



LED Panel and Dimmer Switch

Network-Managed LED Panel

Network-Managed Dimmer Switch for Local Control of LED Panel

Remote Control by UniFi LED Controller and UniFi LED App



Network-Managed Lighting

Ubiquiti Networks introduces the UniFi® LED product family. Targeted for businesses of all sizes, UniFi LED is designed to blend seamlessly into existing deployments of UniFi network systems.

Launching the UniFi LED line are the UniFi LED Panel and UniFi Dimmer Switch. Offering the ultimate in lighting efficiency and convenience, the UniFi LED Panel fits into a standard T-grid dropped ceiling and runs on 802.3at PoE+ (model ULED-AT) or AC power (model ULED-AC).

The UniFi LED panel can be controlled in three ways:

- **UniFi Dimmer Switch** Uses 802.3af PoE (model UDIM-AT) or AC power (model UDIM-AC) and lets you directly control one or multiple LED Panels. You can switch panels on/off or adjust their brightness (10-100%).
- **UniFi LED Controller Software (Beta)** Browser-based interface, hosted on a UniFi Cloud Key Gen2 Plus or Ubuntu device, lets you easily manage your LED devices.
- **UniFi LED App** Mobile app (iOS or Android™) allows remote configuration via an AP connected to the LAN or to the LED Controller.

Advantages

Network Manageable The UniFi LED Panel integrates seamlessly into your enterprise network, for complete control of your lighting system from a single point. For management, the ULED-AT uses wired Ethernet, while the ULED-AC uses either Wi-Fi or wired Ethernet.

Safe, Economical Installation The UniFi ULED-AT uses low-voltage DC power (PoE+), so it is safer to install than AC-powered lighting, and does not need separate power cables, so you save on labor and cable costs.

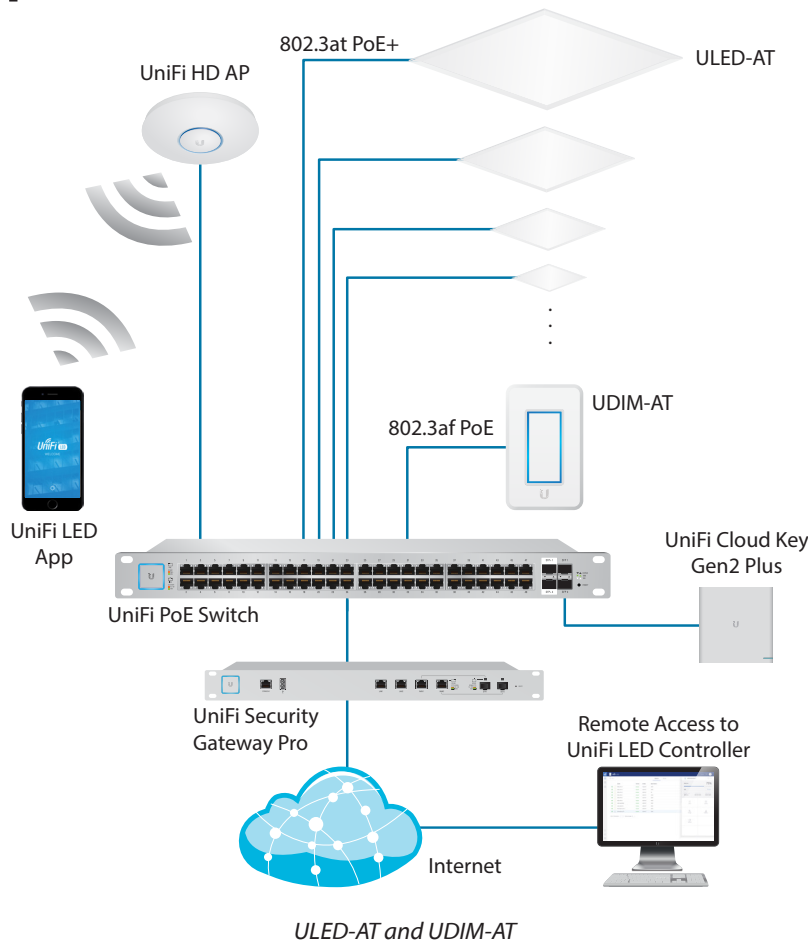
Use Existing AC Wiring The UniFi ULED-AC uses AC power, so that existing wiring can be used. Panels can be daisy-chained together for maximum efficiency.

