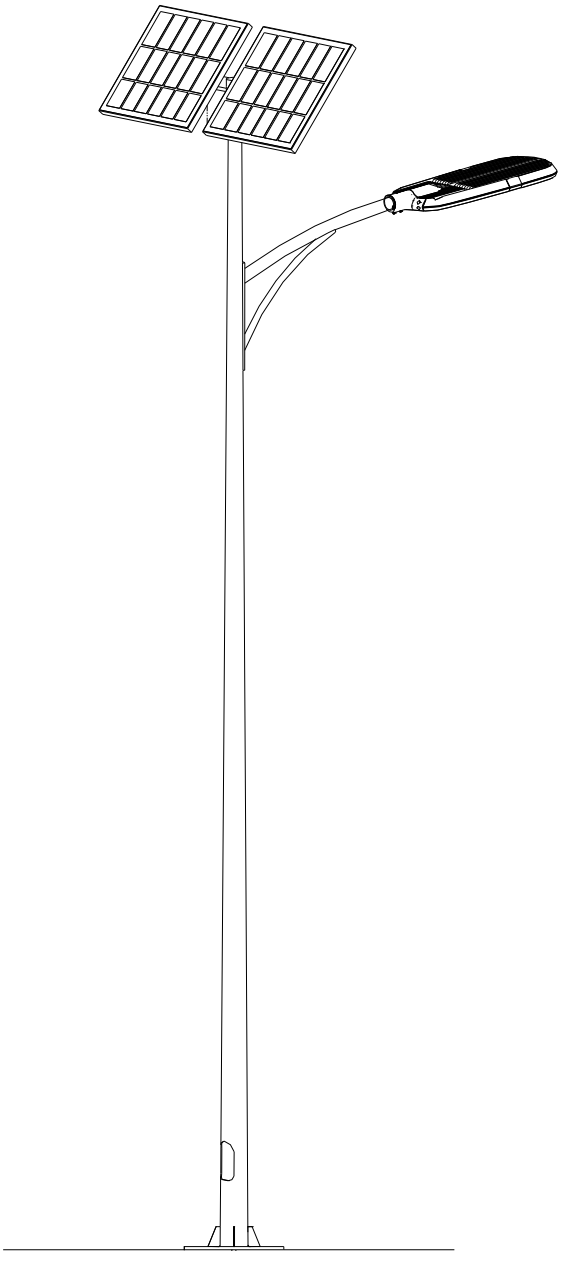
# PHILIPS

## Solar LED Road Lighting System
## Mounting Instructions V5.1

## ---Pole Requirements---

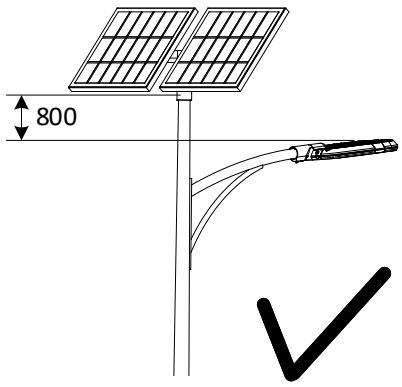


Philips Lighting (China) Investment Co., Ltd.
Building No. 9, Lane 888, Tianlin Road, Minhang District, Shanghai, China
Post code：200233

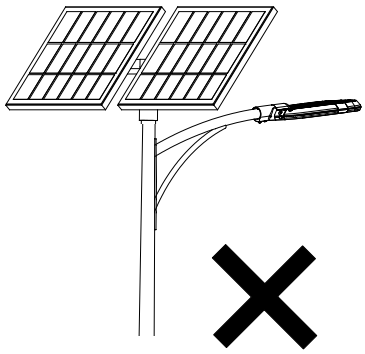
# Solar LED Road Lighting System

## PV Panel Position

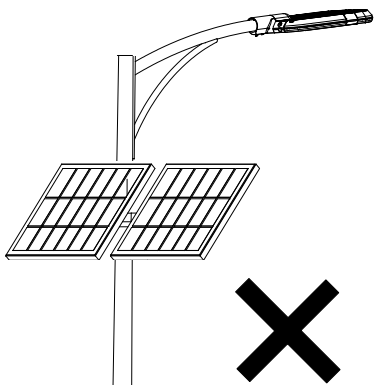
**A1** The vertical distance from bracket bottom to lamp arm must be more than 800 mm, avoiding conflict between the PV and luminaire.




