

ECO INDUSTRIAL SUPPLIES

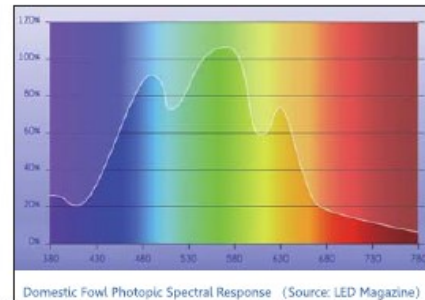
7 Oak Ave Clovelley Park SA 5042

ABN: 24 145 151 241



Poultry Lighting

Research on Chickens



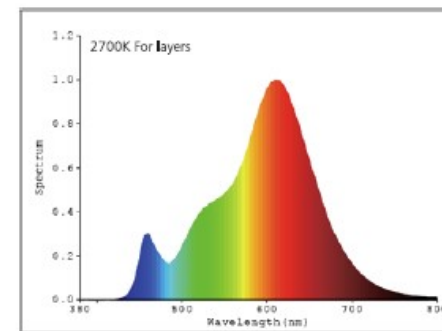
Chickens' eyes are sensitive to the change of the light. Chickens are affected by the duration, intensity and spectrum of the light. Lighting is one of the most important farming input on influencing the production of the meat, egg and other protein sources.

Chickens' eyes are different from human's, the light we perceive is the part of the electromagnetic spectrum our eyes can detect, known as the visible spectrum.

The same is true in animals, including poultry, but with one significant difference. The spectral sensitivity and visible spectrum of poultry, or what they actually see, is not the same as humans. That's why chickens may behave differently under the same intensity light from two different sources that look identical to us.

Suggested Color Temperature For Chicken

1. Color Spectrum for Layers



2700K Warm White Color

Why 2700K is the suggested color temperature for layers?

Blue Color keeps birds calm, reduces the feather pecking of chick.

Red Color increases food intake, enhances egg production, activates movement and accelerates sexual development.

Green Color increases growth rate at an early age by enhancing proliferation of skeletal muscle satellite cells and increase the egg quality.

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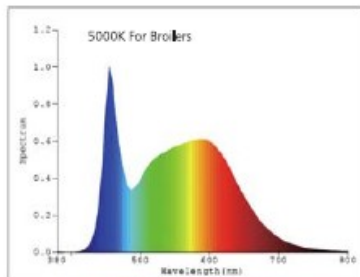
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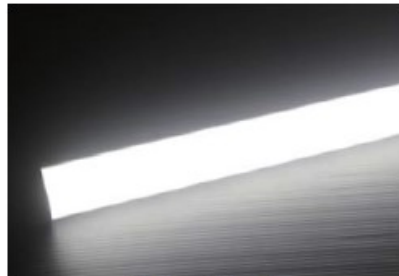
Poultry Lighting

➤ Suggested Color Temperature for Chickens

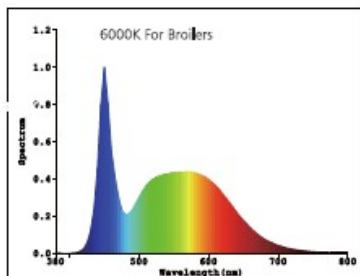
2. Color Spectrum for Broilers



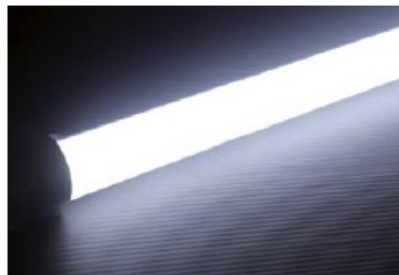
5000K Color Spectrum



5000K Day Light Color



6000K Color Spectrum



6000K Cool White Color

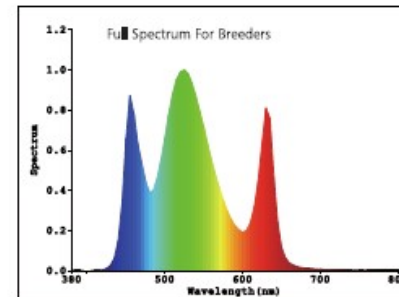
Why 5000K/6000K is the suggested color temperature for broilers?