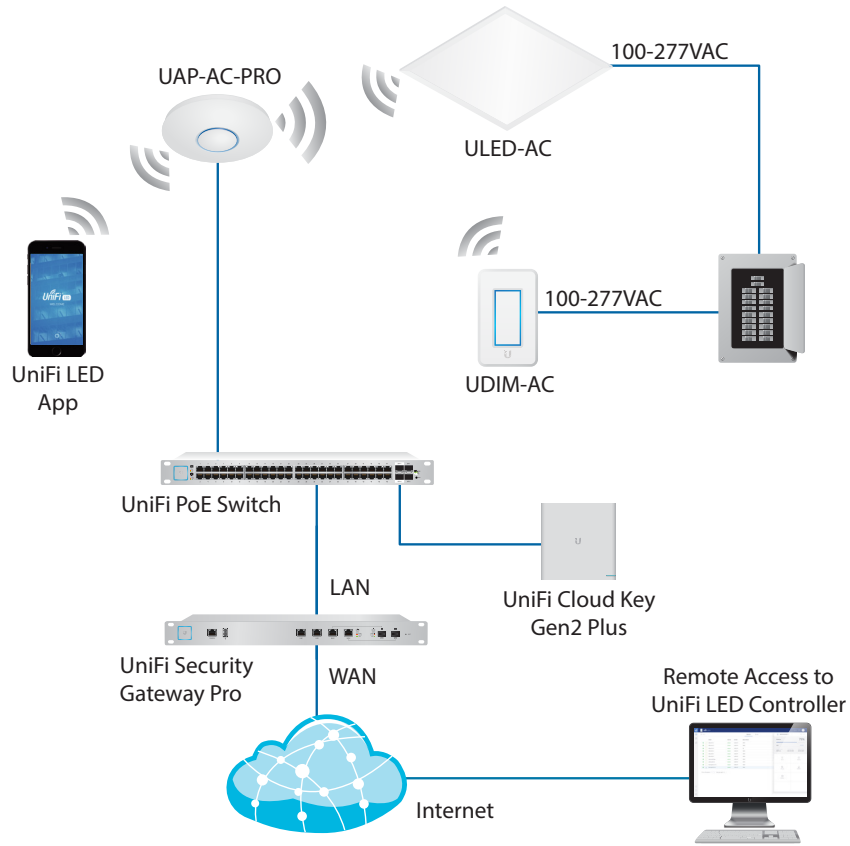
Save Energy With 100 lm/W efficacy, each UniFi LED Panel produces light more efficiently and for less money than T8 fluorescent lighting, as detailed in [“Cost Savings Example”](#) on page 6.

Control Flexibility The UniFi LED Panel can be controlled remotely using the UniFi LED Controller or UniFi LED app, or locally using the UniFi Dimmer Switch.

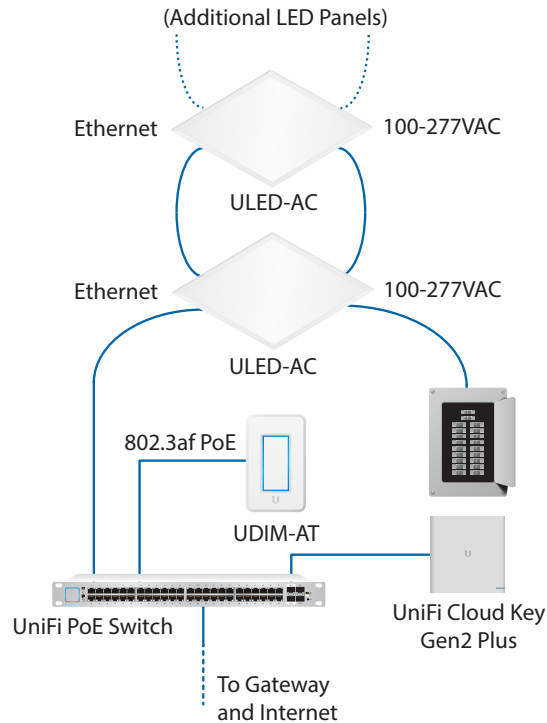
Save on Maintenance Long-lasting LEDs (50,000+ hrs) and one LED panel versus three tubes per fixture mean less time spent changing lights, saving both time and money.

System Examples





ULED-AC and UDIM-AC - Wireless Configuration



ULED-AC and UDIM-AT - Wired Configuration with Daisy Chaining

UniFi LED Controller

Packed with Features

Use the UniFi LED Controller to discover UniFi LED Panels and Dimmer Switches, control LED Panels, display device status and statistics, create and manage groups, and create and configure lighting schedules.

Device Discovery

The UniFi LED Controller automatically detects all UniFi LED Panels and Dimmer Switches that are installed on the network.

Single Point of Control

One admin can directly control your entire lighting system: turn a panel on or off, locate a panel, reboot a panel or reset it to its factory defaults, or adjust a panel's power level.

Device Status and Statistics

The UniFi LED Controller displays device status, including device name and model, MAC address, IP address, uptime, and power level. You can also view statistics that include a graphical display of power usage for the last day, month, or year.

