PRODUCT OVERVIEW

360° LED Tube Lights

Practical electrical and connection reference for solid-colour and RGBW suspended installations.

LED OPERATING VOLTAGE	RGBW RATED POWER	AVAILABLE DRIVER
24V DC	18W / metre	400W / 17A

01 / HOW THE SYSTEM WORKS

360° LED tubes operate on 24V DC. The installation uses a suitable 24V power supply; RGBW installations also use a compatible colour controller. Customers may use their own regulated 24V DC power supply, provided the output capacity, polarity and connections suit the full installation.

Power connection: Connect the building AC supply to the suitable LED power supply. Connect the tubes only to the 24V DC side, never directly to mains electricity.

02 / EXAMPLE 400W POWER SUPPLY - MANUFACTURER SPECIFICATION

AC input	**110V / 220V, ±20%**
DC output	**24V DC (supplier notation: +10%)**
Rated output	**17A / 400W**
Operating efficiency	**86%**
Cooling	**Fan cooled**
Dimensions	**215 x 115 x 50 mm**
Electrical protection	**Overload / overvoltage / short circuit**
Ambient operating range	**-20°C to +80°C (supplier stated)**

CERTIFICATION OPTIONS

Certification options and supporting documentation are available on request for the selected configuration.

CONNECTION METHODS

Power & Tube Connections

Simple system layouts for fixed-colour and RGBW models. Select appropriate connectors, control gear and distribution cabling.

01 / SOLID-COLOUR INSTALLATION



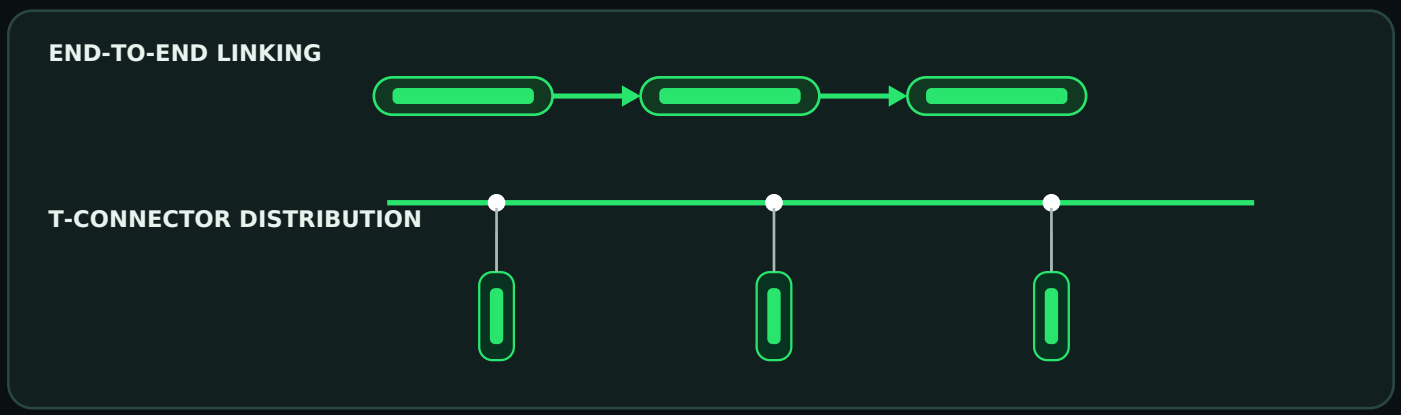
Solid-colour tubes use 24V DC power through a correctly sized supply and compatible links. The overall tube quantity depends on the driver output and the rated cables/connectors.

02 / RGBW COLOUR-CHANGING INSTALLATION



The standard RGBW system controls the connected lights together for colour selection, dimming and programmed colour changes. Individually addressable tube effects require an appropriate alternative controller/system.

03 / PHYSICAL TUBE LINKING OPTIONS



Use manufacturer-compatible connectors and follow the input/output markings on the components. End-to-end linking and T-branch distribution are physical wiring arrangements, not permission to exceed circuit ratings.

SIZING AND PLANNING

Power Supply Capacity

Calculate power demand from tube length and quantity before grouping lights onto supplies and controllers.

RGBW POWER CALCULATION

Tube quantity × tube length (m) × 18W

Example: 20 × 1m × 18W = 360W

01 / RGBW EXAMPLES

TUBE SETUP	TOTAL LOAD	400W DRIVERS
8 × 50cm RGBW	**72W**	**1**
16 × 1m RGBW	**288W**	**1**
20 × 1m RGBW	**360W**	**1**
32 × 1m RGBW	**576W**	**2**
48 × 1m RGBW	**864W**	**3**

Manufacturer example: with 18W tubes, a 400W supply has a mathematical maximum of 22 × 1m tubes. The supplier recommends 20 × 1m tubes per 400W supply (360W connected load) instead of operating at the full nameplate rating.

Using your own power supply? That is supported. Choose a regulated 24V DC supply with sufficient continuous output and the correct protection, polarity and compatible cables/connectors. Match the RGBW controller rating to the connected load.

02 / SYSTEM EXPANSION

More tubes can be added later where the available supply capacity, controller capacity and connection hardware allow. For a larger installation, divide the tubes into suitable powered groups and arrange any required controller synchronisation.

FITTING AND OPERATION

Installation Overview

A straightforward sequence for planning, fitting and testing suspended 360° LED tubes in a commercial gym.

01 / SUSPENDED INSTALLATION

- **Plan the layout**
  Mark out the intended locations, hanging heights and clearances above training equipment and walkways.
- **Mount the suspension hardware**
  Fix rated suspension fittings to a suitable structural support. Route cables clear of sharp steel edges and moving equipment.
- **Position the power supplies**
  Install the selected 24V DC power supplies in accessible, ventilated locations; fan-cooled drivers need airflow.
- **Connect the lighting system**
  A qualified electrician connects the mains feeds to the power supplies, then makes the compatible 24V connections to the tubes and any RGBW controllers.
- **Power up and test**
  Test the lights in manageable groups; check brightness, colour selection, dimming and any controller modes.

02 / QUICK OPERATING NOTES

RGBW lighting: Use the supplied compatible controller/remote to change colours and adjust brightness. Standard controller groups operate together.

Fixed-colour lighting: Tubes emit the ordered colour. Dimming, where required, needs suitable dimming hardware.

Maintenance: Isolate power before cleaning or servicing. Keep power supplies ventilated and inspect cables and suspension fittings periodically.

PRIME GYM TURF | INSTALLATION SUPPORT

Installation reference for qualified electricians. Follow the ratings of the supplied equipment and applicable local electrical regulations.