Panel bracket in correct position

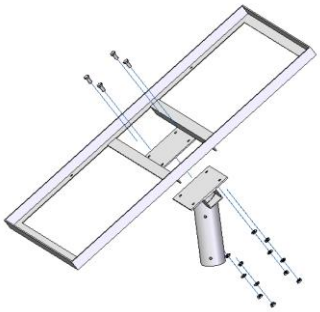


Panel bracket too close to the lamp



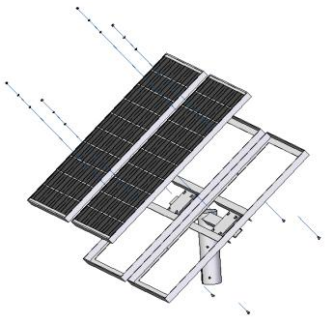
Panel bracket below the lamp

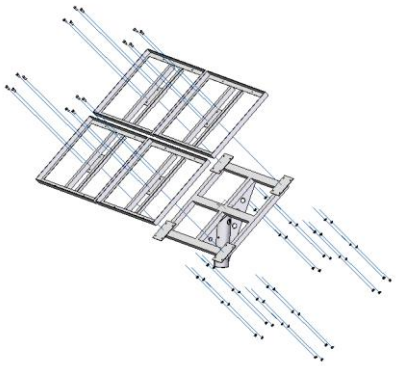
**A2** **PV Panel Bracket Diagram:**



**Single PV Panel**

**Dual PV Panels**





**Four PV Panels**

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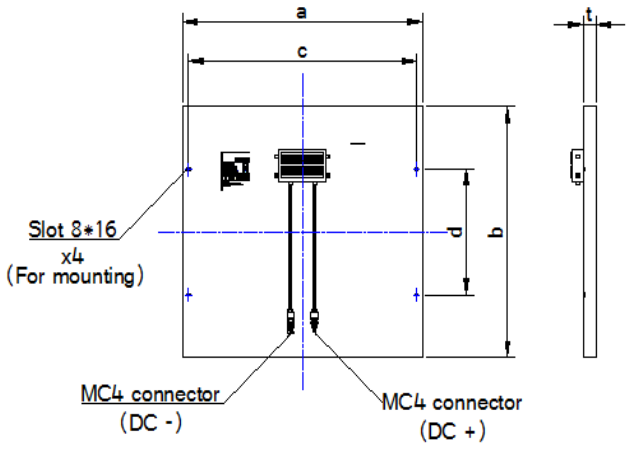
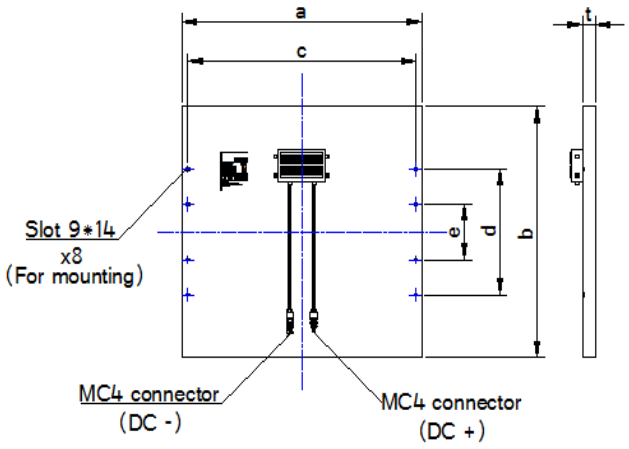
## A3 Panel Specification