Lighting Groups

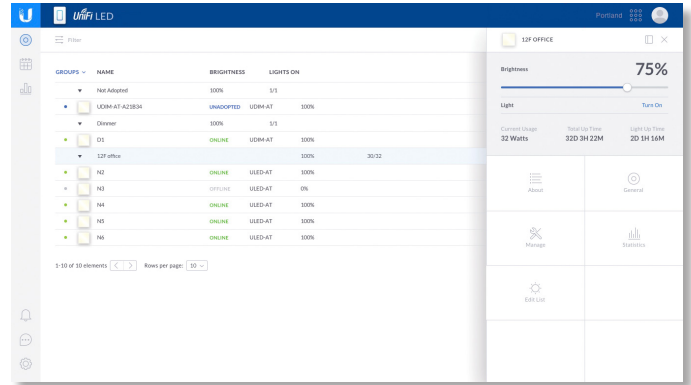
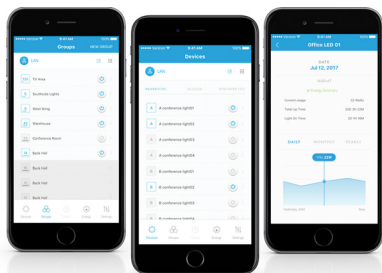
The UniFi LED Controller can manage LED Panels individually or in groups. Organizing panels into groups gives you greater control and flexibility, particularly for installations with large numbers of devices.

Lighting Schedules

To help maximize energy efficiency, the UniFi LED Controller lets you create schedules for specific events and for specific devices. You can have specific lights automatically turn on at a preset power level when an event begins, and then off again when the event ends.

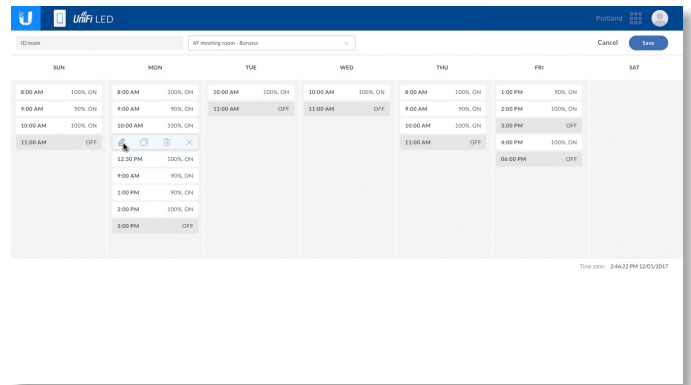
UniFi LED App

The UniFi LED App allows you to control and configure your UniFi LED lighting system from a mobile device, such as a smartphone (iOS or Android) or tablet. The app has all of the features of the UniFi LED Controller, including device discovery, group management, and schedule configuration. The app can also find and configure nearby UniFi LED Panels and Dimmer Switches using Bluetooth.



Dashboard

See a visual representation of your lighting system, including device location, groups, and status.



Scheduling

Easily set up schedules to control on/off times and power levels for groups.



Power Consumption

Use the UniFi LED Controller to display detailed statistics on power consumption.

Accessories

The following accessories are available for the UniFi LED Panel and UniFi Dimmer Switch.



UniFi Cloud Key Gen2 Plus

Model: UCK-G2-PLUS

The UniFi Cloud Key Gen2 Plus, model UCK-G2-PLUS, is an integrated hardware controller and self-contained application server designed to monitor and provide centralized management for your UniFi network devices, UniFi Protect devices, and UniFi LED devices.



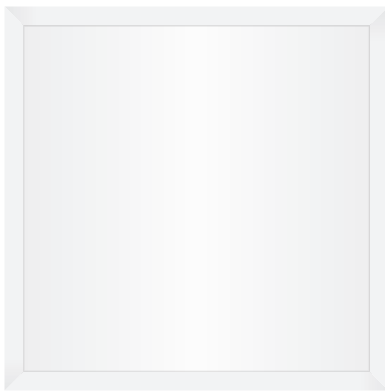
UniFi PoE Switch

Models: US-8-150W, US-16-150W, US-24-250W, US-24-500W, US-48-500W, US-48-750W

These UniFi Switches are fully managed, PoE+ Gigabit switches, delivering robust performance and intelligent switching for growing networks.



UniFi LED Certifications



Certified models:

- ULED-AC



Certified models:

- ULED-AT
- ULED-AC

ULED-AC Rebate Eligibility

The UniFi ULED-AC LED Panel has been qualified as meeting the DLC (DesignLights Consortium) criteria for LED lighting performance and energy efficiency, and is eligible for rebate from utilities and government agencies.

Here are a few websites where you may find rebate information:

UniFi LED Microsite

- <https://unifi-led.ui.com>

DSIRE (Database of State Incentives for Renewables & Efficiency)

- <http://programs.dsireusa.org/system/program>

Rebate Bus

- <https://home.rebatebus.com/>



Cost Savings Example

The following example shows the potential savings in energy and maintenance costs as a result of deploying UniFi LED Panels instead of fluorescent lighting. This section will illustrate the following important features of UniFi LED products:

- UniFi LED Panels are more efficient light sources than fluorescent tubes.
- UniFi LED Panels have longer life and require less maintenance than fluorescent tubes.
- UniFi LED networked lighting control lets you reduce energy consumption even further.

