SHIELD, FULL CUTOFF SHIELD
RATED LIFE	L70 / 10,000 HOURS

SOLAR PANEL

TYPE	MONOCRYSTALLINE
WATTS	200W
VOLTAGE	12V
ADJUSTABLE	ANGLE AND ROTATION ARE FULLY ADJUSTABLE
CHARGE TIME	6 HOURS
DIMENSIONS	46.0 IN X 34.0 IN X 3.0 IN (NOT INCLUDING SLIP-FITTER)
WEIGHT	52 LBS
INGRESS PROTECTION	IP65

BATTERY

TYPE	$LiFePO_4$
CHARGING TEMP	-4° TO 140°F
DISCHARGING TEMP	-40° TO 140°F
CHARGING TIME	6 HRS
BATTERY LIFE	30 HRS (BASED ON ENV / PWR SETTINGS)
REPLACEABLE	YES
CHARGE CYCLES	2000+
AMPERE-HOURS	94
WATT HOURS	1200
WEIGHT	42 LBS (INCL ENCLOSURE)
BMS SYSTEM	ONBOARD FULL PROTECTION
SAFETY	UN 38.3

DECORATIVE LIGHT ASSEMBLY

DESCRIPTION	MEDIUM
SOLAR PANEL	200W
BATTERY	1200 WH
LIGHT HEAD	100W / 15,000 LUMENS
EPA	14.0 FT^2
WEIGHT	124 LBS

ACCESSORIES

PART #	DESCRIPTION
SL-AL1-SHIELD-1	BACK-LIGHT SHIELD
SL-AL1-SHIELD-2	FULL CUTOFF SHIELD
SL-AL1-LENS-T2	LENS SET TYPE 2 OPTICS
SL-AL1-LENS-T3	LENS SET TYPE 3 OPTICS (STANDARD)
SL-AL1-LENS-T4	LENS SET TYPE 4 OPTICS
SL-AL1-LENS-T5	LENS SET TYPE 5 OPTICS

POLE RECOMMENDATION

THE SL-MA2 REQUIRES A 4 IN TENON ON TOP. POLE MODELS COMPATIBLE WITH THE I-SERIES MODULAR FAMILY (ANCHOR-BASE AND DIRECT-BURIAL, 20/25/30 FT, 5 IN–6 IN SQUARE STEEL, 7 GA) ARE LISTED ON THE SOLERA SPEC SHEET. POLE TOP-OF-TENON DIMENSION ON STANDARD SOLERA RPSQ POLES IS 2.38 IN — A 2.38 IN TO 4 IN TENON ADAPTER IS REQUIRED FOR THE SL-MA2 ON STANDARD SOLERA POLES, OR SPECIFY A 4 IN TENON POLE AT ORDER.

CONTACT INFORMATION

SALES SUPPORT

PLEASE CONTACT YOUR DISTRIBUTOR, REP, OR LED REGIONAL SALES MANAGER.

LIGHT EFFICIENT DESIGN SALES CAN BE REACHED AT (847) 380-3540 AND ASK FOR SALES OR EMAIL: SALES@LED-LLC.COM

TECHNICAL SUPPORT

TECHNICAL SUPPORT IS AVAILABLE, PLEASE EMAIL SOLERA-TS@LED-LLC.COM

PLEASE INCLUDE THE MODEL NUMBER, NUMBER OF LIGHTS, INSTALLATION DATE AND ANY OTHER PERTINENT INFORMATION.