Blue Color decreases movement when catching the chicken, make it not frightened then improve the quality of chicken meat.

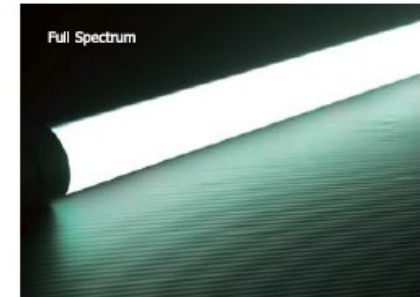
Red Color increase food intake, reduces the feather pecking of chick.

Green Color increases growth rate at an early age by enhancing proliferation of skeletal muscle satellite cells.

3. Color Spectrum for Breeders



Full Spectrum



Full Spectrum

Why Full Spectrum is the suggested color temperature for breeders?

Blue color keeps birds clam, reduces the feather pecking of chick

Red color increases food intake, accelerates sexual development.

Green Color increases growth rate at an early age by enhancing proliferation of skeletal muscle satellite cells.

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Flicker Free in LED Poultry Lighting



Why Chickens need flicker free light for better growth?

Flicker is the term used for the rapid and repeated modulation of light output from a source. The principle source of flicker is the periodic variation in AC mains operated lamp output, at twice the AC frequency. This is known as photometric flicker and varies with each technology.



The incandescent bulb does not appear to flicker due to its inefficient thermal persistence keeping the filament hot, masking the switch in direction of the current. In contrast to this, LED responds instantaneously to changes in the power supply so any effect of photometric flicker is obscured by electrical flicker such as noise on the AC distribution lines or dimming an LED using pulse width modulation.

Poultry have keen eyesight and are much more sensitive than humans to light flickering. Chicken's eyes can see the frequency lower than 205Hz.



Flicker will cause:



Hontech Lighting
(NO Flicker)



Normal Lighting
(100Hz Flicker)





AC 180V-265Vac

Programmable Dimming System



iDimmer 4L
4500W



iDimmer 3L
2200W



Timer 2.0

Manual Dimming System



iDimmer 2L
1200W



iDimmer 4S
4500W

iDimmer 3S
2200W



iDimmer 2S
1200W

LED Poultry Lighting For Flooring Chicken

T8 LED Tube Light

Wattage: 15-25W
OD:26mm



T12 LED Tube Light

Wattage: 23-35W
OD:32mm



IP65 HE27 LED Bulb

Wattage: 6-10W
OD:70-80mm



IP67 HT19 LED Bulb

Wattage:6-10W
OD:70-80mm



LED Poultry Lighting For cage Chicken

T12 Double Side LED Tube Light



Wattage: 23-25W
OD:32mm

Wattage:20-25W
OD:34mm

T14 360° LED Tube Light





48Vdc LED Lighting System For Cage Chicken

DC 48V LED Tube Light
Install Inside the Cage

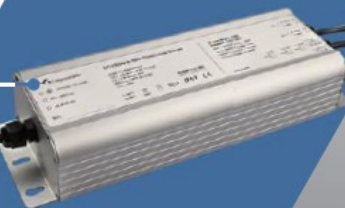


Timer Controller
Timer 2.0



120W DRIVER
Model No: HT-PSD120WCC

360W DRIVER
Model No: HT-PSD360WCC



T6 LED Tube Light
OD: 20mm

T5 LED Tube Light
OD: 18mm

IP65 DC 48V LED Bulb
OD: 48mm

Programmable Dimming Controller Traic (Leading Edge & Trailing Edge) Dimmable



4500W DIMMER

Model No.: HT-DIM-045L



2200W DIMMER

Model No.: HT-DIM-022L

PRODUCT FEATURES

- Programmable Dimmer
= Manual Dimmer+Timer
- High Efficiency : 98%
- Dimmable from : 1%-100%
- Smooth dimming without flickering
- Programmable brightness control by Auto-self setting
- Support system updating
- 24hrs/Days Lighting program control
- Support DIY lighting program setting
- 5 Modes for lighting program setting