30W-200W



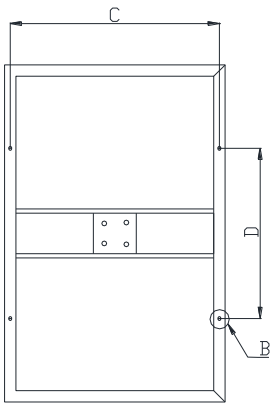

260W-315W

| 12NC | SAP | 3C | Net Weight (kg) | a(mm) | b(mm) | c(mm) | d(mm) | e(mm) | t(mm) |
|---|---|---|---|---|---|---|---|---|---|
| 911401803402 | 30W 17V Panel Subsystem Vmpp17.9V | 30W 17V Panel subsystem | 3 | 666 | 360 | 625 | 180 | NA | 35 |
| 911401803202 | 55W 17V Panel subsystem Vmpp 18.39V | 55W 17V Panel subsystem | 4.2 | 666 | 558 | 625 | 280 | NA | 35 |
| 911401803102 | 60W 17V Panel subsystem Vmpp 17.9V | 60W 17V Panel subsystem | 5 | 666 | 639 | 625 | 329 | NA | 35 |
| 911401803302 | 75W 17V Panel subsystem Vmpp 17.89V | 75W 17V Panel subsystem | 6 | 666 | 774 | 625 | 400 | NA | 35 |
| 911401803702 | 100W 17V Panel subsystem Vmpp 18.22V | 100W 17V Panel subsystem | 8.2 | 666 | 990 | 625 | 480 | NA | 35 |
| 911401803802 | 105W 17V Panel subsystem Vmpp 18V | 105W 17V Panel subsystem | 8.2 | 666 | 990 | 625 | 480 | NA | 35 |
| 911401803602 | 115W 17V Panel subsystem Vmpp 18V | 115W 17V Panel subsystem | 8.8 | 666 | 1125 | 625 | 580 | NA | 35 |
| 911401803502 | 125W 17V Panel subsystem Vmpp 18.7V | 125W 17V Panel subsystem | 9.5 | 666 | 1195 | 625 | 620 | NA | 35 |
| 911401804002 | 130W 19V Panel subsystem Vmpp 20.16V | 130W 19V Panel subsystem | 9.8 | 666 | 1244 | 625 | 800 | NA | 35 |
| 911401803902 | 155W 17V Panel subsystem Vmpp 18.93V | 155W 17V Panel subsystem | 12.5 | 666 | 1476 | 625 | 902 | NA | 35 |
| 911401804102 | 200W 36V Panel subsystem Vmpp 38.99V | 200W 36V Panel subsystem | 15.5 | 992 | 1318 | 951 | 800 | NA | 35 |
| 911401804302 | 260W 30V Panel subsystem Vmpp 30.72V | 260W 30V Panel subsystem | 18.5 | 992 | 1640 | 942 | 1360 | 860 | 40 |
| 911401804202 | 265W 30V Panel subsystem Vmpp 31.15V | 265W 30V Panel subsystem | 18.5 | 992 | 1640 | 942 | 1360 | 860 | 40 |
| 911401804502 | 310W 36V Panel subsystem Vmpp 37.13V | 310W 36V Panel subsystem | 23.5 | 992 | 1956 | 942 | 1676 | 1176 | 40 |
| 911401804402 | 315W 36V Panel subsystem Vmpp 37.37V | 315W 36V Panel subsystem | 23.5 | 992 | 1956 | 942 | 1676 | 1176 | 40 |
| | | | | | | | | | |

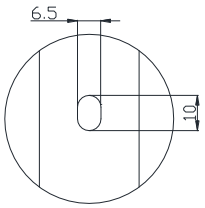
Note:
The description information may be different because of PV technical development.
You should ask Philips professor people to get the newest list.

