



New smart lighting control solution



Smart Lighting Provider - DSTITAC



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## Light auto saving system

Light auto saving system

DSTITAC presents a new efficient lighting product and system - **iSMART Lighting** sensor lighting control system was popular with traditional lighting sources. Now, the LED lighting has become a new fashion together with energy saving in every lighting sites. It has limited to use only on/off function with motion detect sensor. We offers various functional saving with motion detect sensor combination with sensor to save great ratio compare then any others system efficiently. This intelligent control technology optimizes energy efficiency and reduces the building's operating costs.

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### Energy efficiency

The kyoto protocol / Building : the main source of energy saving

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### iSMART Lighting

PIR sensor lighting  
Microwave sensor lighting  
Sensors



## Energy efficiency

### The Kyoto protocol

Energy efficiency is no longer just an option. The Kyoto protocol has stimulated governments from all over the world to approve legislation guaranteeing a more intelligent and aware use of energy in buildings. In March 2007 the European Union committed to achieving reductions of **20% in CO<sub>2</sub> emissions** before 2020. This plan of action, known as "3x20 by 2020", also includes an increase of **20% in the level of Energy Efficiency** and **20% of energy produced from renewable energy sources**. To reach these objectives a number of real changes are required and governments are intensifying their efforts to pass new laws and set and regulate standards for greater energy efficiency



20% of energy from renewable sources



CO emissions reduced by 20%



Energy efficiency increased by 20%

### Reference Standards

This new trend of stricter energy efficiency began with the Kyoto Protocol. Laws like the Energy Policy Act in the United States have established the standards for our future energy.

In Europe, European directive 2002/91/CE (EPBD) regarding energy yields in the building sphere and again, On 18/06/2010 the new European directive (2010/31/CE) regarding energy performance in the building industry was published.

This recognises the importance of active control systems, like automated, control and monitoring systems aimed at saving energy. Initiatives in the private and public sector:

- UNI EN 153232 standard This standard is used to assess the impact of building automation systems on active energy efficiency, by establishing the potential energy saving on heating and electricity depending on the type of building.

- The LEED R Green building Rating System is standard for energy certification and sustainability for the design, construction and running of buildings, created from voluntary contributions. The LEED was originally compiled in the USA by the US Green Building Council, a no-profit association founded in 1993. The standard rapidly became accepted internationally and is now the most commonly used certification system in the world

# Intelligent Lighting

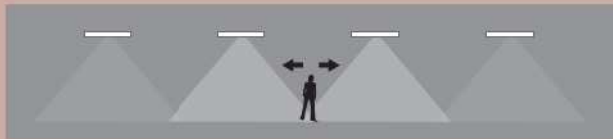
iSMART - PIR



## Save upto 90% energy & money

- Basic energy consumption chart

Type	Watt	Power consumption(W) for dim level at stand by mode			lm per dim level at stand by mode		
		10%	30%	50%	10%	30%	50%
600mm T8 LED TUBE Sensor W/Dim	10±1W	2,5±1W	3,5±1W	6,5±1W	10±15lm	200±15lm	250±15lm
1200mm T8 LED TUBE Sensor W/Dim	18±1W	3,5±1W	4,5±1W	9,2±1W	150±15lm	400±15lm	1100±15lm

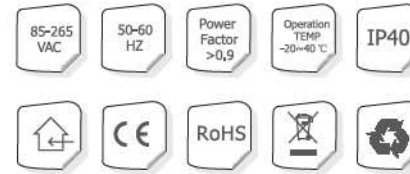


keep low intensity (10, 20, 30%) until lamp integrated sensor detect  
Immediately full bright (100%) once it detect movement



## iSMART PIR - T8 LED TUBE

### LED T8 LED sensor Tube



### Feature & Benefits

- 120 degree sensitive angle and 10M distance
- 30 seconds to 30 minutes interval can be set.
- OFF, 10%, 30% or 50% standby brightness can be set.
- T8 shape with G13 socket and other different socket type options available.
- Optimum light uniformity and high color homogeneity.
- Extremely robust with aluminum heat sink and polycarbonate cover.
- Power Factor: 0.9, Efficiency >88%.
- Overpower, short and open circuit protected.
- NO noise, NO flicker, NO UV and IR.
- Mercury-free and RoHS compliant.
- Comply with CE, FCC and UL standards.

