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SPECIFICATIONS

Product Name: USB Signal Tower / Body Unit

Model: LR6-3USB□-RYG / LR6-USB□

PATLITE Corporation

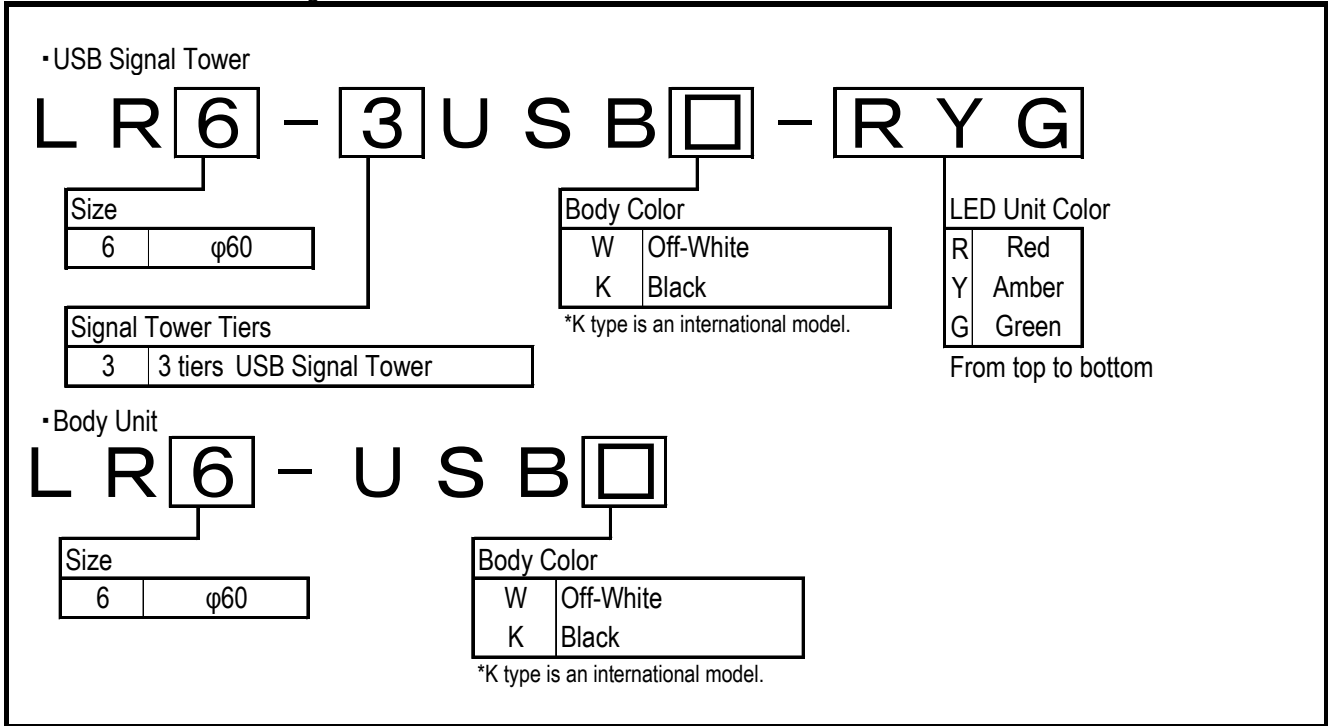
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1. General Specifications