## A4 Location of Holes on Bracket

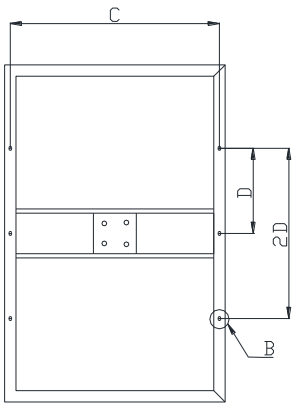
The holes on the bracket (C,D,E) must align with the holes on the panel (c,d,e). Refer to A3. M6 bolts， M6 nuts and D6 spring washers must be anti-corrosion



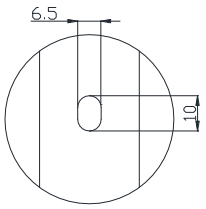

Specification-1
(30W~165W)



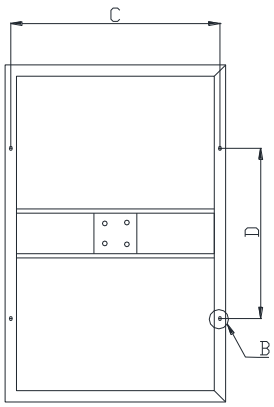

Detail B



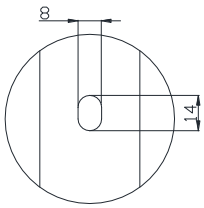

Specification-1
(175W~295W)



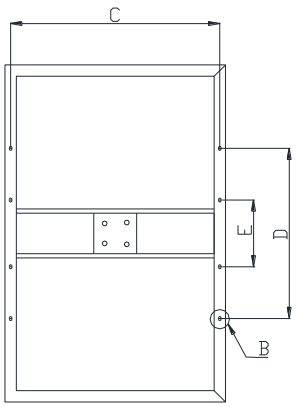

Detail B



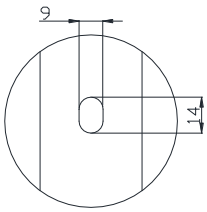

Specification-2
(30W~190W)




Detail B



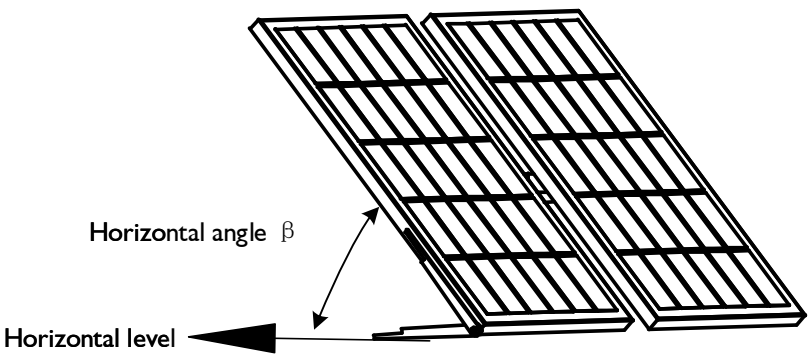

Specification-2
(255W~310W)




Detail B

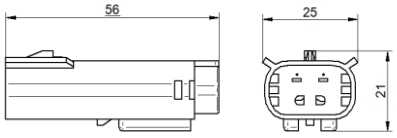
## A5 Panel Bracket Tilt Angle

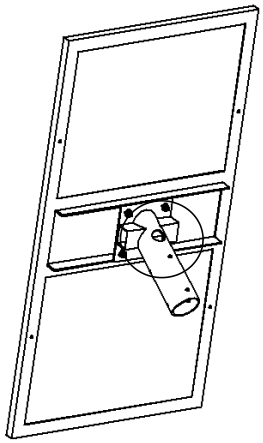
The tilt of the bracket must follow Philips' requirements to ensure the maximum amount of sunlight is gained.



