Equipment Type	**Quantum:EV and Quantum Marina Pedestals**
Model Numbers	All Models
Severity	N/A
Document Code	RTU-EV-011
Date of Issue	June 2022

Upgrade Quantum Lighting with GX53 LED Kit

This document describes the procedure to remove and replace the 8 or 10 LED amenity lighting bar and LED driver/PSU (power supply unit) and install a single, self-contained GX53 style LED bulb.

WARNING: Electrical Power
Make sure electrical power to the charger is OFF before starting work.

IMPORTANT: Read and understand the content of this document before performing any work.

- Work must **only** be performed by someone who is competent to do so in accordance with the current legislation in force in the geographical location of the installation.
- Rolec Services Ltd cannot accept any responsibility for issues arising from improper work.

CAUTION: Equipment Damage

Do NOT use power tools to remove/install panel fixings.

Power tools can damage the fixings, making the panel difficult to remove.

Use hand tools ONLY and do not overtighten fasteners.

NOTE: The displayed colour temperature of the GX53 bulb may not be exactly the same as the LEDs it replaces. Differences between manufacturers and age of existing LEDs can influence the light's appearance.

About GX53 Bulbs

GX53 is the designation of a standard 'off-the-shelf' lighting product and is available in a number of different wattages, colour temperatures (such as cool white and warm white), and even as defined colours such as red, blue and green.

GX53 bulbs comes with their own built-in driver/PSU meaning that the socket can connect directly to a mains supply and should the bulb fail to light correctly there is no dilemma of whether it is the LED or the driver that needs to be replaced.

Instead, the whole bulb is replaced, and illumination should be restored far more easily and at a much lower cost than that of separate drivers and LEDs.

Procedure

The GX53 upgrade removes the LED driver from the body of the enclosure and replaces the 10 x individual LEDs from the lighting head with the GX53 LED bulb, and bulb holder.

To perform this upgrade, access to the pedestal's electrical components will be required and the lighting head will need to be removed.

Kit Contents

ACLG0510 Quantum Lighting Upgrade Kit: 1x GX53 9W 4000K LED

Part Number	Quantity	Component
ACLG0410	1	GX53 LED Bulb
ACLG0420	1	GX53 Bulb Holder (Base)
EFS1039	4	Screw M2.5 x 16
VMP1100	2	Auto Bullet Red MALE 4mm
VMP1101	2	Auto Bullet Red FEMALE 4mm
LAB3614	1	PVC Plate (Spacer)

Remove the LED Mounting Bracket and LED Lights

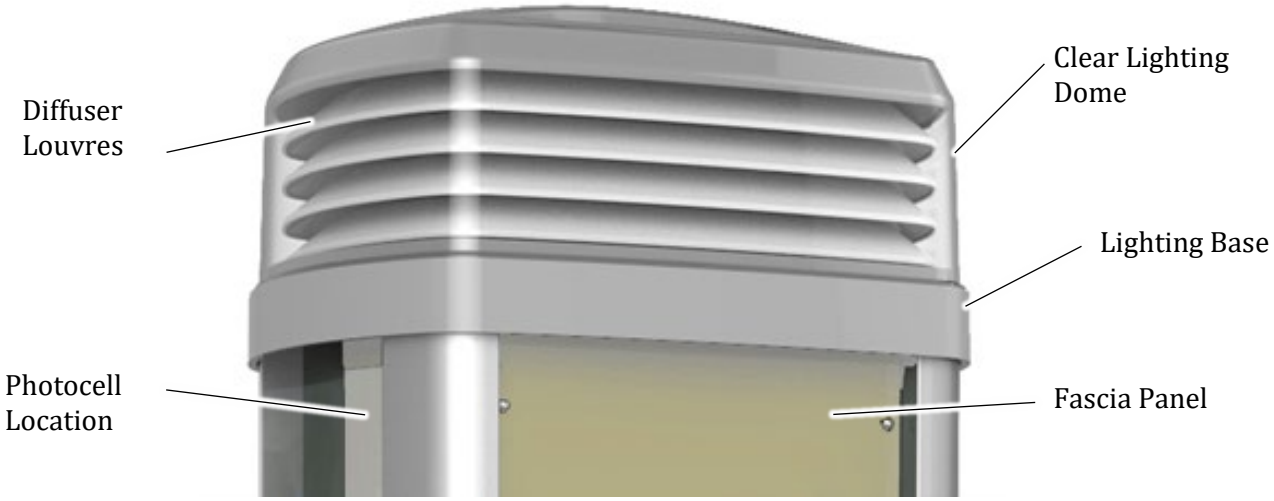

Figure 1 Typical Quantum Lighting Head

1. Remove and retain the fixings that secure the front fascia panel to the pedestal chassis.
2. Carefully ease the panel away from the unit to gain access to the interior.