Model	LR6-□USB□	
Rated Voltage	5V DC (USB Bus Power)	
Operating Voltage Range	Rated Voltage ±5%(Compliant with USB 2.0 standard)	
Rated Current Consumption Max.	500mA	
Operating Ambient Temperature	-20°C - +50°C	
Operating Ambient Humidity	90% RH or less (No Condensation)	
Storage Ambient Temperature	-30°C - +60°C	
Storage Ambient Humidity	90% RH or less (No Condensation)	
Mounting Location	Indoor Only	
Mounting Direction	Upright	
Protection Rating	IP 65 (IEC 60529) / NEMA TYPE 4X,13	
Environmental Condition	Upright	
Supported LED Unit(Optional)	LR6-E-□ (□=R,Y,G,B,C), LR6-E-□Z (□=R,Y,G,B), LR6-E-MZ	
LED Unit Control	Light On, Pattern On(4 Types)	
Buzzer	Operation	Sound On, Sound Pattern(4 Types)
	Frequency	13 Types
	Sound Pressure	Typ. 80dB (Sound Reduction: Approximately -10dB)
	Environmental Condition	Front direction from the Buzzer Aperture, at 1m Buzzer Frequency: 2349.3Hz
Mass(Tolerance:±10%)	LR6-USB□ : 140g LR6-3USB□-RYG : 320g	
Outer Dimensions	Refer to the Outer Dimension Drawing	
Communication Method	USB2.0 Full Speed	
Software Library(DLL) Supported OS	Windows 7, Windows 8(Excludes Windows 8 RT), Windows 8.1(Excludes Windows 8 RT), Windows 10	
Conformity Standards	UL 60950-1 ,CAN/CSA C22.2 No. UL60950-1-07 FCC Part 15 Subpart B Class B ICES-003 EMC Directive (EN 61000-6-3, EN 61000-6-2, EN55032 ClassB, EN55024) KC (KN 32, KN 35) RoHS Diredctive (EN 50581)	
Operation Unit	Volume Switch x1 (Sound Pressure: High/Low 2 Levels)	
Accessories	Flanged Nut(M4) x3, Cable Tie x1	
Option	Wallmount Bracket	SZK-003□
	Pole Bracket	SZP-004□
	Aluminum Pole	POLE-□00A21K, POLE-□00A21,
	Pole Mounting Base	SZ-016A, SZ-010
	L Bracket	Incompatible
Limitations	Units other than the corresponding LED unit can not be connected.	
	You cannot connect more than one LED unit(LR6-E-□,LR6-E-□Z) of the same color.	
	When you use LR6-E-MZ,you cannot connect any other units.	
	When you use LR6-E-MZ,there are two types of LED light patterns.	
Remark	CE Marking UL/cUL Listed	

2. Model

2.1. Model Number Configuration



2.2. Model Number List

LR6-3USBW-RYG	LR6-USBW
LR6-3USBK-RYG	LR6-USBK

3. Function Specification

3.1 Function overview

USB Communication Function	A function for connecting and communicating with the host PC via USB cable. Use software library (DLL).	—
LED Unit Control Function	A function for the host PC to control the LED Unit via USB Control Items: Light on / Light off/ Pattern on	Refer to 3.2.1
Buzzer Function	A function for the host PC to sound the buzzer built into the body unit via USB communication. Control Items: Buzzer on / Buzzer off/ Sound Pattern	Refer to 3.2.2
Buzzer Volume Change Function	A function for changing the buzzer volume via switch on the body unit. • Change Levels : 2 Levels (H : High Volume / L : Low Volume) • Initial Value : H	-

3.2. Function Detail

3.2.1. LED Unit Control Function

LED Unit Control	Light On(On)	Turns the LED Unit on, and keeps it on.				
	Light Off(Off)	Turns off the LED Unit. This is the initial state after the body unit is started.				
	Pattern On	Specify one of four types of LED patterns to illuminate the LED Unit. Operation of LED patterns for one cycle is shown in the following timing charts.				
	LED Pattern 1	<table border="1"> <tr> <td>ON (250msec)</td> <td>OFF (250msec)</td> <td>ON (250msec)</td> <td>OFF (250msec)</td> </tr> </table>	ON (250msec)	OFF (250msec)	ON (250msec)	OFF (250msec)
	ON (250msec)	OFF (250msec)	ON (250msec)	OFF (250msec)		
	LED Pattern 2	<table border="1"> <tr> <td>ON (500msec)</td> <td>OFF (500msec)</td> </tr> </table>	ON (500msec)	OFF (500msec)		
	ON (500msec)	OFF (500msec)				
	LED Pattern 3	<table border="1"> <tr> <td>ON (80msec)</td> <td>OFF (170msec)</td> <td>ON (80msec)</td> <td>OFF (670msec)</td> </tr> </table>	ON (80msec)	OFF (170msec)	ON (80msec)	OFF (670msec)
	ON (80msec)	OFF (170msec)	ON (80msec)	OFF (670msec)		
	LED Pattern 4	<table border="1"> <tr> <td>ON (100msec)</td> <td>OFF (400msec)</td> <td>ON (100msec)</td> <td>OFF (400msec)</td> </tr> </table>	ON (100msec)	OFF (400msec)	ON (100msec)	OFF (400msec)
ON (100msec)	OFF (400msec)	ON (100msec)	OFF (400msec)			
Pattern On	Specify one of two types of LED patterns to illuminate the LED Unit. *When using LR6-E-MZ Operation of LED patterns for one cycle is shown in the following timing charts.					
LED Pattern 1	<table border="1"> <tr> <td>OFF (100msec)</td> <td>ON (150msec)</td> <td>OFF (350msec)</td> <td>ON (150msec)</td> <td>OFF (250msec)</td> </tr> </table>	OFF (100msec)	ON (150msec)	OFF (350msec)	ON (150msec)	OFF (250msec)
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LED Pattern 2	<table border="1"> <tr> <td>OFF (100msec)</td> <td>ON (400msec)</td> <td>OFF (500msec)</td> </tr> </table>	OFF (100msec)	ON (400msec)	OFF (500msec)		
OFF (100msec)	ON (400msec)	OFF (500msec)				