### LED T8 LED sensor Tube 2835 SMD LEDs / PIR sensor



### Odering information

Part Number	Description	Unit
DLT6-80610-4072W-H0-N	T8 LED Tube, With PIR sensor, 0,6M, Milky Lens, G13, 72 SMD2835 LEDs, Warm Wite, 85-265VAC	PCS
DLT6-80610-4072N-H0-N	T8 LED Tube, With PIR sensor, 0,6M, MilkyLens, G13, 72 SMD2835 LEDs, Natural Wite, 85-265VAC	PCS
DLT6-80610-4072C-H0-N	T8 LED Tube, With PIR sensor, 0,6M, MilkyLens, G13, 72 SMD2835 LEDs, Cool Wite, 85-265VAC	PCS
DLT6-81210-4120W-H0-N	T8 LED Tube, With PIR sensor, 1,2M, MilkyLens, G13, 120 SMD2835 LEDs, Warm Wite, 85-265VAC	PCS
DLT6-81210-4120N-H0-N	T8 LED Tube, With PIR sensor, 1,2M, MilkyLens, G13, 120 SMD2835 LEDs, Natural Wite, 85-265VAC	PCS
DLT6-81210-4120C-H0-N	T8 LED Tube, With PIR sensor, 1,2M, MilkyLens, G13, 120 SMD2835 LEDs, Cool Wite, 85-265VAC	PCS
DLT6-81510-4152W-H0-N	T8 LED Tube, With PIR sensor, 1,5M, MilkyLens, G13, 156 SMD2835 LEDs, Warm Wite, 85-265VAC	PCS
DLT6-81510-4152N-H0-N	T8 LED Tube, With PIR sensor, 1,5M, MilkyLens, G13, 156 SMD2835 LEDs, Natural Wite, 85-265VAC	PCS
DLT6-81510-4152C-H0-N	T8 LED Tube, With PIR sensor, 1,5M, MilkyLens, G13, 156 SMD2835 LEDs, Cool Wite, 85-265VAC	PCS

## Technical Specification

### Physical Specifications

Length	600mm	1200mm	1500mm
Weight	212g	360g	441g
Housing	Aluminum Base+PC Cover		
Lens	Milky		
Tube Diameter	T8		
Base Type	G13/R17d		
Work Environment	Indoor use (applicable for dry environments)		

### Electrical Specifications

	600mm	1200mm	1500mm
LED Quantity	72LEDs	120LEDs	156LEDs
Power Consumption	10 ± 1W	15 ± 1W, 18 ± 1W	18 ± 1W, 21 1W
Output Current	170mA	230mA	340mA
Input Voltage	85- 265VAC		
Power Factor	>0,95		
Light Source	2835SMD LEDs, more than 11LM each		
Operation Temperature	-20~40℃		

### Optical Specifications

	600mm	1200mm	1500mm		
Power Consumption	10W	15W	18W	18W	22W
Lumens	>850lm	>1530lm	>1700lm	>1700lm	>2000lm
Luminous Efficacy	> 85 lm/w	> 85 lm/w	> 89 lm/w	> 89 lm/w	> 91 lm/w
Color Temperature	Warm White:2900K-3200K				
	Natural White:5000K-5300K				
	Cool White:6500K-6800K				
CRI	>75				
Beam Angle	120 Degree				

Technical / design details could be changed without noticed

\* Results of 6500K with milky lens

## Advantage

### Optic Lens

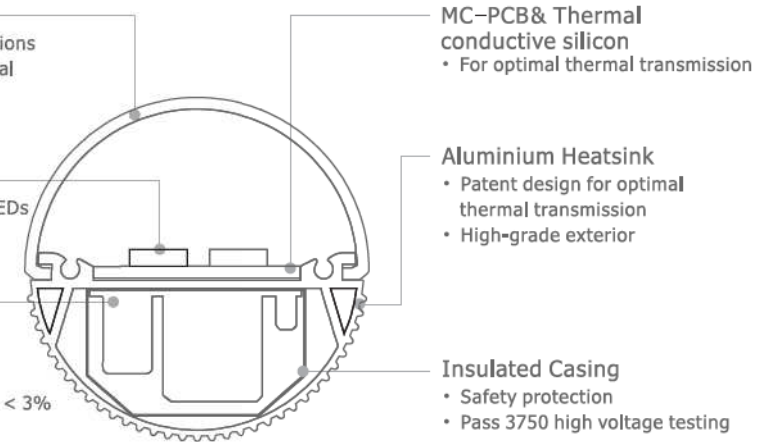
- Clear, milky and stripped options
- TEIJIN Polycarbonate material
- Light transmittance > 90%
- 94-V0 approved