CAUTION: **Equipment Damage**

Fascia panels may be connected to the main assembly by electrical cables. Take care not to damage, strain, or disconnect the cables. Make sure all connections are secure before refitting the panel(s).

3. Inside the pedestal, locate and remove 2 x 5 mm hex bolts and washers that secure the clear lighting dome to the lighting base.
    - Take care to not drop the bolts and washers when they are released from the dome.

Figure 2 Dome Bolts

NOTE: Fig 2. also shows the LED lighting PSU/driver below the dome base. In some models of Quantum pedestal, the PSU/driver is located next to the LED light unit, inside the clear dome.

4. Carefully lift the dome from the pedestal and place it to one side.
    - The louvered light diffuser will remain attached to the dome.
5. Remove 2x 4 mm hex bolts from the top of the LED lighting bar.
6. Carefully lift the lighting bar off the supporting pillars below it.
    - A number of wires may be found under the lighting bar.

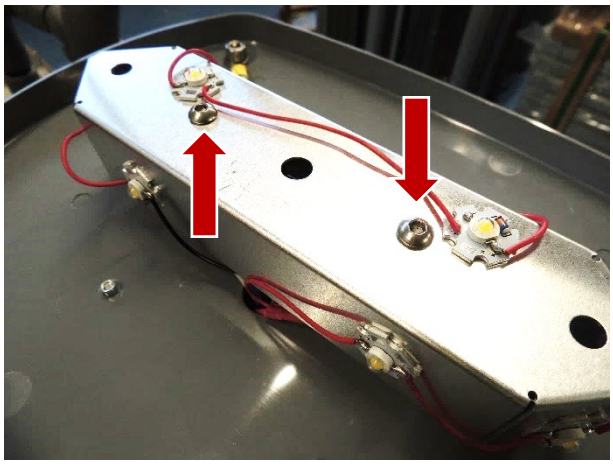

Figure 3 LED Light Unit

7. Remove 2 x metal support pillars from the lighting base.
8. The process now moves inside the pedestal enclosure.

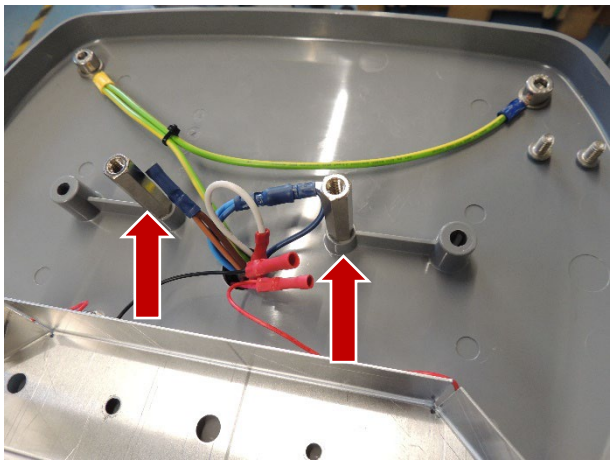

Figure 4 Support Pillars

Remove the LED PSU/Driver

NOTE: In some models of Quantum pedestal, the LED PSU/driver is located next to the LED light unit, inside the clear dome.

These instructions show the PSU/driver in its normal location on the underside of the lighting head, but the process is very similar.