3.2.2. Buzzer Function

Buzzer Control	Sound On	From 13 different sound pitches, select one for Sound A to emit the buzzer. · For the buzzer, select from continuous operation or operate for a specified number of times(1 to 15). Operating one time lasts one second.																																
	Sound Off	Stop the buzzer. This is the initial state after the body unit is started.																																
	Sound Pattern	Specify one of four types of buzzer patterns for the buzzer. · Configure the buzzer pattern by selecting two sounds(for Sound A and Sound B) from 13 different sound pitches. · For the sound pattern, select from continuous operation or operate for a specified number of times(1 to 15). Operating one time is one cycle charts. Operation of buzzer patterns for one cycle is shown in the following timing charts.																																
	Buzzer Pattern 1	<table border="1"> <tr> <td>Sound A (250msec)</td> <td>Sound B (250msec)</td> <td>Sound A (250msec)</td> <td>Sound B (250msec)</td> </tr> </table>	Sound A (250msec)	Sound B (250msec)	Sound A (250msec)	Sound B (250msec)																												
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Buzzer Pattern 4	<table border="1"> <tr> <td>Sound A (100msec)</td> <td>Sound B (400msec)</td> <td>Sound A (100msec)</td> <td>Sound B (400msec)</td> </tr> </table>	Sound A (100msec)	Sound B (400msec)	Sound A (100msec)	Sound B (400msec)																													
Sound A (100msec)	Sound B (400msec)	Sound A (100msec)	Sound B (400msec)																															
Select Pitch (Sound A, Sound B)	<table border="1"> <thead> <tr> <th>Pitch</th> <th>Frequency(Ref. Value)</th> <th>Scale</th> <th>Frequency(Ref. Value)</th> </tr> </thead> <tbody> <tr> <td>(Stop)</td> <td>-</td> <td>E ♭ 7</td> <td>2489.0Hz</td> </tr> <tr> <td>A6</td> <td>1760.0Hz</td> <td>E7</td> <td>2637.0Hz</td> </tr> <tr> <td>B ♭ 6</td> <td>1864.7Hz</td> <td>F7</td> <td>2793.8Hz</td> </tr> <tr> <td>B6</td> <td>1975.5Hz</td> <td>G ♭ 7</td> <td>2960.0Hz</td> </tr> <tr> <td>C7</td> <td>2093.0Hz</td> <td>G7</td> <td>3136.0Hz</td> </tr> <tr> <td>D ♭ 7</td> <td>2217.5Hz</td> <td>A ♭ 7</td> <td>3322.4Hz</td> </tr> <tr> <td>D7</td> <td>2349.3Hz</td> <td>A7</td> <td>3520.0Hz</td> </tr> </tbody> </table>		Pitch	Frequency(Ref. Value)	Scale	Frequency(Ref. Value)	(Stop)	-	E ♭ 7	2489.0Hz	A6	1760.0Hz	E7	2637.0Hz	B ♭ 6	1864.7Hz	F7	2793.8Hz	B6	1975.5Hz	G ♭ 7	2960.0Hz	C7	2093.0Hz	G7	3136.0Hz	D ♭ 7	2217.5Hz	A ♭ 7	3322.4Hz	D7	2349.3Hz	A7	3520.0Hz
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[Handling Precautions]