### SMD LEDs

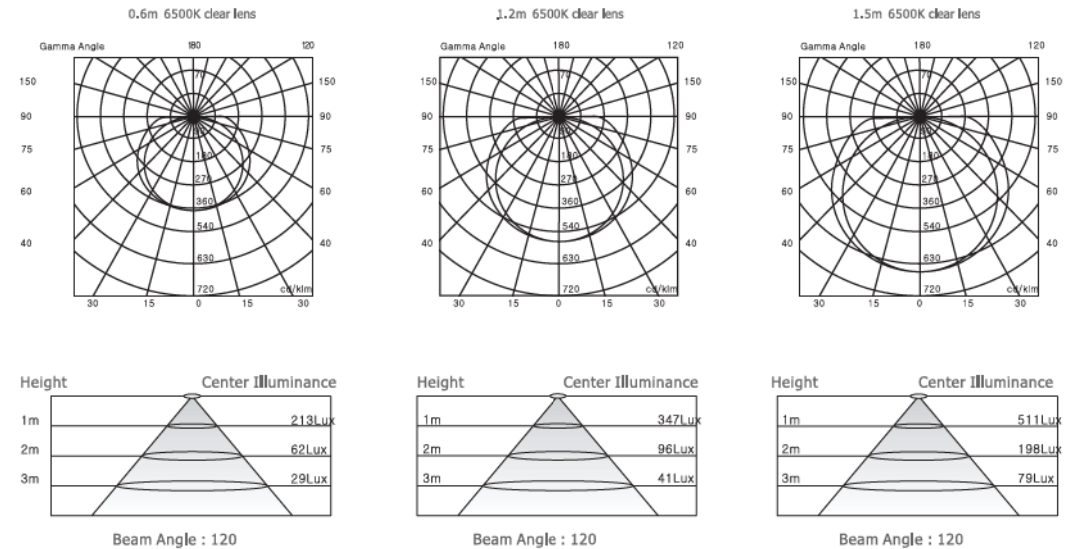
- High brightness 2835 SMD LEDs
- High color homogeneity

### LED Driver

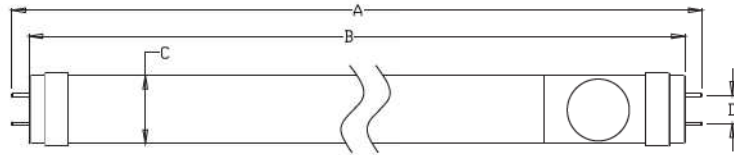
- Isolated driver
- Efficiency > 88%
- Power Factor >0.9
- Constant Current fluctuation < 3%



## Photometric Data

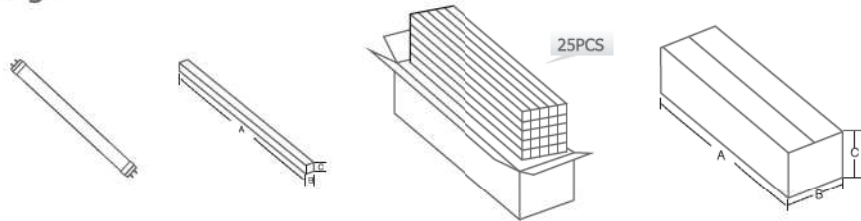


## Dimension & packing details



Item	A:MAX (mm)	B:MAX (mm)	C:MAX (mm)	D:MAX (mm)
2ft/600mm	604	589	26	13
4ft/1200mm	1215	1199	26	13
5ft/1500mm	1514	1499	26	13

