MTR Kai Tak Station- Light Design Proposal

Proposal 1- Panel Light 100mm

100mm light panel installed inside the light trough for replacement. Please check attached product datasheet and hand draft drawing of mounting modification.

1. Performance of new vs old (life, lux)

a. In life time, light panel are better than LED AC tube.
b. The lux level of light panel is higher than that of LED AC tube, since the lumen output of light panel is around 2995lm and LED AC Tube is around 2100lm.

2. Approximate quantity to be replaced (FoH and BoH)

a. FoH - 460 sets LED light tube fittings.
b. BoH - 234 sets fluorescent light tube fitting
- 112 sets fluorescent waterproof light tube fittings.

3. Any specific maintenance requirement?

a. There is a custom-made mounting bracket. Cannot source it in the market easily.
b. LiPHY driver is unique & need T&C after replacement.

4. Install fitting + tube .

The installation work flow of the new proposal is shown below.

I. Remove the tube and tube lamp holder.
II. Install custom-made mounting brackets.

- Pros of custom-made mounting brackets.

  - Will not change or damage existing ceiling system.
  - Save installation time.

III. Mount and fix the light panel on mounting brackets.

5. Spare part cost (each tube / tube + fitting) for maintenance planning

a. The unit cost of light panel selling to MTR is around HKD$1,100 per set without LiPHY driver.
b. The unit cost of custom-made mounting brackets selling to MTR is around HKD$500 per pair.

6. Availability of spare part in the future (proprietary I assume so we can only buy the light from this specific supplier?)

A. The light source is used ZHAGA standard LED modules. It is standard to unite the dimension and mounting method of LED modules. Therefore, light source could be purchased by OSRAM / Philips etc.

B. The ballast is standard constant current power supply, which could be purchased by OSRAM / Philips etc

Proposal 2 - Change the light tube to light panel in Kai Tek Station.

Replacing the current LED tube with LIGHT Panel of dimension 300mm * 1200 mm. Please check attached product datasheet and hand draft drawing of mounting modification.

1. **The suggestion of fixing methods of light panels with some sketch drawings.**

Introduced opening at the top of the reflector and have the helicoid screw mounted onto the ceiling hanger system.

Proposal 3 – DC light Tubes + Diffuser

Replacing the current LED tube with DC light tube and Diffuser. Please check attached product datasheet and hand draft drawing of mounting modification.

1. Replacement procedures.

i. Replace existing AC LED tubes to DC LED tubes.
ii. Adding power supply and LiPhy Driver.
iii. Mount the diffuser.

2. The suggestion of fixing methods.

Introduced opening at the top of the reflector and have the helicoid screw mounted onto the ceiling hanger system.

3. Performance of new vs old (life, lux)

- In life time, LED DC tube and its ballast are better than LED AC tube.
- After mounting the diffuser, the lux level might drop around 30%. Provide proposal and details to you on next week.

4. Cons with the proposal

- Cannot meet MTR lux level requirements, since lux level might drop around 30% after adding the PC diffuser.
- It is difficult for mounting and fixing the diffuser.