## A6 Cable Entry Requirements on Bracket

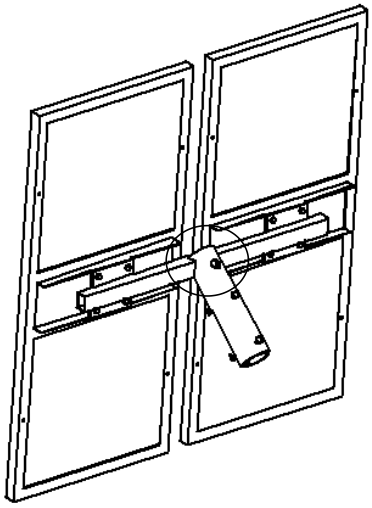
Cable connector size:



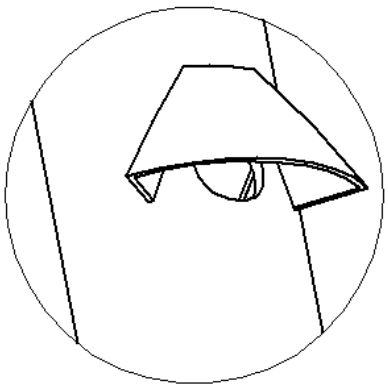



Single PV Panel Bracket

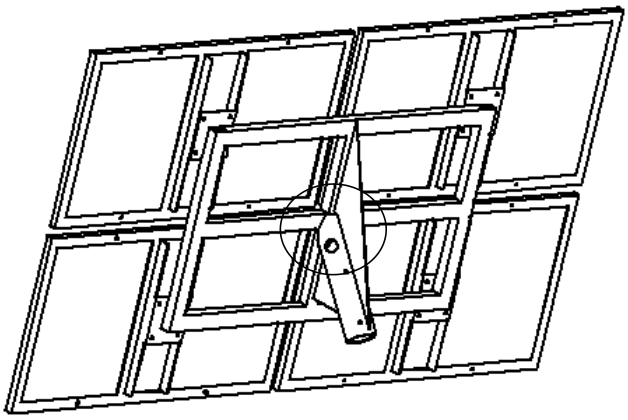
1. The size of cable entry MUST NOT be less than Ø40mm;
2. The bracket must be well grounded with the pole, with a resistance value ≤0.5 Ω;
3. The type of cable entry may vary with bracket design. It must prevent rain water from ingress and allow the cable connector to penetrate through.
4. It is recommended to adopt a cover like below on the hole to avoid rain ingress. Sealing the cable entry hole is prohibited to avoid hydrogen concentrate.