Lighting program setting
(set by days, specific time and brightness)

Rising & Dropping Time

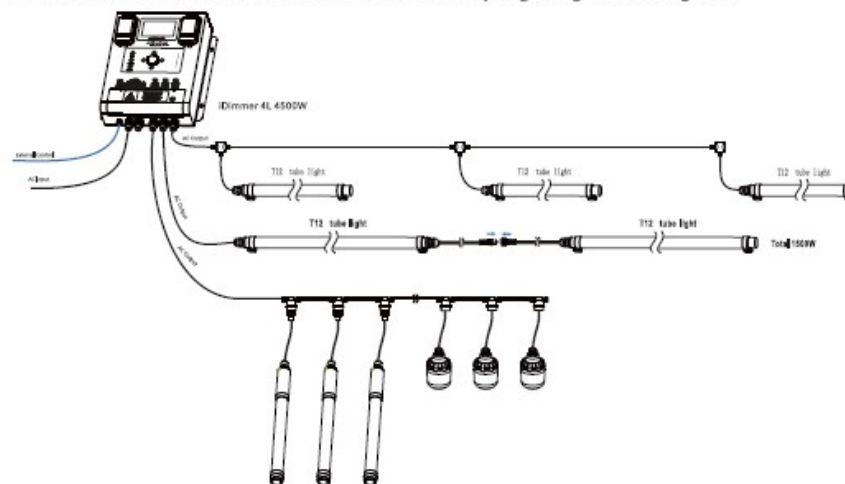
Mode 01: rising station 1 7: 15m

Mode 01: Rising & Dropping Time Setting

Why it need to set Rising & Dropping Time?

According to the RSPCA(Royal Society for the Prevention of Cruelty to Animals), the light intensity between lighting period must be adjusted in a gradual manner(using dimmer or switching individual lights on/off) over at least 15 minutes.

AC 4500W iDimmer 4L and Hontech LED Poultry Lighting Wire Diagram





Manual Dimmer Controller

Traic (Leading Edge & Trailing Edge) Dimmable



4500W DIMMER

Model No.: HT-DIM-045S



2200W DIMMER

Model No.: HT-DIM-022S



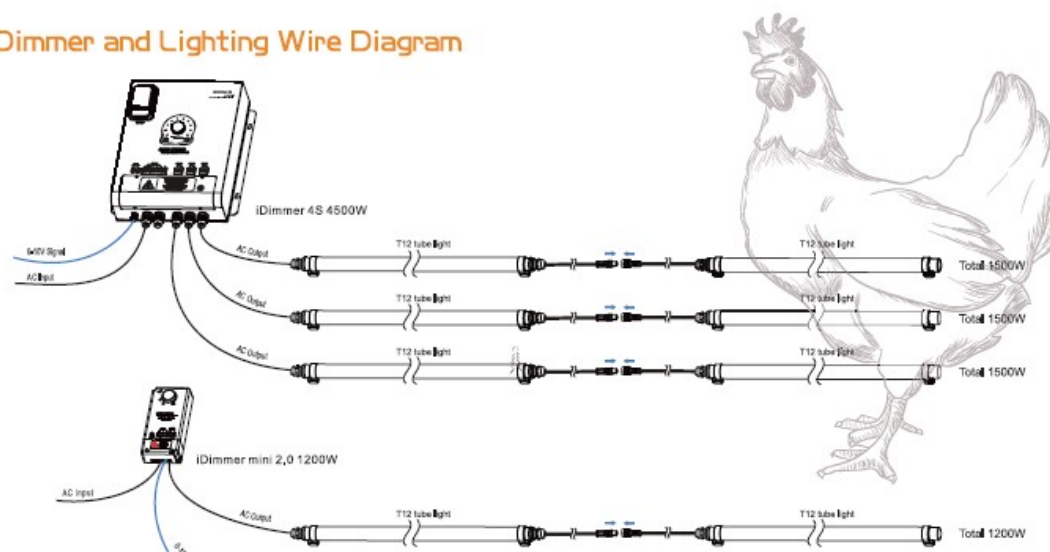
Digital Dimmer
Model No.: HT-DIM-012L



Analog Signal Dimmer
Model No.: HT-DIM-012S

1200W DIMMER

Dimmer and Lighting Wire Diagram



PRODUCT FEATURES

Manual Dimmer:

Control the lights by manual switch
With 0-10V signal, can be controlled by external systems

Humidity : 20%-90% RH non-condensing

Safety : Primary-GND Class A 1750V

Smooth dimming without flickering

Dimmable from : 1%-100%

Working Temp : -20-50 °C

Storage Temp : -20-80 °C

High power factor : 0.97

High Efficiency : 98%

Programmable Timer Controller

Lighting Project

PRODUCT FEATURES

- Built in 0-10V signal
- Manual brightness control
- Programmable brightness control by Auto-Self Setting
- USB port for program update
- 24hrs/Days Lighting program control
- Support DIY lighting program setting
- 5 Modes for lighting program setting



TIMER 2.0

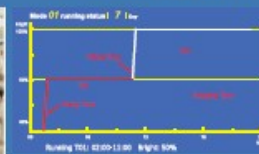
Model No.: HT-TIM-02T

Lighting program setting
(set by days, specific time and brightness)

Mode	Days	Setting	Status
MODE1	7	00:01	ON
MODE2	8	00:01	OFF
MODE3	9	00:01	OFF
MODE4	9	00:01	OFF
MODE5	9	00:01	OFF

Mode	Start time	End time	Bright
Time 01	00	00	00
Time 02	00	00	00
Time 03	00	00	00
Time 04	00	00	00
Time 05	00	00	00

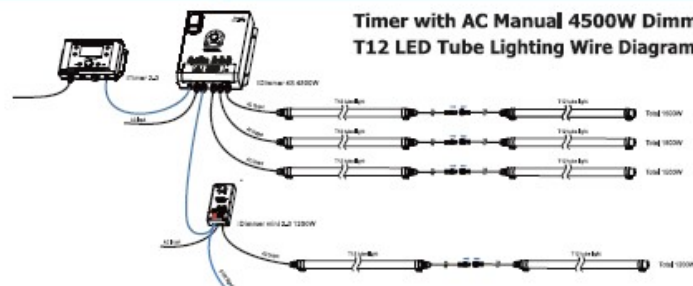
Rising & Dropping time



Why it need to set Rising & Dropping Time?

According to the RSPCA(Royal Society for the Prevention of Cruelty to Animals), the light intensity between lighting period must be adjusted in a gradual manner(using dimmer or switching individual lights on/off) over at least 15 minutes.

Timer with AC Manual 4500W Dimmer and T12 LED Tube Lighting Wire Diagram



Australia Chicken Farm
Farm Size: 148m*28m T12 LED Lights: 132pcs(3*44)



Australia Chicken Farm
Farm Size: 130m*15m T12 LED Lights: 96pcs(3*32)



Poland Chicken Farm
Farm Size: 120m*14m T8 LED Lights: 90pcs(3*30)



Ukraine Chicken Farm
Farm Size: 80m*12m T12 LED Lights: 96pcs(3*32)



Thailand Chicken Farm
Farm Size: 60m*16m Color Switchable LED Lights: 50pcs



Saudi Arabia Chicken Farm
Farm Size: 120m*80m T12 LED Lights: 680pcs



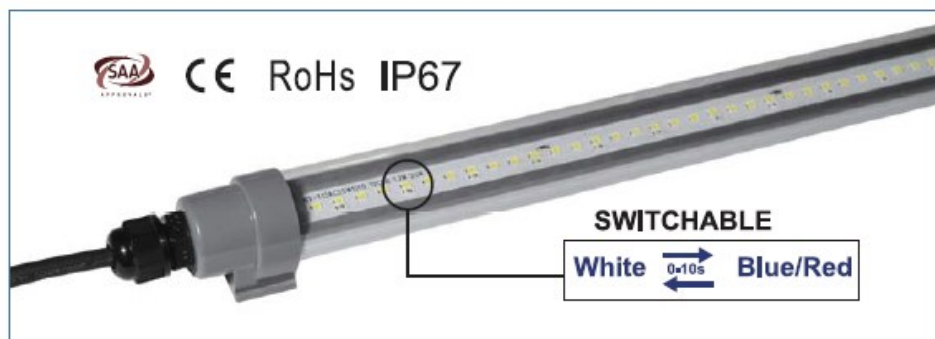
Netherlands Pig House
Farm Size: 127m*25m T12 LED Lights: 280pcs



