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# SPECIFICATIONS

Product Name: Wireless Data Acquisition System  
Transmitter

Model:WDT-5E-Z2/WDT-6M-Z2

**PATLITE Corporation**

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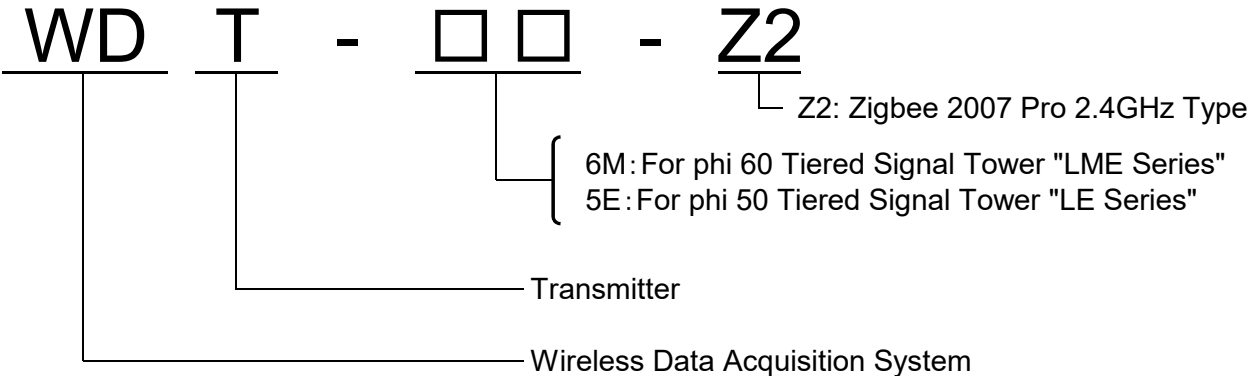
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1.Applicator

This specification is applied to the Wireless Data Acquisition system Transmitter WDT-6M-Z2 and WDT-5E-Z2.

2.Model



### 3. General Specifications

Item	Specifications	
	WDT-6M-Z2	WDT-5E-Z2
Compatible Tiered Signal Towers	LME Series	LE Series <sup>*1</sup>
Rated Voltage	DC24V(Non-polar)	
Operating Voltage Range	DC21.6V~DC26.4V	
Consumption current <sup>*</sup>	20mA±10mA	
Operating Temperature Range	-10°C ~ + 60 °C (No dew or condensation accumulated)	
Relative Humidity	Below 85%RH (No Dew or Condensation)	
Storage Temperature Range	-20 °C ~ +70 °C (No freezing)	
Installation Direction	Upright Only (Indoor Only)	
Protection Rating	Conforms to installed Signal Tower	
Mass	52g±5g	

<sup>\*1</sup>: Please ask collation of form separately.

### 4. Structure Specifications

Item	Specifications	
	WDT-6M-Z2	WDT-5E-Z2
Head Cover	Casting (Material:ABS/PBT)	
Lens	Casting (Material:PC)	
Bracket	Casting (Material:PC)	
Waterproof Gasket (O-ring)	Casting (Material:NBR)	

### 5. Performance Specification:


Item	Specifications	
	WDT-6M-Z2	WDT-5E-Z2
Telecommunication Protocols	IEEE 802.15.4	
Communication Frequency	2405 MHz - 2480 MHz (16 channels)	
Wireless Transmission Method	Direct diffusion (DS-SS <sup>*2</sup> ) system	
Communication Method	Zigbee 2007 Conformity; Zigbee Pro-stack Loading (unique profile implementation)	
Wireless Transmission Speed	Theoretical value maximum 250k-bps <sup>*3</sup>	
Transmission Output	No more than 3mW (Depending on Antenna Access Point)	
Radio Wave Range <sup>*4</sup> (Reference Value)	About 30m from source	
Number of hopping	Maximum of 30 hops	
Conformity Standards	RoHS, CE(R&TTE), FCC <sup>*5</sup> , UL	
Radio Law Compliant Areas	Japan, The United States of America, Europe, China <sup>*6</sup> , Taiwan <sup>*7</sup> , Thailand <sup>*8</sup> , Philippines <sup>*9</sup> , Vietnam	

<sup>\*2</sup>: DS-SS = Direct Sequence-Spread Spectrum

<sup>\*3</sup>: Change with a setting position or communication environment in view of the characteristic of an electric wave.

<sup>\*4</sup>: Electric wave range changes with a setting position or communication environment in view of the characteristic of an electric wave.