Dual PV Panels Bracket



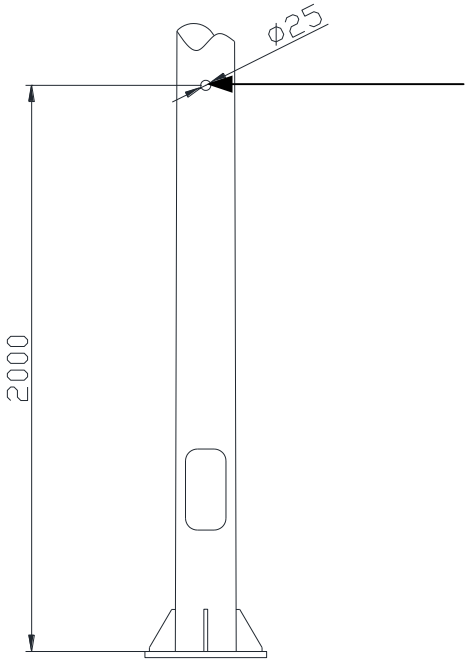
Cover on hole



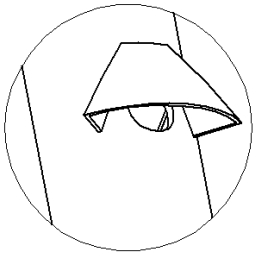
Four PV Panels Bracket

## Ventilation Hole Requirements:

### A7 Ventilation Hole on Pole Requirements

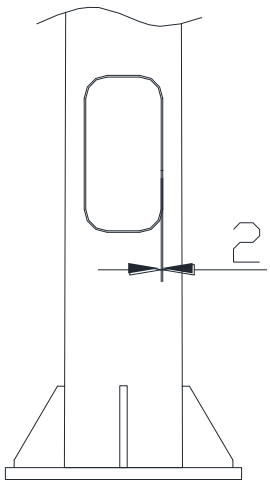



A hole (at least Φ25 mm) must be drilled 2 meters from the bottom of the pole and attached with a cover to avoid rain ingress, as shown in the picture.

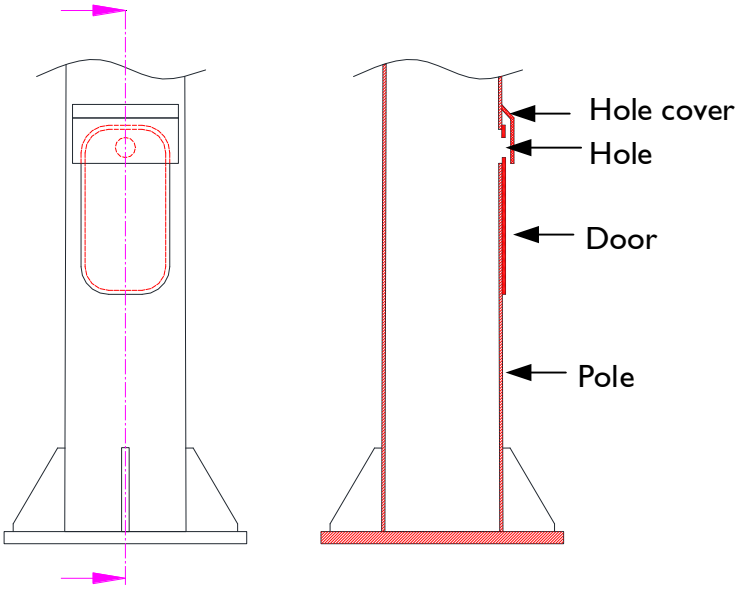


### Ventilation Hole on Service Hatch Requirements:

Option 1. After assembling the door, keep a 2 mm gap between the pole and the service hatch door.

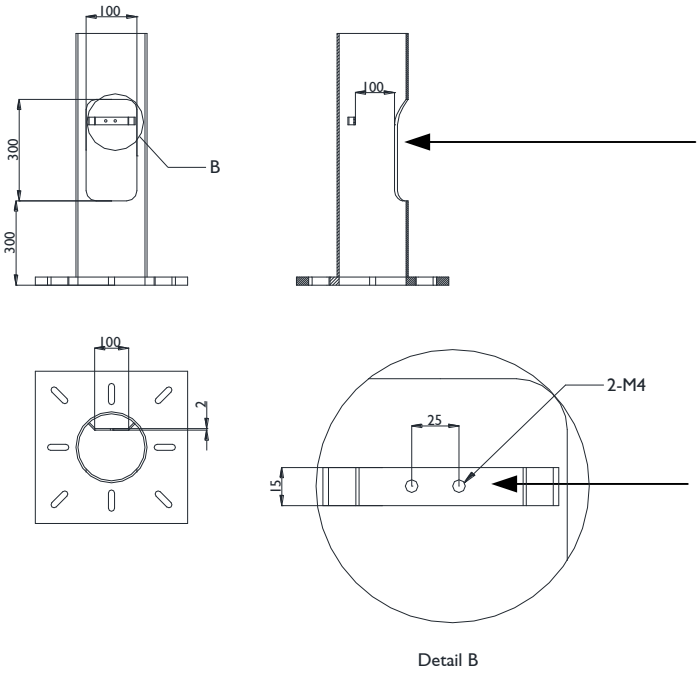



Option 2. Drill a Φ25 hole on the door and attach a cover over it in case of rain ingress.