◆About handling this product

- Although this product (including software) is shipped after strict quality control and inspection, if there is any trouble or malfunction, please contact your PATLITE sales representative.
- This product (including software) is developed, designed and manufactured assuming general use such as general office work, personal use, ordinary industry etc. Do not use it for applications requiring high safety such as medical equipment or systems directly or indirectly related to human lives. In the unlikely event, we will not be liable for any damages or other disadvantages due to being used outside of general purpose or any claims from third parties.
- The conformity of this product to the system, machine, equipment etc. used by the customer shall be confirmed by the customer confident and the company shall assume no responsibility for conformity of the product with these. Please ensure safety design and proper treatment of the system to be able to cope with misoperation, malfunction, and breakdown of this product thoroughly.
- The Company shall not responsible for any damage, special loss, opportunity loss, lost profit, accident compensation, product other than our products (regardless of whether it is connected to this product or not via a communication line etc.). Regardless of the cost of repairing damages, losses, defects, data losses and defects relating to the product (including personnel expenses, construction costs, transportation expenses, shipping costs, etc., but not limited thereto), the company are not responsible.
- The Company shall exercise its own discretion in updating the Software, for improvement of its functions and features. The Company shall not bear any responsibility whatsoever for any ordinary damage, special damage, loss of opportunity, loss of profit, accident compensation or expenses (including but not limited to expenses for manpower, engineering work, transportation, shipping, etc.) incurred for repair with regard to damage, loss, failure, data loss or defect related to products other than the products of the Company (regardless of whether such products are connected to the Company's products by communication circuit, etc.)
- The Customer shall not engage in any of the following without approval issued by the Company in advance.
 - * Copying of the Software
 - * Tampering, integration, reverse engineering, decompiling, disassembly, etc., of the Software
 - * Sublicensing, loan, rental or resale of the Software to a third party
 - * Storage of the Software on a network in a state in which the Software is available for transmission to a third party
 - * Removal of indications of copyright and other rights on the Software

◆About what we want you to protect for safety

- Please keep liquid material such as water and chemicals and foreign matter such as metal like copper iron wire into this product. It may cause electric shock or malfunction.
- Do not drop it or give it a strong shock. It may cause electric shock or malfunction.
- Do not apply strong force to switches or buttons for setting or operating this product. It will be the cause of the failure.

◆About installation

- Be sure to turn off the power when conducting wiring and inspection and repair. It will be the cause of the failure.
- Please do not install near fire or hot and humid place. Also, please do not install in places where corrosive gas or flammable gas is generated.
- Please do not install in an unstable place. Failure to do so may cause injury or malfunction.
- Since this product is for indoor use only, please install it indoors.
- Avoid the following places when installing this product.
 - * Places exposed to direct sunlight
 - * Near fire or hot and humid place
 - * Places where the temperature change is severe and condensation occurs
 - * Breathable, poorly ventilated place
 - * Places where vibration is directly transmitted to this machine
 - * Places where corrosive gas is generated
 - * Places that are exposed to sea breeze
 - * Near the object where strong magnetic field occurs
 - * Places where dust, iron powder etc. occurs
 - * Chemicals, places where oil mist occurs

◆About maintenance

- Do not wipe with volatile chemicals such as benzine, thinner, etc. or chemical wiping cloth as it may cause alteration.
- Clean the unit with a dry, soft cloth.
- If the dirt does not come off, wipe it down firmly with a cloth moistened with water.

A

B

C

D

E

F

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 Length of short side		~	~	~	~	~	LR6-USBW-W18		6 / 7				
	精 f	1	0.5	0.3	0.1	中 m	0.1	0.3	0.5	0.7	1	改訂 Rev.	年月日 Date	改訂履歴 Revisions
	粗 v	3	1.5	1	0.5	粗 c	0.3	0.5	1	1.2	2	△	24.Jan.'18	DC00112D