## Package



Tube	Box	Corton		
Item	ABC:MAX (mm)	Gross Weight (g)	ABC:MAX (mm)	Gross Weight (g)
2ft/600mm	612*32*32	255.8	640*180*180	6735
4ft/1200mm	1223*32*32	440.4	1250*180*180	11665
5ft/1500mm	1523*32*32	543.4	1550*180*180	14440

## Ordering no. logic

DLT1 ----- (E) ----- 8 ----- 06 ----- 0 ----- 0 ----- 1 ----- 144 ----- W ----- H1

Tube Type	External PSU	Diameter	Length	Cover Type	Base Type	LED Type	LED QTY	Color Temp.	Input Voltage
DLT1	Normal Type	S:T5	0.6m	0: Clear	0: G13	1: 3528		Warm White	L0: 11-18V DC
DLT2	Electronic Ballast Compatible	B:T8	1.2m	1: Milky	1: Rctatable	2: 3022		Natural White	L1: 12VDC
DLT3	Inductive Ballast Compatible	L:T10	1.5m		2: F8	3: 3014		Cool white	L2: 24VDC
DLT4	Single end power type				3: R17D	4: 2835			L5: 5VDC
DLT5T	Triac Dimmable								H0: 100-240VAC/85-265VAC
DLT5S	Switch Dimmable								H1: 100-130VAC
DLT6	PIR sensor								H2: 220-240VAC

READ ALL CAREFULLY BEFORE INSTALLING, KEEP THE USER MANUAL FOR FUTURE USE



### FEATURES

- 120 degree sensitive angle and 10M distance.
- 30 seconds to 3 minutes interval can be set.
- OFF, 10%, 30% or 50% standby brightness can be set.

### GENERAL

The DLT6 T8 LED tubes are designed with PIR sensor, for ultimate energy saving and should be installed and maintained according to the following recommendations. They are designed to operate in ambient temperature ranging from -20°C to 40°C.

### UNPACKING

The tubes have been properly packed so that no parts should have been damaged during transit. Inspect to confirm.

The carton should contain a luminaire and a user manual.

NOTE: Be careful not to impact or scratch the lens.

### HANDLING

Damage may occur if luminaire is improperly handled outside of pack. Do not impact luminaire after removal from packaging.

### SAFETY STANDARDS

EN60598-1: 2008 EN61547: 2009 EN55015/A2: 2009



To avoid the risk of electric shock, fire or injury, please note the following before installation or maintenance:

- Make sure the main power source is turned OFF.
- Do NOT take the luminaire apart or reassemble it.
- Do NOT use the luminaire in raining or wet environment.
- Check to confirm the rated working voltage and specification.
- Make sure the luminaire fixture is ground protected.
- Do NOT look directly at LED light source while energized.
- Turn power ON before making sure the luminaire is properly installed.

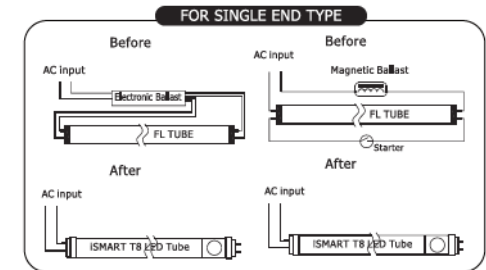
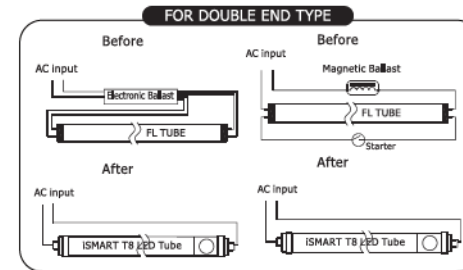
### INSTALLATION STEPS

#### Retrofit Luminaire with Electronic Ballast

- 1, Turn OFF main power source.
- 2, Remove existing fluorescent tube.
- 3, Modify the circuits according to the following drawing.
- 4, Drop the DLT6 T8 LED Tube into the luminaire fixture.
- 5, Turn ON the main power to light it.

#### Retrofit Luminaire with Magnetic Ballast

- 1, Turn OFF main power source.
- 2, Remove existing fluorescent tube.
- 3, Modify the circuits according to the following drawing.
- 4, Drop the DLT6 T8 LED Tube into the luminaire fixture.
- 5, Turn ON the main power to light it.



For more information, please check the LT6 data sheet.