## Service Hatch Requirements:

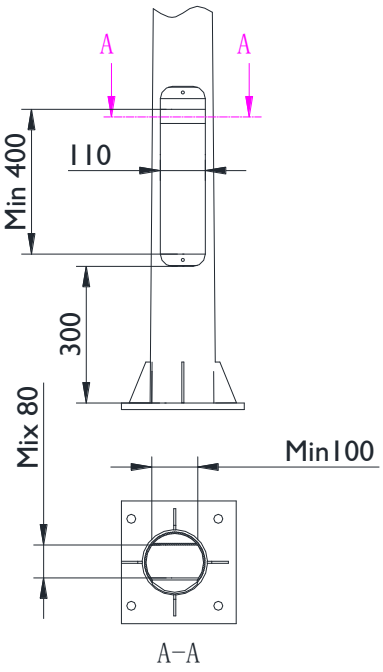
**A8** **Gen3.0 Eco/Gen3.0 Pro**

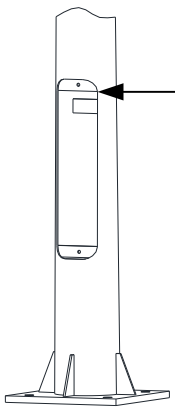



The service hatch must be more than
300mm X 100mm
The service hatch must be located over 300 mm from the ground.The distance between the beam and hatch door should be over 100 mm.

A beam in the service hatch is required with two M4 screw holes drilled into it.

**HCU (Hybrid Controller Unit)**



The beam in the service hatch is required to hang HCU on it.

Note:
The pole must be grounded and connected firmly to the foundation base.

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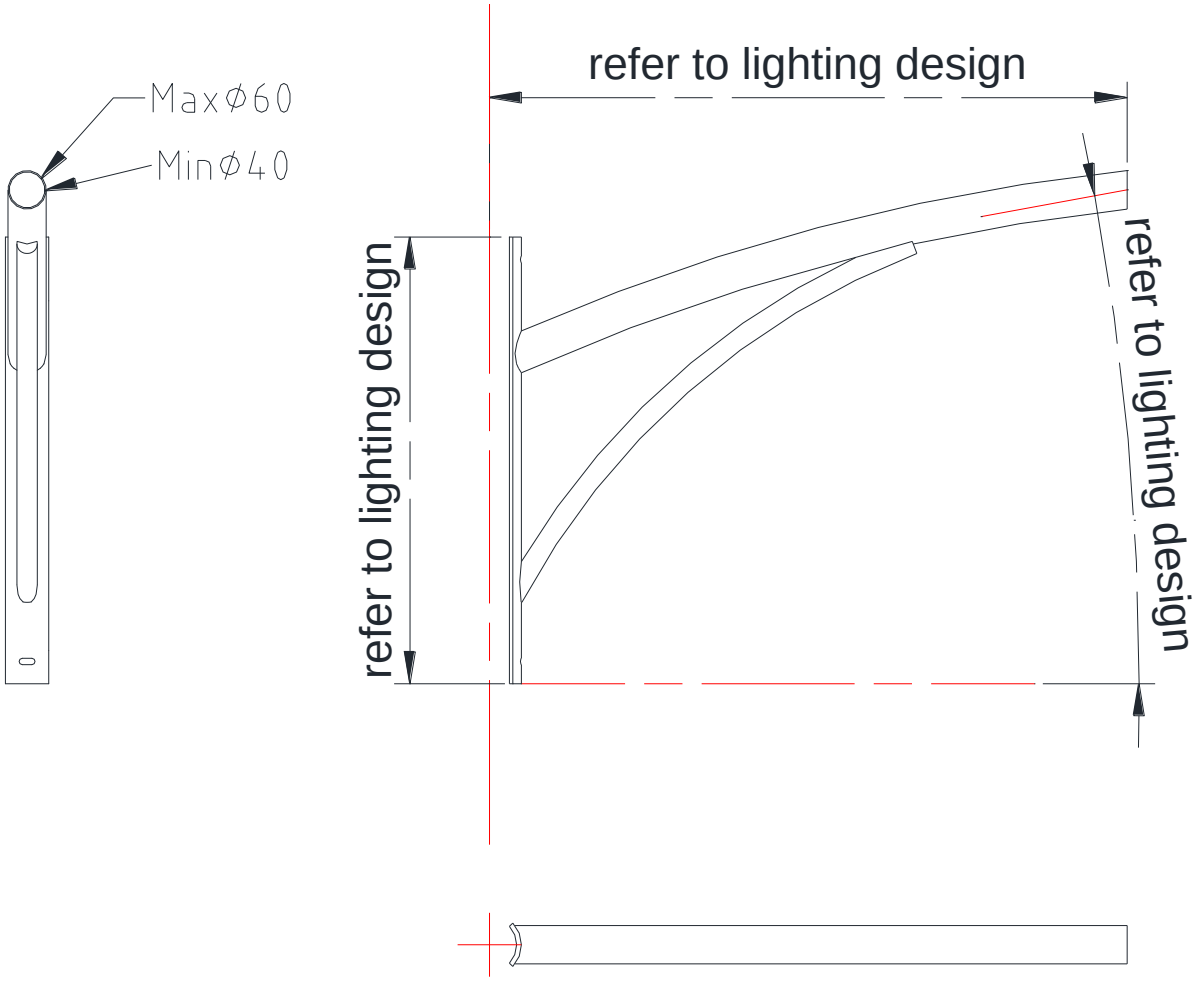
**A9** **Luminaire Arm Requirement**