Energy Cost

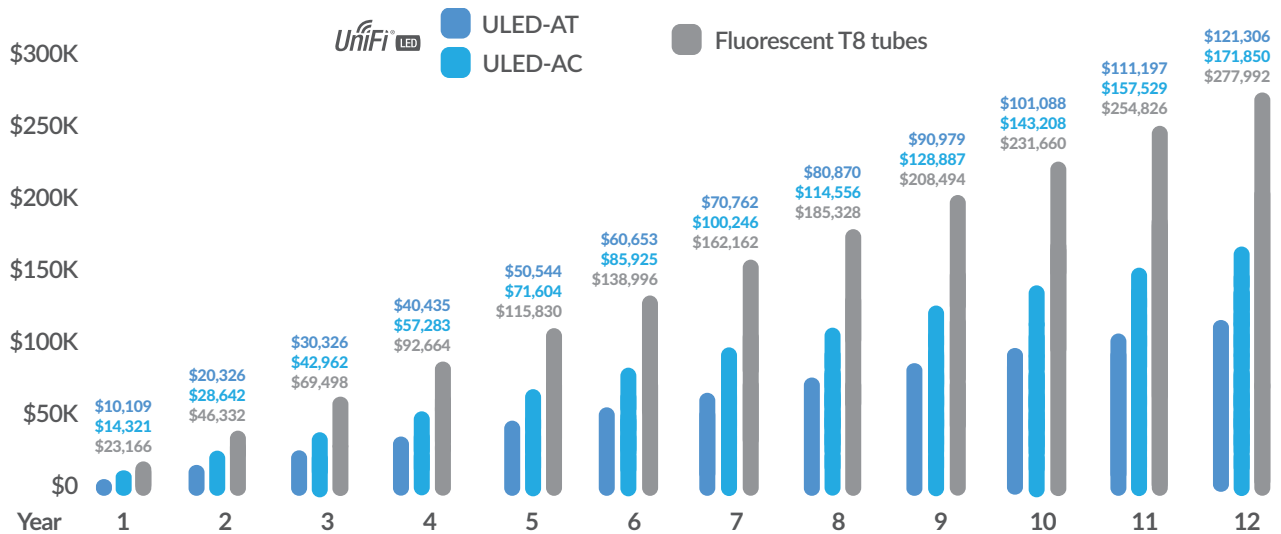
This example compares four lighting types:

- T5 fluorescent tubes
- T8 fluorescent tubes
- UniFi LED Panels, model ULED-AT
- UniFi LED Panels, model ULED-AC

Performance Type	Characteristic	Fluorescent Tubes		UniFi LED Panels	
		T5 Tubes	T8 Tubes	ULED-AT	ULED-AC
Brightness Performance	Nominal Brightness (lm)	4400	4400	2400	3400
	Brightness Loss (%)	40	40	20	20
	Actual Brightness (lm)	2640	2640	1920	2720
Energy Efficiency Performance	Energy Consumption (W)	44	55	24	34
	Energy Consumption/Year (kWh)	158.4	198	86.4	122.4
	Energy Cost/Year	\$24.71	\$30.89	\$13.48	\$19.09

Annual Energy Cost Comparison

The chart below illustrates the total annual energy cost¹ of using 750 UniFi LED Panels vs. 750 fluorescent troffers (four tubes per troffer) to light a 3,000 m² office over a 12-year span with a rate² of \$0.156/kWh. As the chart shows, UniFi LED Panels use considerably less energy than T8 tubes and have a significantly lower energy cost per year.



Energy Cost Comparison for UniFi LED Panels vs. Fluorescent Tubes

Notes:

1. The figures shown assume each lighting fixture is on for 3,600 hours/year.
2. Energy rate is average commercial rate for California as of May 2018. Source: [U.S. Energy Information Administration](https://www.eia.gov)

Maintenance Cost

UniFi LED panels have longer life than troffers containing multiple fluorescent tubes. As a result, UniFi LED panels require fewer maintenance visits, lowering maintenance costs.

