Chickens' eyes are sensitive to the change of 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.

1. Color Spectrum for Layers

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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Suggested Color Temperature for Chickens

2. Color Spectrum for Broilers

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

Why Full Spectrum is the suggested color temperature for breeders?

Blue color keeps birds calm, 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.

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

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.

Flicker will cause:

- Poor Growth
- Stress
- Appetite decrease
- Disease increase
- Reducing laying rate
- Pecking

Hontech Lighting (NO Flicker)               Normal Lighting (100Hz Flicker)

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AC 180V-265Vac

Programmable Dimming System

LED Poultry Lighting For Flooring Chicken

<table>
<thead>
<tr>
<th>T8 LED Tube Light</th>
<th>T12 LED Tube Light</th>
<th>IP65 HE27 LED Bulb</th>
<th>IP67 HT19 LED Bulb</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD: 26mm</td>
<td>OD: 32mm</td>
<td>OD: 70-80mm</td>
<td>OD: 70-80mm</td>
</tr>
</tbody>
</table>

Manual Dimming System

LED Poultry Lighting For Cage Chicken

T12 Double Side LED Tube Light

Wattage: 23-25W
OD: 32mm

T14 360° LED Tube Light

Wattage: 20-25W
OD: 34mm

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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

T5 LED Tube Light
OD: 18mm

T6 LED Tube Light
OD: 20mm

IP65 DC 48V LED Bulb
OD: 48mm

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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

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 dDimmer 4L and Hontech LED Poultry Lighting Wire Diagram

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Manual Dimmer Controller
Traic (Leading Edge & Trailing Edge) Dimmable

4500W DIMMER
Model No.: HT-DIM-045S

2200W DIMMER
Model No.: HT-DIM-022S

1200W DIMMER
Model No.: HT-DIM-012S

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%

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Programmable Timer Controller

**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

---

**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 periods must be adjusted in a gradual manner, using dimmer or switching individual lights on/off over at least 15 minutes.

---

**Australia Chicken Farm**
- Farm Size: 150m²
- T2 LED Lights: 90 pcs (3'3'3')

**Australia Chicken Farm**
- Farm Size: 150m²
- T12 LED Lights: 90 pcs (3'3'3')

**Poland Chicken Farm**
- Farm Size: 120m²
- T9 LED Lights: 90 pcs (3'3'3')

**Ukraine Chicken Farm**
- Farm Size: 80m²
- T12 LED Lights: 90 pcs (3'3'3')

**Thailand Chicken Farm**
- Farm Size: 120m²
- Color Switchable LED Lights: 90 pcs

**Saudi Arabia Chicken Farm**
- Farm Size: 120m²
- T12 LED Lights: 80 pcs

**Netherlands Pig House**
- Farm Size: 120m²
- T12 LED Lights: 240 pcs

**Netherlands Mushroom**
- Farm Size: 120m²
- T12 LED Lights: 80 pcs

---

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IP67 Dimmable LED Poultry Light For Floor Chickens

COLOR SWITCHABLE T12 LED TUBE LIGHT

- Switchable: White ↔ Blue/Red
- 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 another color.

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

Model 1: White Color, Dimmable
Model 2: Blue Color, Dimmable

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IP67 Dimmable LED Poultry Light For Cage Chickens

IP65 HE27 DIMMABLE LED BULB

- 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.

<table>
<thead>
<tr>
<th>HT Product Code</th>
<th>Voltage</th>
<th>Power</th>
<th>LED Info</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT-QP06WS</td>
<td>180-264Vac@Dimmable</td>
<td>6W</td>
<td>SMD2835</td>
<td>OD70*130mm</td>
</tr>
<tr>
<td>HT-QP10WS</td>
<td>180-264Vac@Dimmable</td>
<td>10W</td>
<td>SMD2835</td>
<td>OD82*143mm</td>
</tr>
</tbody>
</table>

IP67 HT19 DIMMABLE LED BULB

<table>
<thead>
<tr>
<th>HT Product Code</th>
<th>Voltage</th>
<th>Power</th>
<th>LED Info</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT-QP06WS</td>
<td>180-264Vac@Dimmable</td>
<td>6W</td>
<td>SMD2835</td>
<td>OD70*120mm</td>
</tr>
<tr>
<td>HT-QP10WS</td>
<td>180-264Vac@Dimmable</td>
<td>10W</td>
<td>SMD2835</td>
<td>OD82*154mm</td>
</tr>
</tbody>
</table>

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IP67 Dimmable LED Poultry Light For Cage Chickens

**T14 360° HANING LED TUBE LIGHT**

- E27 Base
- 360 Degree
- LED Driver
- RoHS IP67

**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**

<table>
<thead>
<tr>
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<th>Power</th>
<th>LED Info</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT-T14AC20W12FD</td>
<td>20W</td>
<td>8W/230V 120pcs</td>
<td>L/1200mm 0-1500mm</td>
<td></td>
</tr>
<tr>
<td>HT-T14AC20W16FD</td>
<td>16W</td>
<td>8W/230V 96pcs</td>
<td>L/1000mm 0-1500mm</td>
<td></td>
</tr>
</tbody>
</table>

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DC 48V 0-10V Dimmable LED Driver

120W DRIVER
Model No.: HT-PSD120WCC
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)

360W DRIVER
Model No.: HT-PSD360WCC

Notes:
Rated 14AWG(2*1.5MM²) can be connected 16 lights to 80 meter @48Vdc. Suggested 120W for each channel.

IP65 DC 48V LED BULB
E27 Base

IP67 Dimmable LED Poultry Light for Cage Chickens

T5 LED TUBE LIGHT

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

COLOR SWITCHABLE T6 DC 48V LED TUBE LIGHT

Two Color Switchable LED Tube Light

Switchable

White 6/10s Blue/Red

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).

HT Product Code | Beam Angle | Voltage | Power | LED Info | Total Length
---|---|---|---|---|---
HT-V600G5W/120V/1005 | | 48V | 6W | SMD2835 60leds | 1200mm
HT-V600G5W/150V/1005 | 140° | 48V | 6W | SMD2835 60leds | 1000mm
HT-V600G5W/150V/1800 | 180° | 48V | 6W | SMD2835 78leds | 1800mm

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Pig House LED Lighting

Why LED Light is good for pig/swine growth?

Physiology of the porcine eye suggests that the domesticated pig is best adapted for dim levels of natural light. Pigs 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.

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# IP67 LED Cooler Light

AC 90-265V
DC 12V/24V/36V
LED Cooler Light

<table>
<thead>
<tr>
<th>HT Product Code</th>
<th>Beam Angle</th>
<th>Voltage</th>
<th>Power</th>
<th>LED Info</th>
<th>Total Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT-3D209W120IPF</td>
<td>140°</td>
<td>24W</td>
<td>2W</td>
<td>GM20930 12pcs</td>
<td>200mm</td>
</tr>
<tr>
<td>HT-3D209W120IPF</td>
<td>140°</td>
<td>24W</td>
<td>6W</td>
<td>GM20930 12pcs</td>
<td>200mm</td>
</tr>
<tr>
<td>HT-3D209W120IPF</td>
<td>140°</td>
<td>24W</td>
<td>12W</td>
<td>GM20930 12pcs</td>
<td>200mm</td>
</tr>
<tr>
<td>HT-3D209W120IPF</td>
<td>140°</td>
<td>24W</td>
<td>15W</td>
<td>GM20930 12pcs</td>
<td>200mm</td>
</tr>
</tbody>
</table>

**PRODUCT FEATURES**

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

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