1.The inner diameter of the arm must be more than **Ø40** mm
2. The outer diameter of the arm must be less than **Ø60** mm

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# Solar LED Road Lighting System

## Check List for Site Installation Preparation

(This checklist must be signed by the subcontractor (installer/constructor) before system handover)

| | | | |
|---|---|---|---|
| **Project Name** | | **Project Location** | |
| **Site Constructor** | | | |

| No. | Item | Ref. | Description | Results | Remarks |
|---|---|---|---|---|---|
| 1 | Panel Position | A1 | The vertical distance from the bracket bottom to lamp arm is more than 800 mm. | ☐ Yes ☐ No | |
| 2 | Bracket Size | A4 | The bracket size & screw hole position align with the panel. | ☐ Yes ☐ No | |
| 3 | Tilt Angle | A5 | The tile angle of the bracket follows Philips' design. | ☐ Yes ☐ No | |
| 4 | Cable Entry Hole | A6 | The size of the cable entry is no less than 40 mm | ☐ Yes ☐ No | |
| 5 | | | A cover is placed on the hole to avoid rain ingress. | ☐ Yes ☐ No | |
| 6 | | | The cable entry hole must not be sealed. | ☐ Yes ☐ No | |
| 7 | Ventilate Hole | A7 | Drill a hole (at least Φ25mm) 2.0m from the ground with a cover. | ☐ Yes ☐ No | |
| 8 | Service Hatch Dimensions | A8 | The serice hatch dimensions must be according to the diagram. | ☐ Yes ☐ No | |
| 9 | Luminaire Arm | A9 | The inner diameter of the arm must be more than Φ40 mm.<br>The outer diameter of the arm must be less than Φ60 mm. | ☐ Yes ☐ No | |
| 10 | Pole and Bracket Strength | | The pole supplier is responsible for the pole strength. The pole design must follow local design standards. | ☐ Yes ☐ No | |
| 11 | Other Accessories | | The quantity of the screws, nuts, and washers is correct. | ☐ Yes ☐ No | |

**Person in charge of site construction**

_____

Signature/Date

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