Detail	Fluorescent Tubes		UniFi LED Panels	
	T5 Tubes	T8 Tubes	ULED-AT	ULED-AC
Quantity in Example Office	3000	3000	750	750
Annual Total Operating Time (hr)	10,800,000	10,800,000	2,700,000	2,700,000
Average Tubes/Panels Replaced per Year	216	450	54	54
Annual Time Spent on Replacement (hr)	18.0	37.5	4.5	4.5

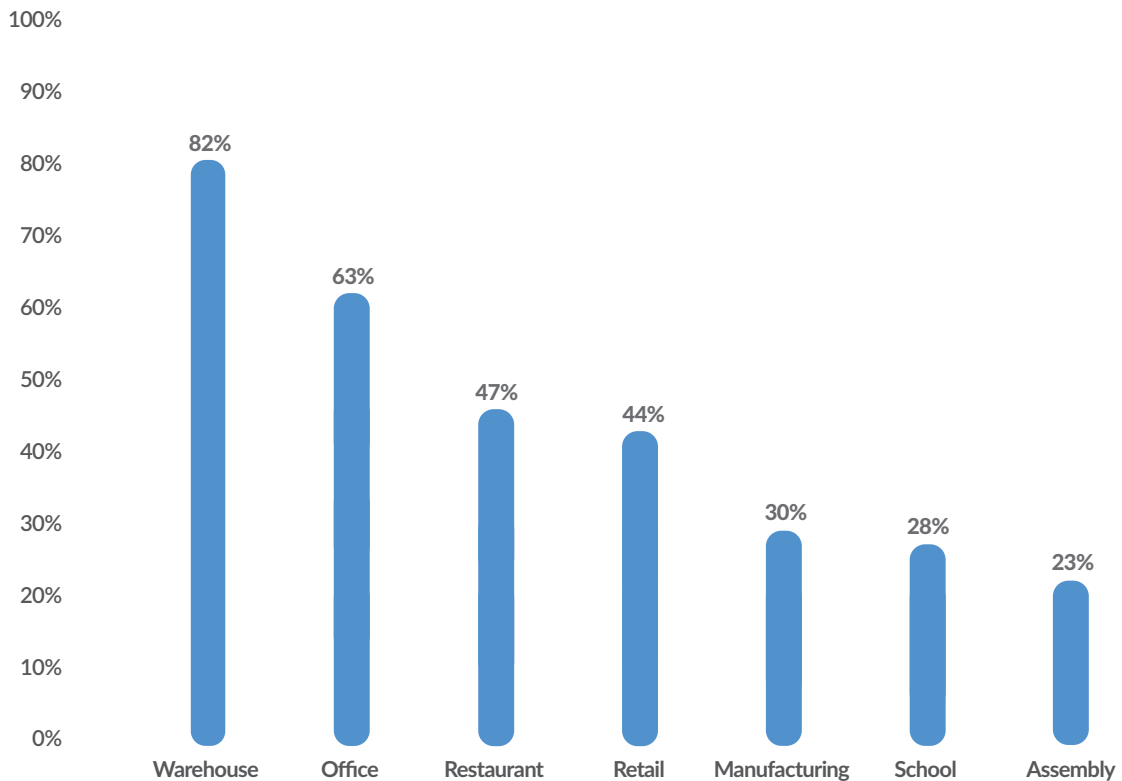
UniFi LED Networked Lighting Control

To maximize the benefits of energy-efficient LED lighting, networked lighting control (NLC) is essential. NLC controls and monitors your lighting for optimal energy consumption while providing the correct amount of light in each area.

The UniFi Dimmer Switches (models UDIM-AT and UDIM-AC), together with the UniFi LED Panels (models ULED-AT and ULED-AC), allow the design and implementation of a lighting system with NLC functionality.

The chart below represents the results of a study conducted by the DesignLights Consortium (DLC), which determined the average savings due to NLC in a variety of physical settings. According to the study, NLC provided savings averaging 47% throughout the locations visited.

Leveraging the benefits of NLC technology, UniFi LED products, including UniFi LED Panels and Dimmer Switches, provide a future proof platform for energy-efficient and cost-effective lighting.



Percent Savings as a Result of Networked Lighting Controls*

* Source: Networked Lighting Control (NLC) Systems (2017), DesignLights Consortium



Hardware Overview

The UniFi LED Panel and UniFi Dimmer Switch can be deployed in a variety of environments, including commercial office buildings, schools, and hospitals. Each LED Panel fits easily into a standard 2' x 2' dropped ceiling grid.

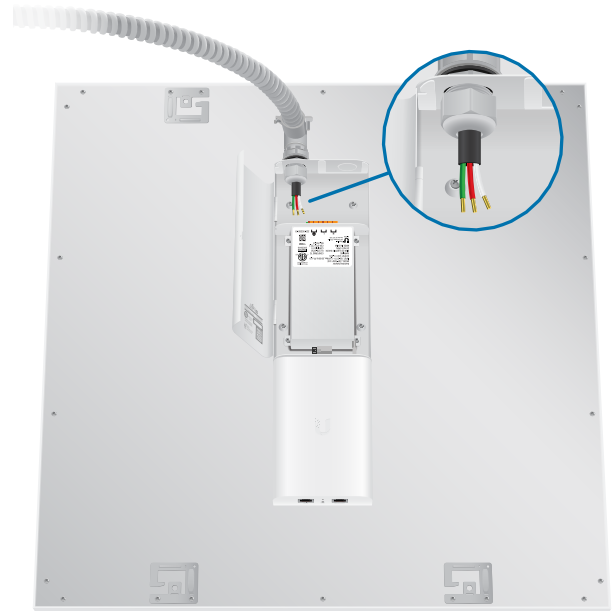
The ULED-AT LED Panel and UDIM-AT Dimmer Switch require only Ethernet cabling to receive power and connect to the network.