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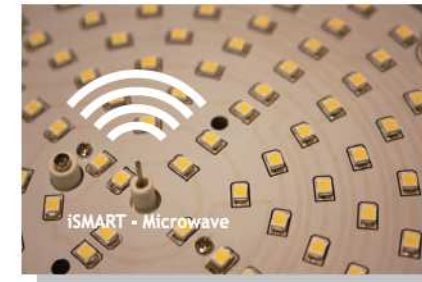
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# Intelligent Lighting

iSMART - Microwave

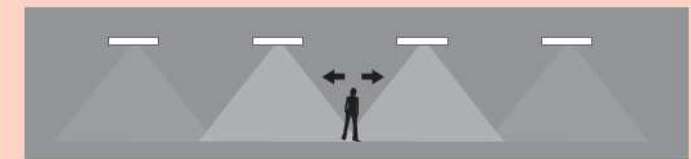
## iSMART - Microwave

Proposed to more public and place needs more accurate operations

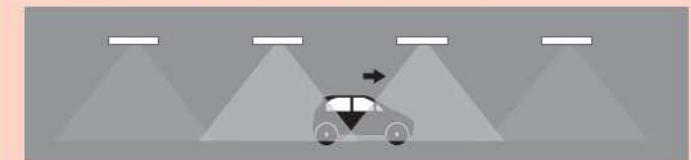


## Save upto 90% energy & money

Item	Model	Full power / lm		Power consumption (Watt) at			lm output per dim level at		
		Watt	lm	20%	30%	50%	20%	30%	50%
iSMART - Ceiling lamp	MRT-10-01 (3000K)	10W	720	3.2Ws15%	3.8Ws15%	5.0Ws15%	144lm15%	216lm15%	360lm15%
	MRT-10-02 (3000K)	13W	900	3.4Ws15%	4.2Ws15%	5.0Ws15%	160lm15%	270lm15%	450lm15%
	MRT-10-03 (3000K)	16W	1040	3.8Ws15%	4.8Ws15%	6.5Ws15%	208lm15%	312lm15%	520lm15%
iSMART - Bulb	MRT-07-01 (3000K)	4W	250	2.5Ws15%	3.0Ws15%	3.2Ws15%	50lm15%	75lm15%	125lm15%
	MRT-07-02 (3000K)	7W	460	3.0Ws15%	3.8Ws15%	4.8Ws15%	92lm15%	138lm15%	230lm15%
iSMART - TB tube	MRT-08-01 (4300K)	10W	700	2.8Ws15%	3.5Ws15%	5.0Ws15%	140lm15%	210lm15%	350lm15%
	MRT-08-02 (4300K)	18W	1400	4.0Ws15%	5.0Ws15%	8.5Ws15%	280lm15%	420lm15%	700lm15%
	MRT-08-03 (4300K)	24W	1900	5.5Ws15%	6.8Ws15%	10.5Ws15%	380lm15%	570lm15%	950lm15%

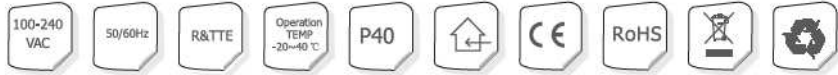


keep low intensity (10, 20, 30%) until lamp integrated sensor detect. Immediately full bright (100%) once it detect movement



