



LED Troubleshooting Guidelines

Summary:

This document provides a step-by-step instruction for identifying causes to simple fixture integration issues and the corrective action to help solve them.



Introduction

This guide is designed specifically for installation personnel to use while putting together new fixtures. It will help in identifying the root cause of faults.

Troubleshooting LED modules

Fault	Potential causes	Corrective action
Entire Fixture does not light up	No Input Voltage/Power	Check AC connection to Power supply, Check Electrical service panel
	Power supply failure	Check power supply
	Loose wiring	Check power supply connection to LED modules
	No power to LED modules	Check for polarity. Power supply red output wire must be connected to +ve of the module and power supply blue output wire must be connected to –ve of the module.
One or more Modules in a fixture does not light up	No power to module, incorrect Polarity	Check module to module connection for correct polarity
	Module has been damaged	Check continuity
Fixture does not dim / is too dim	Dimmer not compatible	Check dimmer compatibility with power supply
	Incorrect Dimmer connection	Check Dimmer connections to the power supply. Confirm Dimmer manufacturers proper wiring
	Crossed violet/gray (0-10V) wiring	Check wiring diagram and ensure wiring colors match (note: dimming wire and terminal color must match)
Module Flicker during Dimming	Dimmer overload	Check Dimmer rating for max power and current
	Dimmer not compatible	Check dimmer compatibility with power supply
One end of fixture brighter than the other	Voltage drop on module	Check for maximum number of boards that can be connected in series. Information available on PIB

Fixture less bright than estimated	Power supply thermal fold-back	Check if Power supply thermal fold back has been activated
CCT inconsistency	LED board CCT mismatch	<p>Check CCT on the label provided on each LED board</p> <p>Visually inspect LED chip color on the board to determine the CCT difference. (dark yellow -> lower CCT, becomes lighter as CCT increases)</p> <p>Visually ensure all LED boards have consistent CCT when powered up.</p> <p>If the problem still persists, contact manufacturer.</p>

Troubleshooting Driver Hardware

Fault	Potential causes	Corrective action
Fixture fails to turn on	Loose wiring	Ensure that all wires are secured properly in the terminal blocks.
	Damaged cables	Check for damages and replace them.
	Incorrect wiring on input side	Line (black) and neutral (white) cables should be connected to their corresponding terminal blocks.
	Incorrect wiring on output side	LED + should connect to the + terminal block on the module and LED – should connect to the – terminal block.
	Compatibility of LED driver and module	Check if the correct module has been used in the fixture. Using an over rated module can lead to driver shutdown at turn on.
The fixture is either too bright or too dim.	Incorrect programmed output current	Use the OT programming kit to program the appropriate current for each driver. For instructions, please use the OT programming guide.
	Purple and gray wires crossed over	Check wiring diagram and ensure wiring colors match (note: dimming wire and terminal color must match)
Fixture is dim when starts but then brightens up	Thermal fold back	Check if power supply thermal fold back has been activated.



Fixture does not dim	Dimmer not compatible	Check manufacturer's guide.
	Incorrect wiring to dimmer	Check and correct as needed.
Flickering	Dimmer not compatible	Check manufacturer's guide.
	LED module may be incorrect	An incorrect module can lead to the driver going out of its operating conditions. Ensure they are compatible.