The ULED-AC LED Panel and UDIM-AC Dimmer Switch are both powered using AC power. The ULED-AC connects to the network using either wired or wireless Ethernet, while the UDIM-AC connects wirelessly.

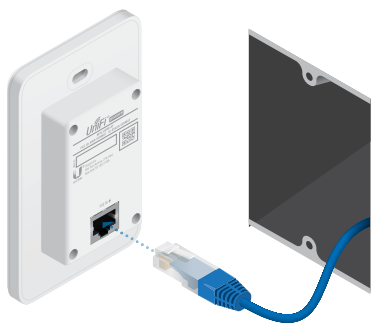
The UniFi LED Panel is available in single- and two-packs, and the UniFi Dimmer Switch is available in single- and five-packs.



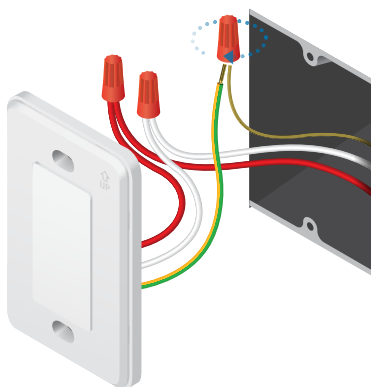
ULED-AT PoE Power and Network Connection



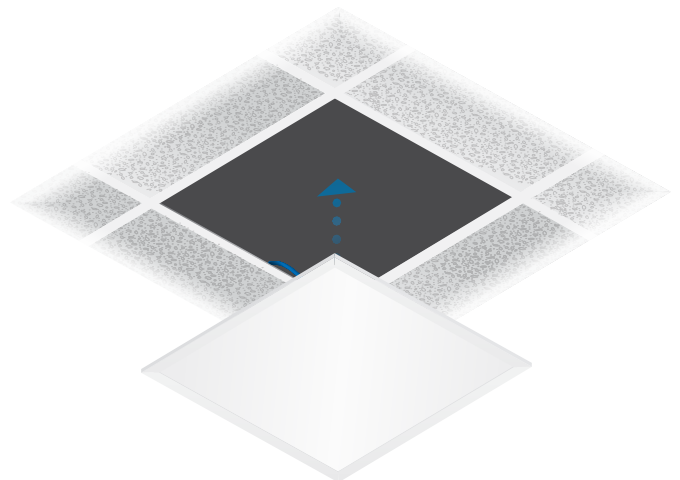
ULED-AC Power Connection



UDIM-AT Dimmer Switch Installation



UDIM-AC Dimmer Switch Installation



ULED-AT and ULED-AC LED Panel Installation

Specifications

UniFi LED Panel

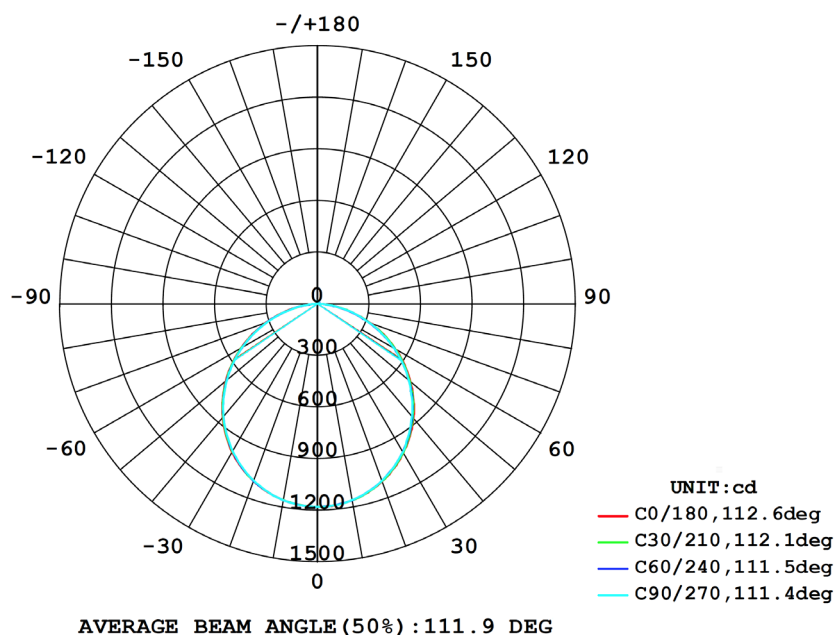
	ULED-AT	ULED-AC
Dimensions LED Panel Thickness	602 x 602 x 56.7 mm (23.7 x 23.7 x 2.23") 12 mm (0.47")	602 x 602 x 56.7 mm (23.7 x 23.7 x 2.23") 12 mm (0.47")
Weight	4.5 kg (9.9 lb)	5.3 kg (11.68 lb)
Networking Interface	10/100 Ethernet Port	802.11 b/g/n (2.4 GHz Only) 10/100 Ethernet Port
Connectivity	Bluetooth 4.1	Wi-Fi 802.11 b/g/n, Bluetooth 4.1
Buttons	Reset	Reset
LEDs	Status	Status
Power Method	802.3at PoE+	100-277VAC, 50/60 Hz
Maximum Power Consumption	25.5W	34W
Mounting	Recessed 2' x 2' Drop Ceiling Grid	Recessed 2' x 2' Drop Ceiling Grid
Operating Temperature	0 to 40° C (32 to 104° F)	0 to 40° C (32 to 104° F)
Certifications	CE, FCC, IC, MET	CE, FCC, IC, DLC, MET
DLC Listed	N/A	Yes
Lighting		
Initial Delivered Luminance (Max.)	2300 lm	3400 lm
Efficacy	100 lm/W*	100 lm/W
CCT	4,000 K	4,000 K
Lifetime Rating	L80 > 50,000 hrs	L80 > 50,000 hrs
CRI	> 80	> 80
Beam Angle	114°	114°
Brightness Control	10-100% Dimming	10-100% Dimming
Environment	Indoor Dry Location	Indoor Dry Location