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- \*5: FCC ID: V24271
- \*6: CMIIT: 2014DJ3779(WDT-5E-Z2), 2014DJ3901(WDT-6M-Z2)
- \*7:  CCAH14LP0360T8
- \*8: This telecommunication equipment conforms to technical standard NTC TS 1012-2551
- \*9: NTC Type Accepted No.ESD-1510088C(WDT-5E-Z2),No.ESD-1510087C(WDT-6M-Z2)

## 6.Functional Specifications

- Perform a wireless network link automatically.
- Function settings can be transmitted from the transmitter to the WDR-LE-Z2 receiver.
- The status (lighting, flashing, No lighting) of a Tiered Signal Tower for each color (red, yellow, green, blue, and white) is transmitted.
- A luminescent pattern of 3 colors (green = strong, orange=good, red = weak) displays the radio wave strength.
  - \* Definition of Radio Wave Status
    - Strong: Radio-wave-intensity  $\geq -84$ dBm
    - Good:  $-87$ dBm < Radio-wave-intensity <  $-84$ dBm
    - Weak: Radio-wave-intensity  $\leq -87$ dBm
  - \* One signal line from the Tiered Signal Tower always has to be used to supply DC24V of power to the transmitter.

## 7.Detailed Functional Specifications

### 7-1 Send Data Information

Following information can be transmitted.

- The status change on the Tiered Signal Tower when lights turn on or off.

### 7-2 Transmission Method

Three kinds of patterns can transmit information

1. The status change on the Tiered Signal Tower is sensed when lights turn on, off or are blinking.
2. A command request from the receiver changes information.
3. A command request from the receiver changes internal Wireless Information or Transmitter Information.

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## 8. Safety Precautions for Handling

### 8.1 Safety Warnings

- The power supply rating is DC24V. Don't exceed the voltage tolerance, or apply an AC voltage. Failure to comply will result in internal circuitry damage. Moreover, there is fear of fire.
- Prior to maintenance or repair, be sure to turn off the power. Failure to comply may result in electric shock or damage to this machine.
- Do not expose to high temperatures, high humidity or near open flames. Moreover, do not use this machine in locations where corrosive or combustible gas is present. Disfiguration or other abnormalities may occur, and may possibly result in an accident.

### 8.2 Precautions for Use

- Don't use it in a location with poor ventilation. Possible cause of failure may occur.
- Don't use it in a location where corrosive gas and combustible gas is present. Possible cause of failure may occur.
- Don't use it near equipment (solenoid etc.) which creates strong electric or magnetic fields. Failure to comply may result in malfunction due to inductive noise.
- Don't use it in a place where it will be exposed to direct sunlight. Possible cause of failure or disfiguration may occur.
- Don't use it in a place where intense temperature change and dew is present. Possible cause of failure may occur.
- Don't use it in a place exposed to sea air. Possible cause of failure may occur.
- Don't use it on a machine where vibration is transmitted directly. Possible cause of failure may occur.
- Don't use it in an environment where it would be exposed to dust, iron powder, etc. Possible cause of failure may occur.
- Don't use it in a place where chemicals and oil mist is present. Possible cause of failure may occur.
- Do not expose to high temperatures, high humidity or near open flames. Possible cause of failure may occur.
- Don't install on a machine which may sink. Failure will occur if liquids (water, chemicals, etc.) penetrate the inside.
- The Main Unit is made of resin. Be careful to not allow collision with hard objects. Damage to the Main Unit may occur.
- Since wireless communications are used, use this machine after understanding the characteristic of wireless well.

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- This product's frequency band operates on the microwave frequency along with machinery, universities or factory assembly lines which uses in-house radio stations (radio station permits required), as well as specific low-power radio stations (radio station permits not required), as well as amateur radio stations (radio station permits not required) that are in use.

- (1) Before using this product, ensure there are no in-house radio stations presently in use, as well as specific low power radio stations or amateur radio stations in the vicinity.
- (2) If by chance interference from this product affects an in-house radio station, immediately change the frequency being used, or stop radio wave emissions and contact the following address to consult on how to prevent interference (i.e. establish a partition).
- (3) Also, if interference from this product affects a low-power or amateur radio station, contact your Patlite Sales Representative for information.

### 8.3 Maintenance

- Be sure the power is turned off before performing any maintenance work.
- Do not wipe this product with volatile chemicals, or chemically treated dust cloth containing benzene, thinner etc.
- Wipe this product with a soft dry cloth.
- When it is difficult to remove dirt by wiping with a dry cloth, dampen the cloth with water, then firmly wipe it.
- Be sure to store the packaging materials used for this product for when shipping it becomes necessary.

## 9.Regarding Disposal

- When discarding this equipment, follow the laws and regulations in accordance with the ordinance and rules of the local self-governing body for industrial waste.