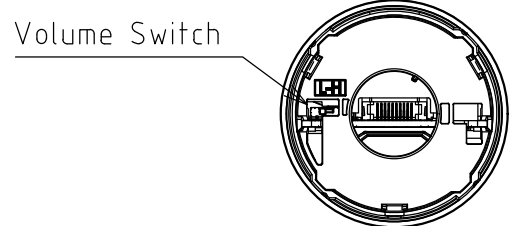
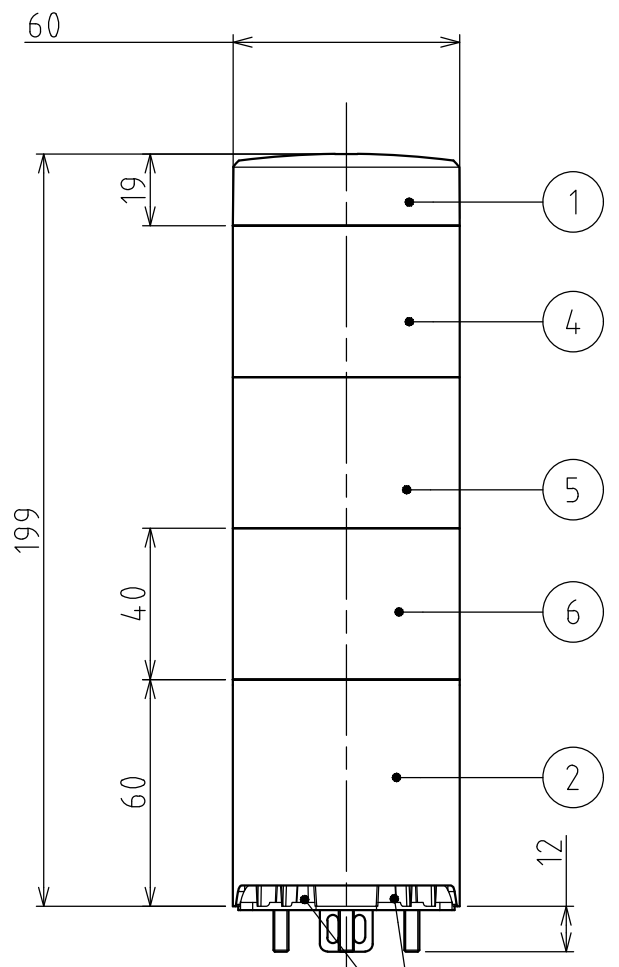
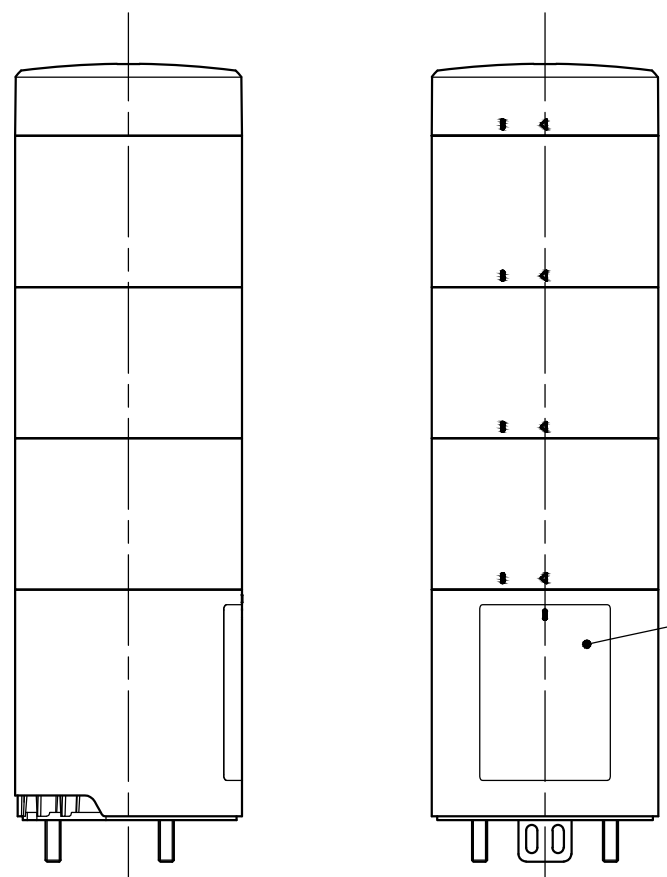


fig.4 Removed Head Cover



Buzzer Aperture



Mounting Hole(φ5×3places)