* Based on power delivered to the LED Panel

UniFi Dimmer Switch

	UDIM-AT	UDIM-AC
Dimensions	71 x 115 x 25 mm (2.8 x 4.53 x 0.98")	71 x 115 x 37.5 mm (2.8 x 4.53 x 1.48")
Weight	90 g (3.2 oz)	125 g (4.41 oz)
Networking Interface	10/100 Ethernet Port	802.11 b/g/n (2.4 GHz Only)
Buttons	Reset	Reset
LEDs	Status	Status
Power Method	802.3af PoE	100-277VAC
Max. Power Consumption	5W	5W
Max. LED Panels per Dimmer Switch	128 (Recommended)	128 (Recommended)
Operating Temperature	0 to 40° C (32 to 104° F)	0 to 40° C (32 to 104° F)
Certifications	CE, FCC, IC	CE, FCC, IC

Light Distribution Curve



Light Distribution Curve for ULED-AT and ULED-AC

Luminous Distribution Intensity (candela)

Angle	ULED-AT			ULED-AC		
	0°	45°	90°	0°	45°	90°
0°	824	825	825	1181	1181	1181
5°	820	821	821	1176	1175	1176
10°	809	810	810	1161	1160	1159
15°	791	791	792	1135	1133	1132
20°	765	766	766	1100	1097	1095
25°	732	734	734	1055	1051	1048
30°	693	695	696	1001	996	993
35°	649	650	651	938	931	927
40°	599	600	601	867	860	856
45°	545	546	547	791	782	777
50°	487	487	488	707	698	694
55°	425	425	425	617	609	605
60°	362	361	361	523	516	512
65°	296	295	295	426	419	417
70°	231	229	228	326	320	320
75°	167	165	164	229	224	224
80°	107	104	104	137	133	133
85°	51.5	48.6	49.5	57.6	54.3	56.1
90°	6.46	6.69	5.13	5.80	5.79	6.19

Utilization Factors

Coefficient of Utilization - ULED-AT																	
RC	80%			70%			50%			30%			10%			0%	
RW	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
RCR	0	0.84	0.84	0.84	0.82	0.82	0.82	0.78	0.78	0.78	0.74	0.74	0.74	0.71	0.71	0.71	0.69
	1	0.73	0.70	0.67	0.71	0.68	0.66	0.68	0.66	0.63	0.65	0.63	0.61	0.62	0.61	0.59	0.58
	2	0.63	0.59	0.54	0.62	0.57	0.54	0.59	0.55	0.52	0.57	0.54	0.51	0.54	0.52	0.50	0.48
	3	0.56	0.50	0.45	0.54	0.49	0.45	0.52	0.47	0.44	0.50	0.46	0.43	0.48	0.45	0.42	0.40
	4	0.49	0.43	0.38	0.48	0.42	0.38	0.46	0.41	0.37	0.44	0.40	0.37	0.43	0.39	0.36	0.34
	5	0.44	0.38	0.33	0.43	0.37	0.33	0.41	0.36	0.32	0.40	0.35	0.32	0.38	0.34	0.31	0.30
	6	0.40	0.33	0.29	0.39	0.33	0.28	0.37	0.32	0.28	0.36	0.31	0.28	0.35	0.31	0.27	0.26
	7	0.36	0.30	0.25	0.35	0.29	0.25	0.34	0.29	0.25	0.33	0.28	0.25	0.32	0.28	0.24	0.23
	8	0.33	0.27	0.23	0.32	0.26	0.22	0.31	0.26	0.22	0.30	0.25	0.22	0.29	0.25	0.22	0.20
	9	0.30	0.24	0.20	0.30	0.24	0.20	0.29	0.24	0.20	0.28	0.23	0.20	0.27	0.23	0.20	0.18
	10	0.28	0.22	0.18	0.27	0.22	0.18	0.26	0.22	0.18	0.26	0.21	0.18	0.25	0.21	0.18	0.17

