

T-Light™ LCU Galaxy Light Control Unit

The **T-Light LCU Galaxy**, or luminaire control unit, is a principal component of the T-Light Galaxy point-to-multipoint wide area star system. It is easily installed inside the luminaire (LCU Internal); or externally (LCU External), utilizing either a standard (twist and lock) NEMA socket, or conduit configuration. **T-Light LCU Galaxy** is a principal component of the **T-Light** street light control network. The LCU controls its LED driver or electronic ballast to provide On/Off and dimming functionality. The LCU provides various comprehensive energy measurements, luminaire parameters and maintenance statuses.

The LCUs receive commands individually or as a group from the Data Communication Unit (DCU) gateway; commands can be changed as and when needed. The T-Light network is easily controlled either automatically through the web-accessed **T-Light CMS** system (or a 3rd party management software).

The **T-Light LCU** can be configured to offer repeater functionality in addition to controlling the luminaire. The repeater is used either to extend the communication range of the base station or to facilitate reliable communications with dead zones within the operating radius of the T-Light Galaxy system.



LCU Internal



LCU External

Reports

- Reports of events related to exceeding established parameter limits
- Aggregate energy and active power consumption
- Burning hours
- Number of On/Off cycles
- Failure reports
- Various luminaire dynamic parameters such as: instantaneous levels of ambient light, power consumption, voltage, current, power factor, temperature.

Functional Specifications

- On/Off and dimming functionality using automatic DALI/0-10 volt selection
- Luminaire power consumption measurement to 1% accuracy
- Analog and digital input for interfacing with external sensors
- Auto-commissioning with GPS or NFC chip
- Internal or external configurations
- Highly secure wireless communication utilizing AES-128 or AES-256
- Two types of external configuration enclosures - NEMA: ANSI C136.41, 7pin; or conduit configuration
- Dual backup protection – autonomous operation based on a pre-programmed scenario; built in light sensor (in external configuration), no dayburn
- Supports over the air firmware upgrade
- Data and settings preserved in case of power failure
- LCU stores history of measured parameters for at least a week to allow for data extraction
- Dual functionalit controls the luminaire and operates as a repeater
- MTBF > 1,000,000 hours
- Controlled Auxiliary Output (optional)

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Technical Characteristics

Remote continuous and gradual dimming from 0-100%

Ballast Communication Protocols:	DALI or 0-10V
Input Voltage:	90 - 305V AC @50-60Hz
Load Current:	10A
Surge Protection:	350J (10kA)
Operating Temperature:	-40°C to +72°C
Safety:	IEC60950-1:2005
Isolation:	3kVac/5mA/5Sec

Mechanical Characteristics

LCU Internal configuration:	165 x 55 x 32mm
LCU External configuration:	Ø 89 x 108mm
Protection: LCU internal	IP66
LCU external	IP66

Rf Characteristics T-Light™ Galaxy

Frequency:	400-470 MHz - License band
Bandwidth:	6.25kHz
Data Rate:	4.8kbps
Output Transmit Power:	Up to +36dBm / 4Watt max
Part 90.210 Certification (Spectrum Mask E)	
Compliance with FCC PART 90	
Compliance with ETSI EN 300-113-2	
Range: Up to 20km (depending on environmental conditions)	
Can be extended using Repeaters	

Installation

The LCU Internal is easily installed inside the light fixture or light column, next to the light unit ballast or LED driver.

The LCU External is easily installed on top of the lighting fixture utilizing a NEMA socket or conduit configuration.

T-Light Galaxy System Architecture



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