Netherlands Mushroom
Farm Size: 120m*16m T12 LED Lights: 85pcs

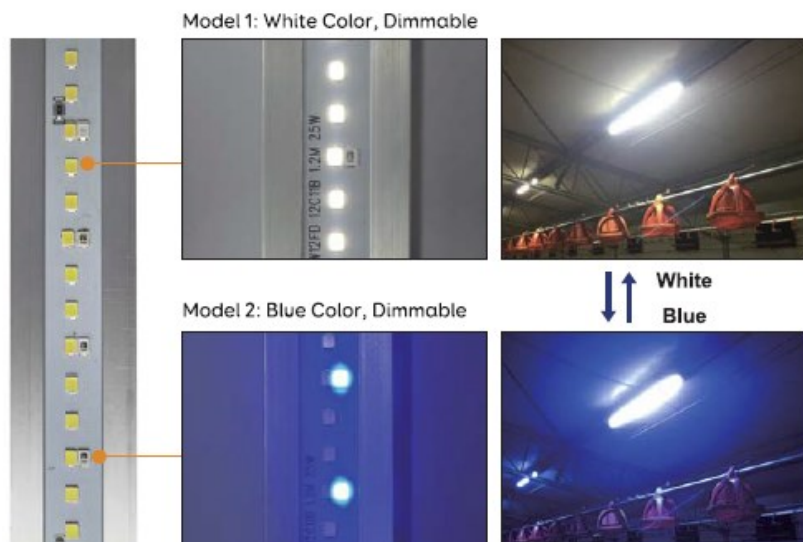
IP67 Dimmable LED Poultry Light For Floor Chickens

COLOR SWITCHABLE T12 LED TUBE LIGHT




Color switchable (e.g. "White" vs "Blue") within 0-10s from AC ON / OFF.
Turn ON / OFF the AC power within 0-10s each time, the color shall be switched into other color.

Memorability: Turn ON/OFF the AC power three times within 0-3s,
the color shall be switched into the default color(white color)



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	HT Product Code	Beam Angle	Voltage	Power	LED Info	Total Length
	HT-12AC25W12FS	270°	180-264Vac	white color 25W Red/Blue color 8W	white SMD2835 132pcs Blue SMD2835 44pcs	L: 1200mm ØØ32mm
				white color 25W Red/Blue color 25W	white SMD2835 132pcs Blue SMD2835 132pcs	L: 1200mm ØØ32mm
	HT-12AC30W16FS			white color 30W Red/Blue color 11W	white SMD2835 168pcs Blue SMD2835 56pcs	L: 1500mm ØØ32mm
				white color 30W Red/Blue color 30W	white SMD2835 168pcs Blue SMD2835 168pcs	L: 1500mm ØØ32mm

White Color



ON/OFF Switchable



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IP67 Dimmable LED Poultry Light For Cage Chickens

IP65 HE27 DIMMABLE LED BULB



HT Product Code	Voltage	Power	LED info	Size
HT-QPF06WS	180-264Vac@ Dimmable	6W	SMD2835	OD70*130mm
HT-QPF10WS		10W	SMD2835	OD80*140mm


PRODUCT FEATURES

- Easy to replace the old farm lamps.
- PC Material LED bulb Housing to resist cleaning chemicals.
- Waterproof glue inside for standing the water jet when cleaning.
- Flicker free LED driver, smooth dimming without flickering.