Buzzer Aperture Side

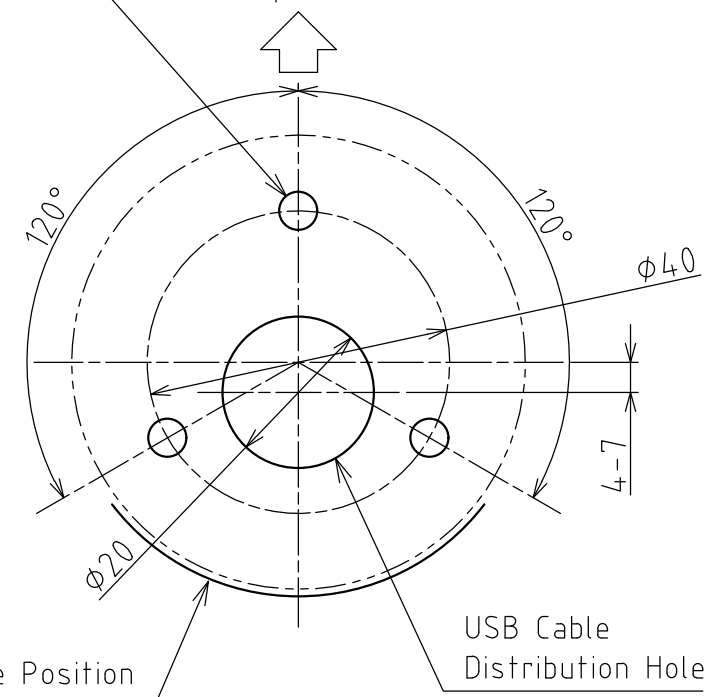


fig.2 Mounting Dimensional Drawing

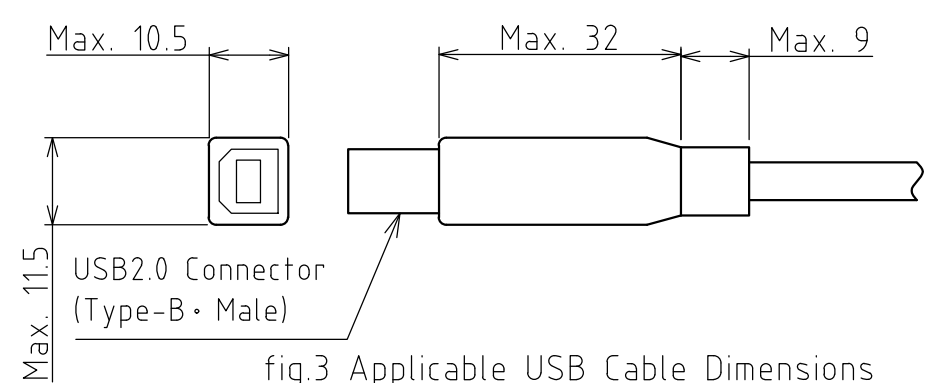
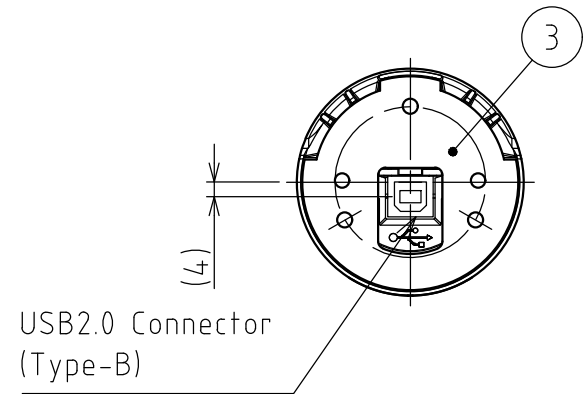


fig.3 Applicable USB Cable Dimensions



[Note]
1.Maximum Board Thickness : 7mm

6	LED Unit(Green)	1	PC
5	LED Unit(Amber)	1	PC
4	LED Unit(Red)	1	PC
3	Waterproof Packing	1	Foamed Urethane
2	Bracket	1	PC
1	Head Cover	1	PC
番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks

機種 Model	LR6-3USB口-RYG	特注No. S.P.No.	-	図名 Name	Outer Dimensions Drawing
品目コード Part No.	-	尺度 Scale	-	三角法 3rd Angle P.	単位 Unit mm
				株式会社 PATLITE Corporation	