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\* The intention of this machine is not intended for applications which involves human life or highly advanced reliability. If this product is used for such applications above, or applications outside the intended use of this product, causing an accident resulting in injury, death, damage, production delay, etc. due to the failure or malfunction of this machine, we are not liable. When using this machine for security purposes, use it in addition to other security products and inspect it periodically.

- Our company is not responsible for any damage or other disadvantages inflicted upon the customer due to the customer's use of this software, or any claims from a third party.



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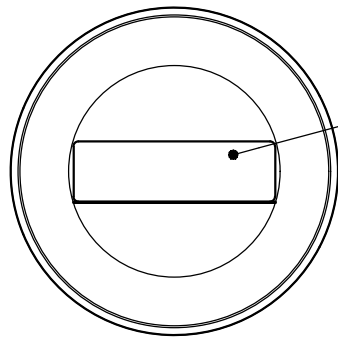
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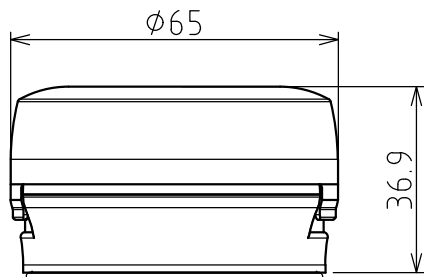
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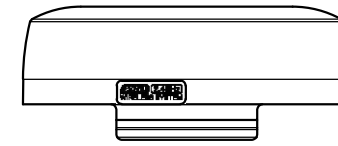
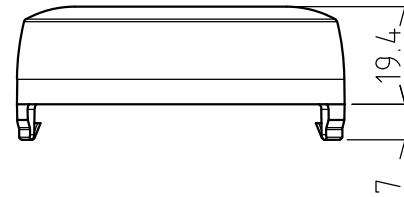
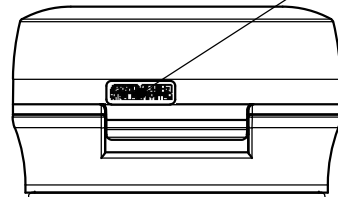


Name Plate

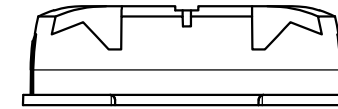
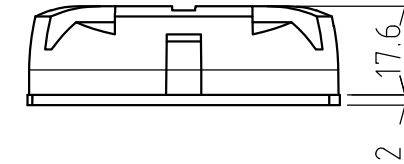
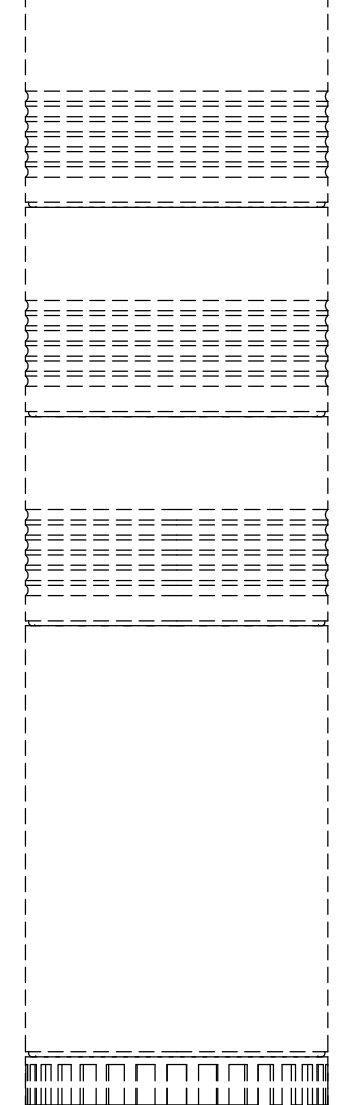
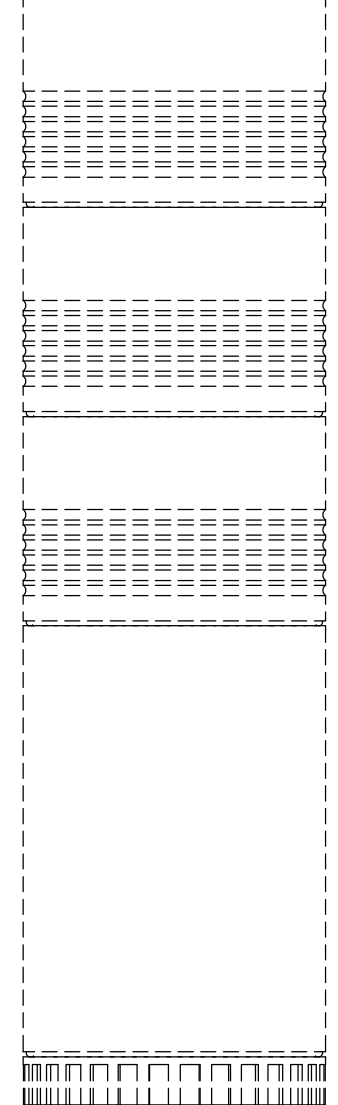
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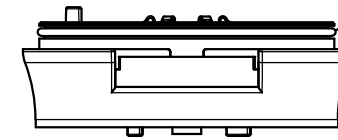
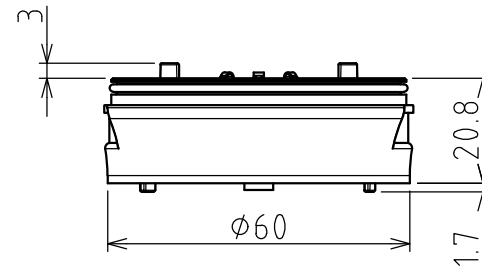
Identification Label