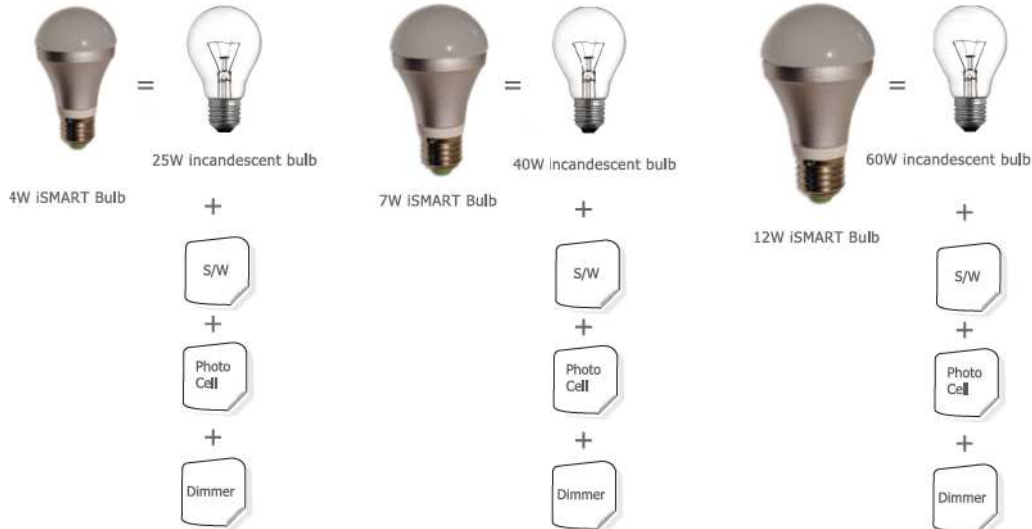
## iSMART Micro - LED Bulb series

### LED sensor Bulb



### Feature & Benefits

- 360 degree sensitive angle and 2.5~3M Height, 5M angle distance
- 30 seconds to 30 minutes interval can be set.
- OFF, 20%, 30% or 50% standby brightness can be set.
- Bulb shape with E27 socket
- Optimum light uniformity and high color homogeneity.
- Extremely robust with aluminum heat sink and polycarbonate cover.
- CRI > 80
- Photo cell function: Auto identify the environment illumance, working after it.
- Corridor function: vacant in the detection area  
1) 1-10s, 100% intensity, 2)10-40s 20% intensity, 3)after 40, off
- Overpower, short and open circuit protected.
- NO noise, NO flicker, NO UV and IR.
- Mercury-free and RoHS compliant.
- Comply with CE, FCC , RoHS, R&TTE



## Technical specification

Model	MRT-07-01	MRT-07-02	MRT-07-03
Rated input	100-240V 50/60Hz		
input power	4W	7W	12W (Ready in 2014)
PF	>0.5	>0.9	
Total lm	250lm	480lm	
Optical CCT	3000K/4000K/6000K		
Base	E27		
Dimension	ø60mm * 110mm		N/A
CRI	>80		
LED type	SMD		
Working temp.	-10°C ~ 40°C		
Life time	30,000 hours		

### INDUCTION PARAMETERS

- Ambient illuminance threshold :10lux
- Time interval :10s ON-Dimming 30s Dimming-off
- Diming level : 20% lm
- Detection range: 2.5 ~ 5m
- Sensor angle: 360 degrees
- HF system: 5.8Ghz ISM wave band
- Transmission power: <0.5mW (1% of cellphone standard power)
- Motion detection range: 0.5 ~ 3m/s
- Note: Motion only can detect movement of object bigger than 0.3m  
Detection range is related to height and weight of object

### COMPARED PARAMETERS

item	product	Incandescent bulb	LED Bulb (General)	iSMART- LED BULB
Power (W)		25W	4W	4W
Lumious efficiency (lm/w)		10lm/W	71.5lm/W	71.5lm/W
Luminous flux (lm)		250lm	250lm	250lm
Life-span (H)		2000h	30000h	30000h
Yearly power consumption (W)		91250W	14600	8760
Yearly cost (USD)		\$91.25	\$14.60	\$8.76
Carbon emission (KG) (IPCC Standard: 0.637kg/kwh)		58.13KG	9.3KG	5.5KG

## Important Notice

### 1. Installation

- To avoid interference each other, space between each bulbs must larger than 1M
- Microwave from bulb can't not go through metal, brick wall, If thickness arger than 20cm. it can go through thin wall but will be attenuated
- Installation behind a glass / plastic will result in reduction of detection area. Approx. reduce by 20% with every 3mm thickness
- To get more reliable sensitivity, the bulb should be not installed in a glass cover
- It is not recommended to install bulb in a small area (smaller than 10m )

### 2. Working mode (Sensor Initialization Mode)

- After connecting to mains and power on, bulb will light up 100% lm for 10sec. and then s/w off itself (this is called initialization mode)
- After initialization mode, if no motion in detection range, bulb will keep off. if any motion in detection range, it will work intelligently as description in normal mode.