Coefficient of Utilization - ULED-AC																	
RC	80%			70%			50%			30%			10%			0%	
RW	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
RCR	0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
	1	1.04	0.00	0.96	1.02	0.98	0.94	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.82
	2	0.91	0.84	0.78	0.88	0.82	0.77	0.85	0.79	0.75	0.81	0.77	0.73	0.78	0.74	0.71	0.69
	3	0.79	0.71	0.65	0.78	0.70	0.64	0.74	0.68	0.63	0.71	0.66	0.61	0.69	0.64	0.60	0.58
	4	0.70	0.61	0.55	0.69	0.61	0.54	0.66	0.59	0.53	0.64	0.57	0.52	0.61	0.56	0.51	0.49
	5	0.63	0.54	0.47	0.62	0.53	0.47	0.59	0.52	0.46	0.57	0.50	0.45	0.55	0.49	0.45	0.42
	6	0.57	0.47	0.41	0.55	0.47	0.41	0.53	0.46	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.37
	7	0.51	0.42	0.36	0.50	0.42	0.36	0.49	0.41	0.36	0.47	0.40	0.35	0.45	0.39	0.35	0.33
	8	0.47	0.38	0.32	0.46	0.38	0.32	0.44	0.37	0.32	0.43	0.36	0.31	0.42	0.36	0.31	0.29
	9	0.43	0.35	0.29	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.28	0.39	0.33	0.28	0.26
	10	0.40	0.32	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	0.24

Luminance Data (candela/m²)

Angle	ULED-AT			ULED-AC		
	0°	45°	90°	0°	45°	90°
65°	2246	2235	2232	3232	3162	3188
75°	2051	2022	2018	2830	2750	2763
85°	1821	1719	1761	2098	1995	1971

Zonal Flux Data

Zonal Lumen Summary				
Zone	ULED-AT		ULED-AC	
	Lumens	% of Fixture	Lumens	% of Fixture
0-30°	638.7	26.6%	915.2	26.8%
0-40°	1045	43.5%	1497	43.8%
0-60°	1843	76.8%	2642	77.3%
0-90°	2358	98.3%	3355	98.2%

Software

UniFi LED Controller	
Platforms	UniFi Cloud Key Gen2 Plus Ubuntu 16.04 LTS (Xenial Serus) 64-bit Debian 9 64-bit
Minimum Memory Requirement RAM Storage	2 GB 16 GB
CPU	64-bit (x64)
Features Control Monitoring Management	On/Off, Brightness, Locating, Grouping Device Status, Power Usage, Uptime, Light Uptime, Energy Statistics Reboot, Factory Reset, Forget Device
Filters	LED Panels, Dimmer Switches
Scheduling	On/Off Times, Brightness, One-Time/Recurring
Management Interface	Web UI

UniFi LED App	
OS	iOS, Android
Features Control Monitoring Management	On/Off, Brightness, Locating, Grouping Device Status, Power Usage, Uptime, Light Uptime, Energy Statistics Reboot, Factory Reset, Forget Device
Filters	LED Panels, Dimmer Switches

UniFi Switch Compatibility

The UniFi switches are compatible with UniFi LED products as detailed below.

UniFi LED Product	US-8	US-8-60W	US-8-150W	US-16-150W	US-24-250W	US-24-500W	US-48-500W	US-48-750W
ULED-AT	–	–	✓	✓	✓	✓	✓	✓
UDIM-AT	✓	✓	✓	✓	✓	✓	✓	✓
ULED-AC	✓	✓	✓	✓	✓	✓	✓	✓
UDIM-AC	– (supports wireless connections only)							

✓ Compatible with the UniFi switch

Related Product Datasheets



UniFi Cloud Key Gen2 Plus:

[dl.ui.com/datasheets/unifi/UniFi Cloud Key G2 Plus DS.pdf](https://dl.ui.com/datasheets/unifi/UniFi%20Cloud%20Key%20G2%20Plus%20DS.pdf)



UniFi PoE Switches:

[dl.ui.com/datasheets/unifi/UniFi PoE Switch.pdf](https://dl.ui.com/datasheets/unifi/UniFi%20PoE%20Switch.pdf)



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