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指定 公差 General Tolerance	角度公差 ±[°]		寸法公差 ±[mm]					図番 Drawing No.		ページ Page
	短辺 長さ Length of short side	~ ~ 100	6	30	120	300	1000	WDT-6M-Z2-W18		9 / 10
	精 f	1 0.5 0.3 0.1	精 f	0.05	0.1	0.2	0.4	0.6	改訂 Rev.	年月日 Date
粗 v	3 1.5 1 0.5	粗 c	0.3	0.5	1	1.2	2	△		

[環境物質管理要領](K-BT-品質7-02)に示す規制を満たすこと。  
Be sure to satisfy the regulations of "Management Standard for the Environmental Substances"(K-BT-QUALITY7-02).

4	Head Cover	1	PBT/ABS resin Light gray
3	lens	1	PC resin Clear
2	O-Ring	1	NBR Black
1	bracket	1	PC resin Light gray
番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks
機種 Model	WDT-6M-Z2	特注No. S.P.No.	-
品目コード Part No.	-	図名 Name	Dimensions
尺度 Scale	-	三角法 3rd Angle P.	単位 Unit mm
株式会社 パトライト PATLITE Corporation			

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Ver.2.0

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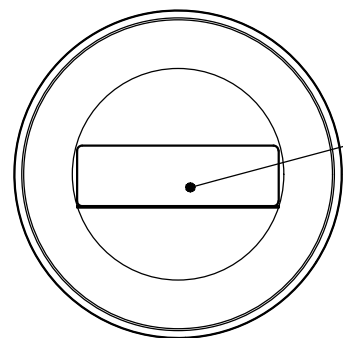
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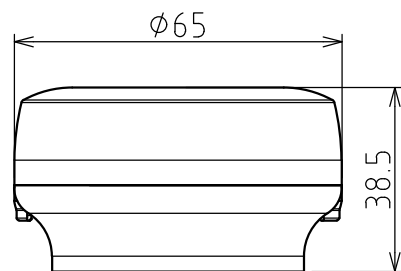
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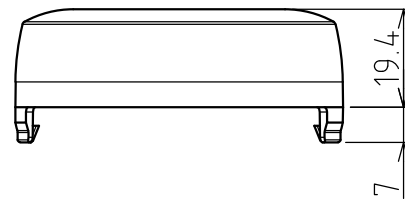
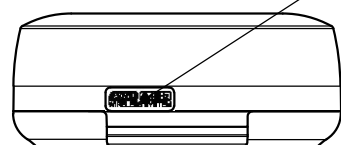
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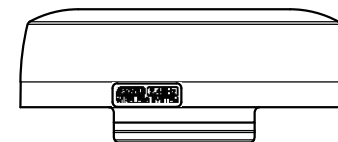
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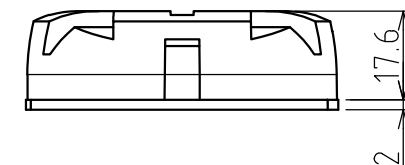
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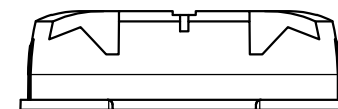
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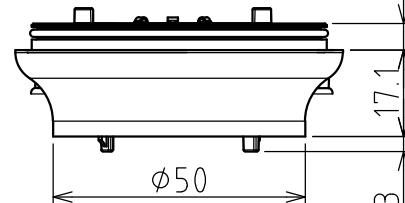
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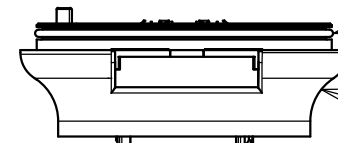
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指定 公差 General Tolerance	角度公差 ±[°]		寸法公差 ±[mm]					図番 Drawing No.		ページ Page	
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		単位 Unit	mm
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