\* Working mode can be changed by customer requirement

### 2. Working mode (Sensor Initialization Mode)

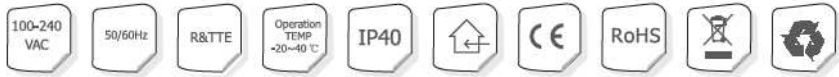
- After connecting to mains and power on, bulb will light up 100% lm for 10sec. and then s/w off itself (this is called initialization mode)
- After initialization mode, if no motion in detection range, bulb will keep off. if any motion in detection range, it will work intelligently as description in normal mode.

\* Working mode can be changed by customer requirement



## ISmart Micro - LED T8 Tube

### LED T8 LED sensor Tube



#### Feature & Benefits

- 120 degree sensitive angle and 2.5~3M Height, 15M angle distance
- 30 seconds to 30 minutes interval can be set.
- OFF, 20%, 30% or 50% standby brightness can be set.
- Bulb shape with G13 socket
- Optimum light uniformity and high color homogeneity.
- Extremely robust with aluminum heat sink and polycarbonate cover.
- CRI > 80
- Photo cell function: Auto identify the environment illumination, working after it.
- Corridor function: vacant in the detection area  
1) 1-10s, 100% intensity, 2)10-40s 20% intensity, 3)after 40, off
- Overpower, short and open circuit protected.
- NO noise, NO flicker, NO UV and IR.
- Mercury-free and RoHS compliant.
- Comply with CE, FCC, RoHS, R&TTE



#### Technical specification

Model Type	Input Voltage	Power	Beam Angle	CCT	Size	Luminous Flux	CRI
MRT-08-01	100-240V 50/60Hz	8W	120 +/-10°	2700K 4300K 6400K	ø26*600mm	640lm	>80
MRT-08-02		12W			ø26*900mm	810lm	
MRT-08-03		15W			ø26*1200mm	1200lm	
MRT-08-04		20W			ø26*1500mm	1500lm	

#### Important Notice

##### 1. Installation

- To avoid interference each other, space between each bulbs must larger than 1M
- Microwave from bulb can't not go through metal, brick wall, If thickness arger than 20cm. it can go through thin wall but will be attenuated
- Installation behind a glass / plastic will result in reduction of detection area. Approx. reduce by 20% with every 3mm thickness
- To get more reliable sensitivity, the bulb should be not installed in a glass cover
- It is not recommended to install bulb in a small area (smaller than 10m )

##### 2. Working mode (Sensor Initialization Mode)

- After connecting to mains and power on, bulb will light up 100% lm for 10sec. and then s/w off itself (this is called initialization mode)
- After initialization mode, if no motion in detection range, bulb will keep off. if any motion in detection range, it will work intelligently as description in normal mode.

\* Working mode can be changed by customer requirement

##### 2. Working mode (Sensor Initialization Mode)

- After connecting to mains and power on, bulb will light up 100% lm for 10sec. and then s/w off itself (this is called initialization mode)
- After initialization mode, if no motion in detection range, bulb will keep off. if any motion in detection range, it will work intelligently as description in normal mode.

\* Working mode (ON/off or Dim) can be changed by customer requirement

## ISmart Micro - LED down light

### LED sensor down light



#### Feature & Benefits

- 120 degree sensitive angle and 2.5~3M Height, 10M angle distance
- 30 seconds to 30 minutes interval can be set.
- OFF, 20%, 30% or 50% standby brightness can be set.
- Bulb shape with G13 socket
- Optimum light uniformity and high color homogeneity.
- Extremely robust with aluminum heat sink and polycarbonate cover.
- CRI > 80
- Photo cell function: Auto identify the environment illumination, working after it.
- Corridor function: vacant in the detection area  
1) 1-10s, 100% intensity, 2)10-40s 20% intensity, 3)after 40, off
- Overpower, short and open circuit protected.
- NO noise, NO flicker, NO UV and IR.
- Mercury-free and RoHS compliant.
- Comply with CE, FCC, RoHS, R&TTE



#### Technical specification

Model Type	Input Voltage	Power	PF	Beam Angle	CCT	Size	Luminous Flux	CRI
MRT-09-01	100-240V 50/60Hz	9W	>0.9	120 +/-10°	2700K	4 inch	480lm	>80
MRT-09-02		15W			4300K	6 inch	1280lm	
MRT-09-03		20W			6400K	8 inch	1700lm	