LED unit Qty	L [mm]
0	79
1	119
2	159
3	199
4	239
5	279

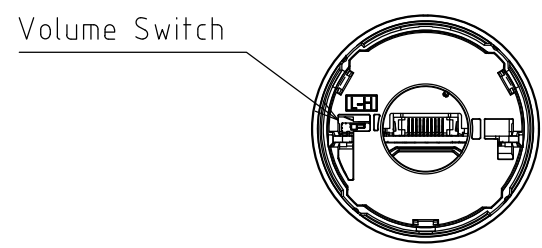


fig.4 Removed Head Cover

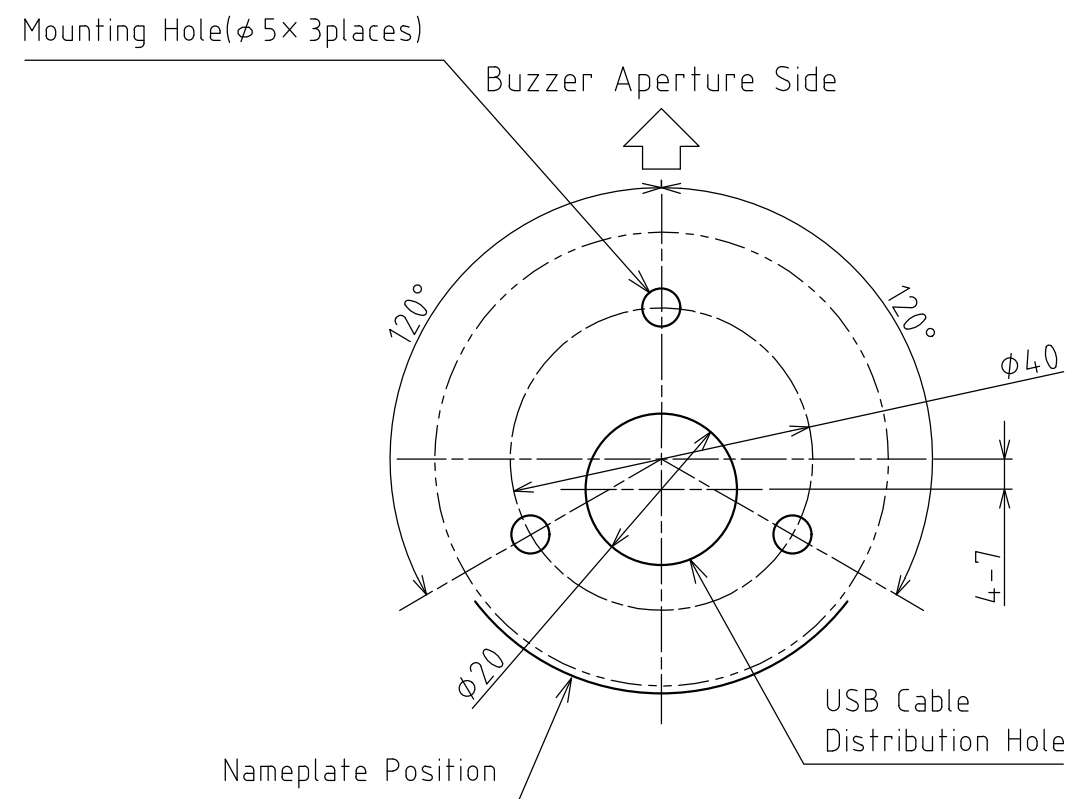
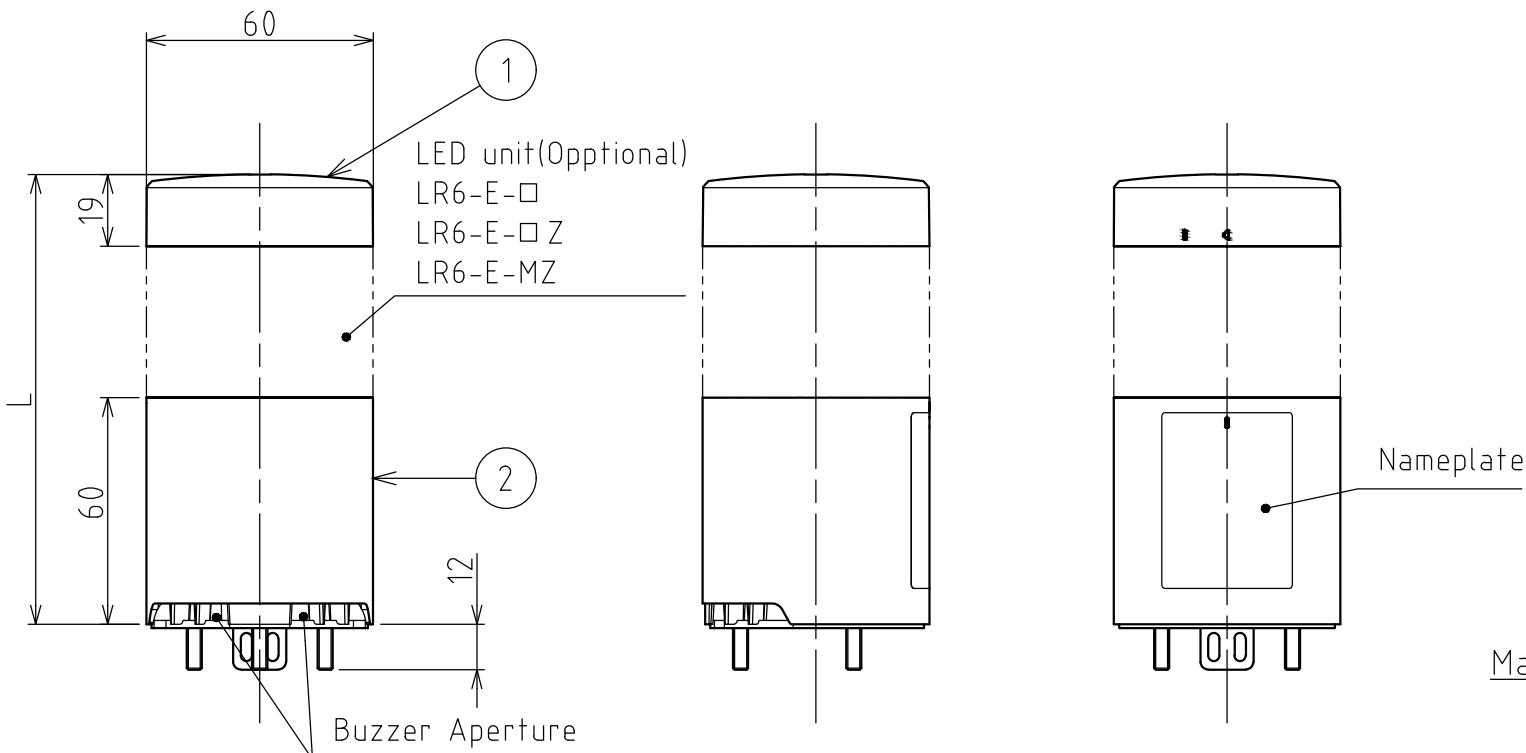