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IP67 HT19 DIMMABLE LED BULB




FLICKER FREE



300°


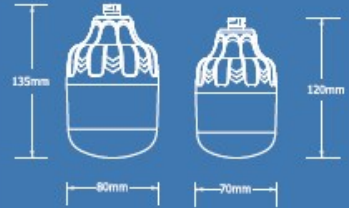


50,000 HOURS




SAVE 70% ENERGY

IP67 Waterproof

HT Product Code	Voltage	Power	LED info	Size
HT-QPF06WS	180-264Vac@ Dimmable	6W	SMD2835	OD70*120mm
HT-QPF10WS		10W	SMD2835	OD80*135mm



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IP67 Dimmable LED Poultry Light For Cage Chickens

T14 360° HANING LED TUBE LIGHT



Chicken Farm(layer house) In El Salvador
 Installed light: HT-T14AC20W12FD
 Dimmable T14 360degree LED tube light 1200mm 20W
 Color Temperature 2700K
 E27 base for vertical installation
 Light distance 4M

T12 DOUBLE SIDE LED TUBE LIGHT

Double side	HT Product Code	Beam Angle	Voltage	Power	LED Info	Total Length
	HT-T12AC25W12FF	Double Sided Lighting	180-264Vac	25-30W	SMD2835 186pcs	L: 1200mm OD32mm
	HT-T12AC30W15FF			26-30W	SMD2835 216pcs	L: 1500mm OD32mm
	HT-T12AC36W18FF			35-40W	SMD2835 284pcs	L: 1800mm OD32mm

DC 48V 0-10V Dimmable LED Driver



120W DRIVER

Model No.: HT-PSD120WCC



360W DRIVER

Model No.: HT-PSD360WCC

Input: 100-264V~, 50/60HZ
PF > 0.95 @max. load
Efficiency > 90% @230Vac
THD < 10%

Dimmable: 1%-100%
Ripple & Noise: 50mVp-p
Turn Off: 1% (No output)

Notes:

Rated 14AWG(2*1.5MM²) can be connected T6 lights to 80meter @48Vdc. Suggested 120W for Each channel.

IP65 DC 48V LED BULB



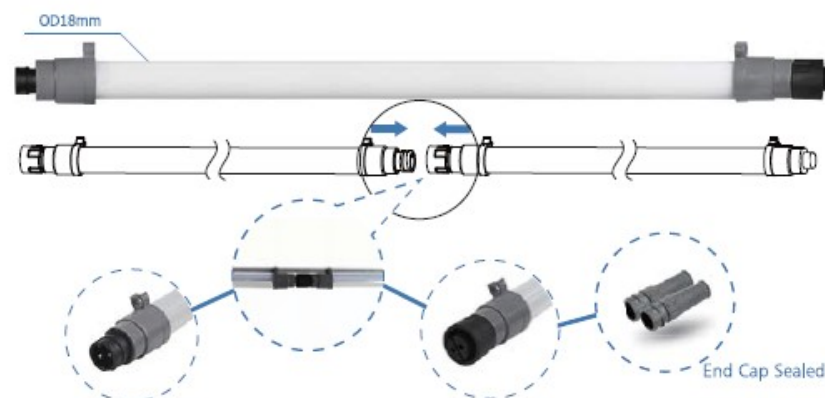
HT Product Code	Voltage	Power	LED Info	Size
HT-QPF03WS/DC	48Vdc	3W	SMD2835	OD48*100mm

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IP67 Dimmable LED Poultry Light for Cage Chickens

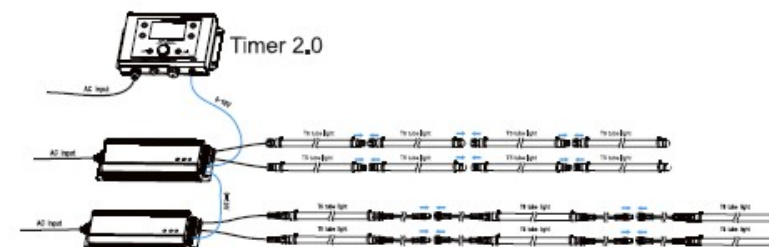
T5 LED TUBE LIGHT

CE RoHS  IP67



HT Product Code	Beam Angle	Voltage	Power	LED Info	Total Length	PLUG & PLAY CONNECTION
HT-T5DD4W12FBC	140°	48Vdc	4W	SMD2835 48leds	1200mm	
HT-T5DC26W18FBC			5W	SMD2835 60leds	1500mm	
HT-T5DC36W18FBC			6W	SMD2835 72leds	1800mm	

