

T-Light™ SMART LIGHTING SYSTEM



T-Light™ LCU Light Control Unit

T-Light™ LCU is a luminaire control unit, 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** 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 Control 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).

Depending on the optimal topology chosen for an environment, one of two LCU wireless models may be used: the T-Light™ Pro mesh system; or the T-Light™ Galaxy point-to-multipoint wide area star system.

FUNCTIONAL SPECIFICATIONS

- Controls LED/HID luminaire to provide On/Off and dimming functionality using DALI or 0-10V and built in On/Off switch
- Luminaire power consumption measurement to 1% accuracy
- Analogue and digital input for interfacing with external sensors
- Internal or external enclosures
- Two types of Internal or external configurations enclosures- NEMA: ANSI C136.41, 7pin; or conduit wiring
- 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
- Data acquired and stored in unit even during communication loss
- LCU stores history of measured parameters for at least a week to allow for data extraction

- MTBF of over one million hours
- GPS receiver or NFC chip for autonomous registration and commissioning
- Controlled Auxiliary Output (optional)

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



LCU Internal



LCU External

T-Light™ LCU

Light Control Unit

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:	3A (higher load current is optional)
Surge Protection:	10kA
Operating Temperature:	-40°C to +72°C
Safety:	IEC60950-1:2005
Isolation:	3.75kV

RF CHARACTERISTICS T-Light™ PRO

"Under the cover" antenna option

Frequency:	868-869.5 MHz – EU ISM band 902-928 MHz – US ISM band
Data rate:	80-110 kbps
Output Transmit Power:	Up to +27dBm / 500 mW max
Compliance with FCC CFR47 PART 15	
Compliance with ETSI EN 300 220-1	
Range between the LCUs:	From hundreds of meters up to 2km (depending on environmental conditions)

RF CHARACTERISTICS T-Light™ GALAXY

Frequency:	450-470 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 PATT 90	
Compliance with ETSI EN 300-113-2	
Range:	Up to 20 km (depending on environmental conditions) Can be extended using Repeaters

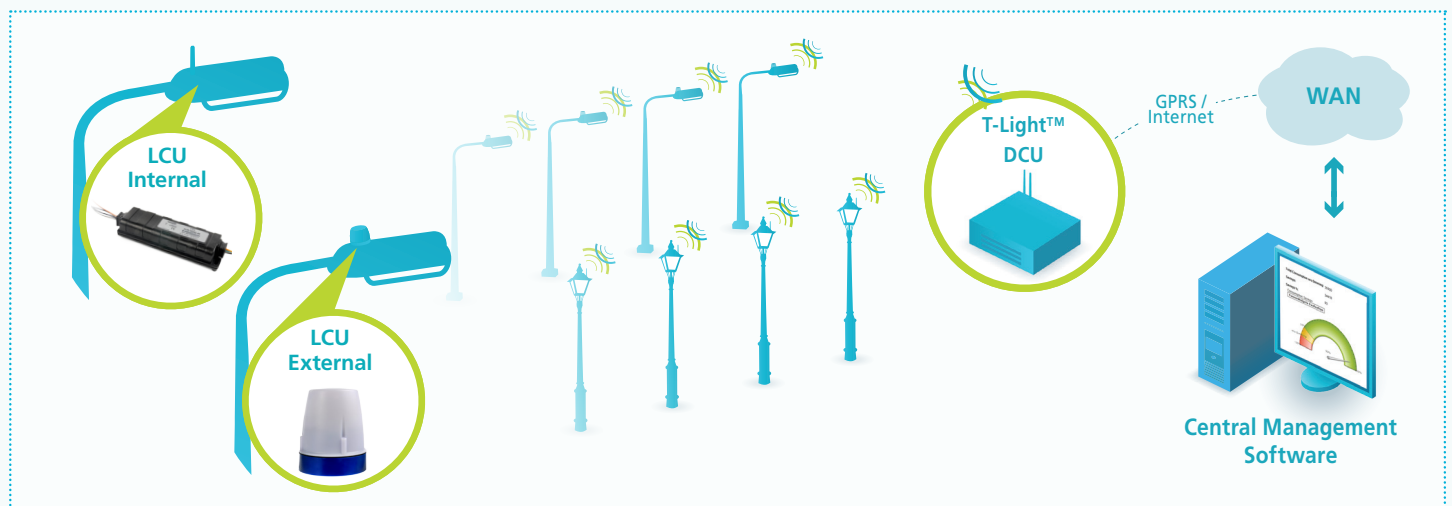
MECHANICAL CHARACTERISTICS

LCU Internal configuration:	165 x 55 x 32mm
LCU External configuration:	Ø 89 x 108mm
Protection: LCU internal	IP65
LCU external	IP66

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™ SYSTEM ARCHITECTURE



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* Specifications subject to change without prior notice



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