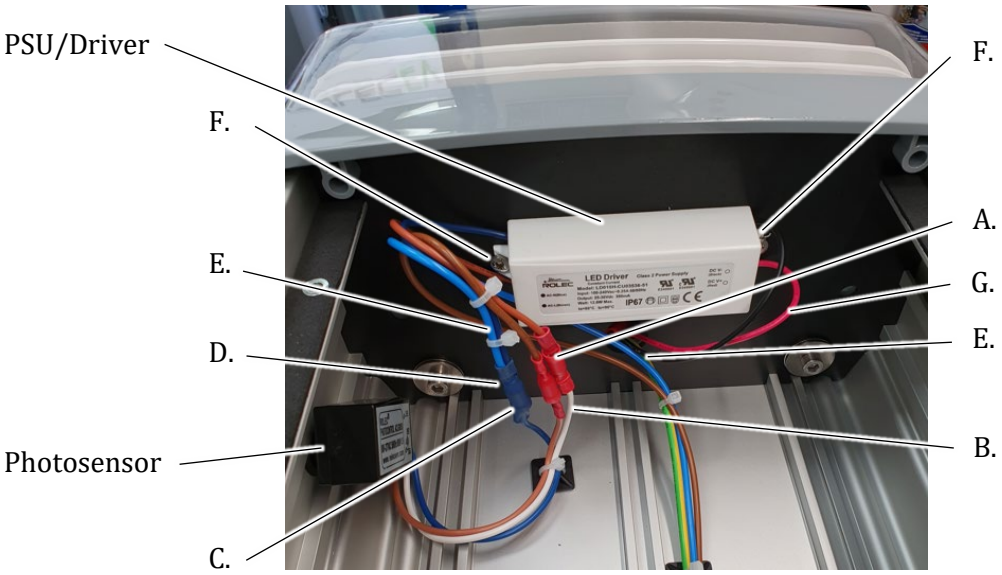

Figure 5 Typical Quantum Marina Pedestal

1. Disconnect the **brown** PSU/driver wire (A) from the **white** photosensor wire (B).
2. Disconnect the **blue** photosensor wire (C) from the twin **blue** PSU/driver and pedestal wire (D).
3. Remove the connector from the end of the twin **blue** wires (D) and separate the twin wires.
4. Crimp a bullet connector socket to the **blue** wires (E and C) coming from the pedestal.
    - This will place the two wires into the same connector.
5. Remove the 2 x screws (F) securing the PSU/driver to the underside of the lighting head.
6. Disconnect the **red** and **black** LED PSU/driver wires (G) from the LED lighting bar.
    - The wires of the PSU/driver may be connected to the lighting bar with 'bullet' connectors, or they may be permanently crimped together.
7. Pull the PSU/driver away from the underside of the lighting head.
    - The PSU/driver may also be stuck to the lighting head with adhesive.
8. With all required disconnections complete, the lighting bar and the PSU/driver can be removed from the pedestal.

NOTE: Wires **B**, **C** and **E** will be used to connect to the new LED later in the procedure.

Install the GX53 Upgrade LED System

1. Place the spacer onto the base and orientate it as shown opposite.
2. Use the spacer as a guide to drill 4x 1.5mm holes in the lighting base.
    - It may be possible that the screws will self-tap and not need a pilot hole but this is done at your own risk.
3. Place the bulb holder onto the base of the lighting unit and orientated it so that it fits neatly along the centre line of the base.
4. Feed the white cable from the bulb holder through the hole in the base.
5. Secure the bulb holder and spacer to the base with 4x 2.5mm screws.
6. Place the new GX53 LED bulb into the bulb holder then turn the bulb clockwise to lock it in place.

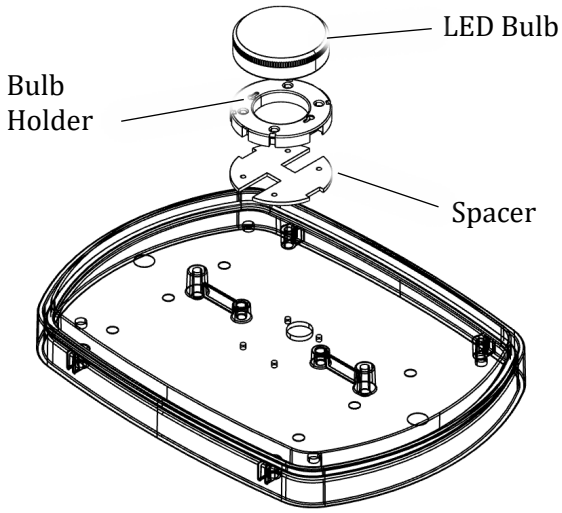

Figure 6 Main LED Components

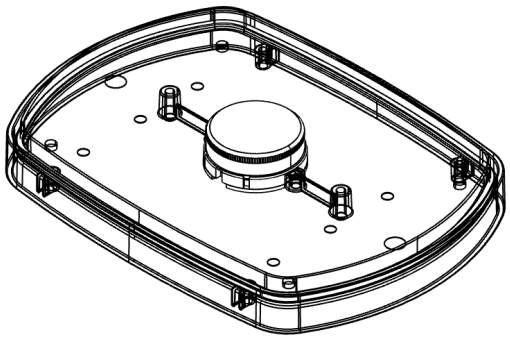

Figure 7 LED Components Installed

7. Using the supplied bullet connectors crimped onto the appropriate wires:
    - Attach the **brown** LED wire to the **white** photosensor wire.
    - Attach the **blue** LED wire AND the **blue** photosensor wire to the **blue** wire coming from the pedestal.
8. Place the clear dome onto the pedestal.
9. Make sure the bottom edge of the lighting dome sits on the rubber seal of the lighting base.
10. Refit and tighten the 2x 5 mm hex bolts and washers to secure the lighting dome to the lighting base.
11. Make sure all accessible cable connections within the enclosure are secure and have not become loose or detached during the previous steps.
12. Refit and secure the front fascia panel using the fixing removed at the start of the process,
13. Apply electrical power to the pedestal.

END OF PROCEDURE