Timer with 0-10V 120W/360W Driver and 48Vdc T5/T6 LED Tube Light Connection



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IP67 Dimmable LED Poultry Light For Cage Chickens

T6 LED TUBE LIGHT



CE RoHS  IP67

DOUBLE END CABLE CONNECTION

PRODUCT FEATURE:

Specially design for cage chicken, IP67 LED tube light.
DC 12V/24V/36V/48V available, low safety voltage.
Wide beam angle, no dark area for cage chicken.
PMMA/PC material, chemical resistance(Ammonia).
Flicker free and perfectly dimmable from 1-100%.



HT Product Code	Beam Angle	Voltage	Power	LED info	Total Length
HT-T6DC04W12FB/B	140°	48Vdc	4W	SMD2835 48leds	1200mm
HT-T6DC05W15FB/B			5W	SMD2835 60leds	1500mm
HT-T6DC06W18FB/B			6W	SMD2835 75leds	1800mm

COLOR SWITCHABLE T6 DC 48V LED TUBE LIGHT

Two Color Switchable LED Tube Light

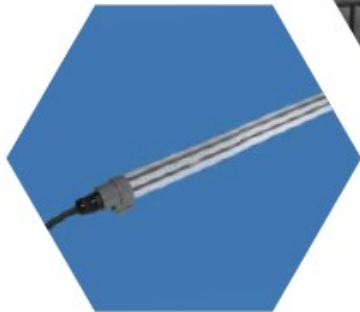


Color switchable (e.g: "White" vs "Blue") within 0-10s from AC ON / OFF.
Turn ON / OFF the AC power within 0-10s each time, the color shall be switched into other color.

Memorability: Turn ON/OFF the AC power three times within 0-3s, the color shall be switched into the default color(white color)



»»» Pig House LED Lighting



Why LED Light is good for pig/swine growth?

Physiology of the porcine eye suggest that the domesticated pig is best adapted for dim levels of natural light. Pig have dichromatic vision, in the pig's eye there are two sets of cones that give the animal peak wavelength sensitivity at 439 nm (blue color) and 556 nm (green color). The photoreceptors in a pig's eye cannot detect the red color (> 650 nm).

Evidence shows that pigs have poorer color perception than humans and in particular a reduced sensitivity to the red end of the spectrum. There is little research into the effect of colored lights on pig production. In cases where red light has been used, pigs respond as though in darkness.

One key benefit of LED lighting is the ability to dim the lights, providing dawn and dusk periods, reducing the competition for food when lights are switched on in the morning and reducing potentially startling effects when lights are switched on or off.

IP67 LED Cooler Light



	HT Product Code	Beam Angle	Voltage	Power	LED Info	Total Length
	HT-T8AC10W06FW	140°	90-265Vac	10W	SMD2835 66pcs	600mm
	HT-T8AC14W09FW			14W	SMD2835 72pcs	900mm
	HT-T8AC18W12FW			18W	SMD2835 96pcs	1200mm
	HT-T8AC22W15FW			22W	SMD2835 120pcs	1500mm

	HT Product Code	Beam Angle	Voltage	Power	LED Info	Total Length
	HT-T5DC03W20FW	140°	12-36Vdc	3W	SMD2835 12pcs	200mm
	HT-T5DC05W42FW			5W	SMD2835 36pcs	425mm
	HT-T5DC05W55FW			5W	SMD2835 48pcs	550mm
	HT-T5DC12W83FW			12W	SMD2835 60pcs	830mm
	HT-T5DC15W12FW			15W	SMD2835 84pcs	1225mm

PRODUCT FEATURES

- IP67 waterproof level.
- Working temperature: -30℃-50℃.
- Design for commercial freezer.