#### COMPARED PARAMETERS

item	product	Incandescent bulb	LED down light (General)	ISmart- LED BULB
Power (W)		40W	7W	7W
Lumious efficiency (lm/w)		12lm/W	68.6lm/W	68.6lm/W
Luminous flux (lm)		480lm	480lm	480lm
Life-span (H)		2000h	30000h	30000h
Yearly power consumption (W)		146000	27375	16425
Yearly cost (USD)		\$146.00	\$27.38	\$16.42
Carbon emission (KG) (IPCC Standard: 0.637kg/kwh)		93KG	17.35KG	10.41KG

\* Working mode (ON/off or Dim) can be changed by customer requirement

# iSMART Micro - LED Ceiling light



- 120 degree sensitive angle and 2.5~3M Height, 10M angle distance
- 30 seconds to 30 minutes interval can be set.
- OFF, 20%, 30% or 50% standby brightness can be set.

Optimum light uniformity and high color homogeneity.  
Extremely robust with aluminum heat sink and

Photo cell function: Auto identify the environment illuminance, working after it.

Corridor function: vacant in the detection area  
1) 1-10s, 100% intensity, 2)10-40s 20% intensity, 3)after 40, off  
Overpower, short and open circuit protected.



Model Type	Input Voltage	Power	PF	Beam Angle	CCT	Size	Luminous Flux	CRI
MRT-10-01	100-240V 50/60Hz	10W	>0,9	120 +/-10°	2700K	ø185*65Hmm	720lm	>80
MRT-10-02		13W			4300K	ø238*65Hmm	800lm	
MRT-10-03		16W			6400K	ø298*65Hmm	17001040	

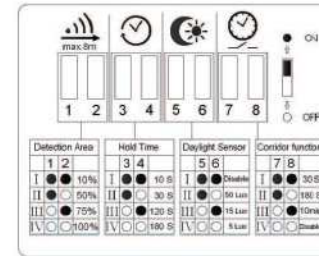
item	product	Incandescent bulb	LED down light (General)	iSMART- LED BULB
Power (W)		60W	12W	12W
Lumious efficiency (lm/w)		12lm/W	62.5lm/W	68.662.5
Luminous flux (lm)		750lm	750lm	750lm
Life-span (H)		2000h	30000h	30000h
Yearly power consumption (W)		219000	43800	26280
Yearly cost (USD)		\$219.00	\$43.80	\$26.28
Carbon emission (KG)		139.5KG	27.76KG	16.65KG
(IPCC Standard: 0.637kg/kwh)				

\* Working mode (ON/off or Dim) can be changed by customer requirement

## INDUCTION PARAMETERS

- Ambient illuminance threshold :10lux
- Time interval :10s ON-Dimming 30s Dimming-off
- Diming level : 20% Im
- Detection range: 2.5 ~ 10m
- Sensor angle: 120 degrees

- HF system: 5,8Ghz ISM wave band
- Transmission power: <0.5mW (1% of cellphone standard power)
- Motion detection range: 0.5 ~ 3m/s
- Note: Motion only can detect movement of object bigger than 0.3m  
Detection range is related to height and weight of object



## User frendly function for ceiling light

The ceiling lamp can be adjustable by user as following :  
you only put the hold time on 30s or 120s as you like ,and  
the corridor function on disable ,then it will keep 20% on  
all the time .

## Important Notice

### 1. Installation

- To avoid interference each other, space between each bulbs must larger than 1M
- Microwave from bulb can't not go through metal, brick wall, If thickness arger than 20cm. it can go through thin wall but will be attenuated
- Installation behind a glass / plastic will result in reduction of detection area. Approx. reduce by 20% with every 3mm thickness
- To get more reliable sensitivity, the bulb should be not installed in a glass cover
- It is not recommended to install bulb in a small area (smaller than 10m )

### 2. Working mode (Sensor Initialization Mode)

- After connecting to mains and power on, bulb will light up 100% Im for 10sec. and then s/w off itself (this is called initialization mode)
- After initialization mode, if no motion in detection range, bulb will keep off. if any motion in detection range, it will work intelligently as description in normal mode.

\* Working mode can be changed by customer requirement

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