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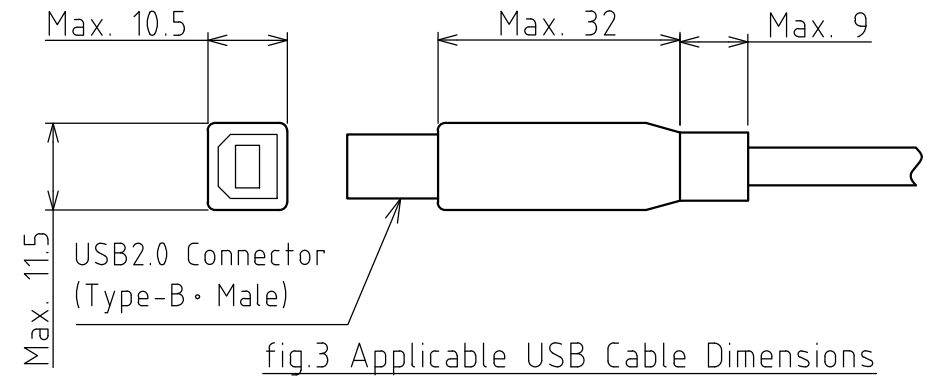
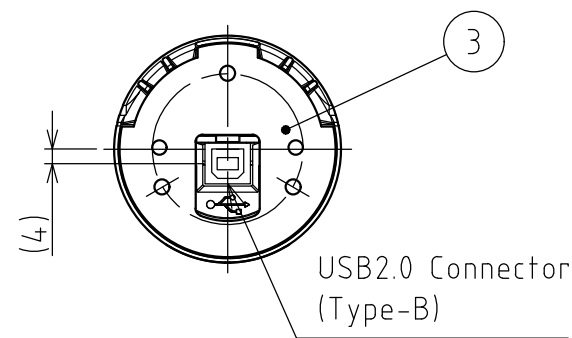


fig.3 Applicable USB Cable Dimensions



[Note]
1.Maximum Board Thickness : 7mm

3	Waterproof Packing	1	Foamed Urethane
2	Bracket	1	PC
1	Head Cover	1	PC
番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks
機種 Model	LR6-USB□	特注No. S.P.No.	-
		図名 Name	Outer Dimensions Drawing
品目コード Part No.	-	尺度 Scale	三角法 3rd Angle P.
		単位 Unit	mm
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