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SPECIFICATIONS

Product Name: USB Signal Tower / Body Unit

Model: LR6-3USB□-RYG / LR6-USB□

PATLITE Corporation

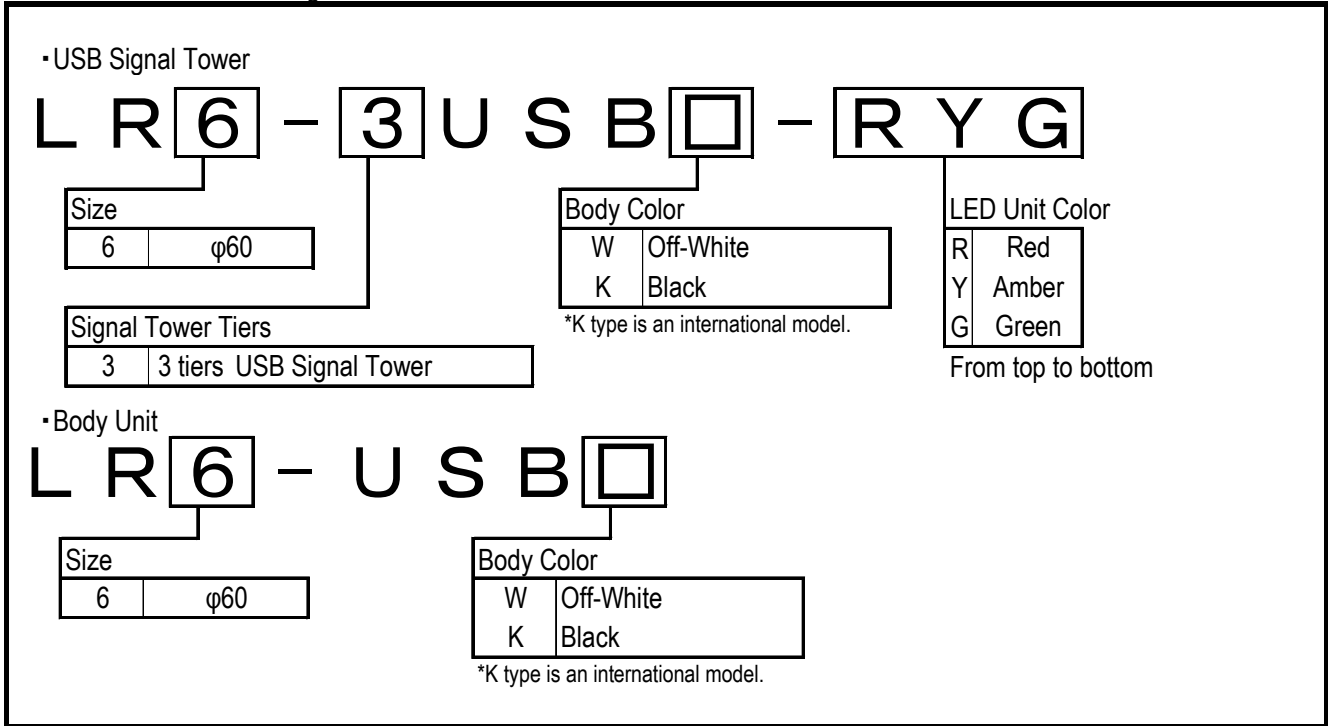
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1. General Specifications

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 61000-6-2 /6-4) RoHS Directive (EN IEC 63000)	
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
	Mounting Bracket	SZW-002W
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)
OFF (100msec)	ON (150msec)	OFF (350msec)	ON (150msec)	OFF (250msec)		
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 fontinuous operqation 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)																											
	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 Precaution]

◆ About handling this product

- This product (including software) is shipped only after undergoing strict quality controls and inspections. However, should you encounter any issues, please contact your PATLITE sales representative.
- This product (software is included) is for the use of general office work, home and for personal use, it has been developed, designed and manufactured for general applications, such as for industry, and it is not designed for applications which demands high safety requirements, such as equipment or systems used in connection directly, or indirectly, with human life. Understand prior to use, that no responsibility is taken at our company for damages or other disadvantages, due to customers using this product beyond the scope of its general application, or from any claims from third parties. When using this product for applications in which equipment of higher reliability than the general application demands, such as a computer system, etc., use suitable safety design countermeasures against system failure, etc.
- The suitability of this product in the system, with other machines and equipment, shall be tested and confirmed by the customer. We assume no responsibility regarding this. Design safety into the system to cope with misoperation, misuse, going offline, and other unforeseen operation of this product.
- We bear no responsibility for damages, lost opportunities, lost profits, compensation for accidents, or other costs including but not limited to personnel, construction, transportation, and shipping costs, related to using this product. We bear no responsibility for defects in other products, regardless of the other product's connection to this product (such as a communication line), or for the cost of repairing damages, losses, defects, or recovering lost data related to using the other products, including but not limited to personnel, construction, transportation, and shipping costs.
- To improve the functionality in the software for this product, we will update the software at our own discretion. We bear no responsibility for the results of software updates, such as damages, lost opportunities, lost profits, compensation for accidents, or other costs including but not limited to personnel, construction, transportation, and shipping costs, related to using this product. We bear no responsibility for defects in other products, regardless of the other product's connection to this product (such as a communication line), or for the cost of repairing damages, losses, defects, or recovering lost data related to using other products, including but not limited to personnel, construction, transportation, and shipping costs.
- Note the following statements regarding the software for this product, which require prior written consent from PATLITE:
 - * Do not duplicate the software for this product.
 - * Do not alter, combine, reverse-engineer, decompile, or disassemble the software for this product.
 - * Do not license, rent, or resell the software for this product to a third party.
 - * Do not store the software of this product on a network so it can be transmitted to a third party.
 - * Do not remove the copyright notice or other trademark and company rights attached to the software for this product.

◆ Things you should always do for your safety

- Avoid spilling liquids (such as water or chemicals) into this product. Avoid dropping foreign metallic objects (such as copper wire) into this product. Failure to follow these instructions could result in electric shock or equipment damage.
- Do not drop or hit this product. Failure to follow these instructions could result in electric shock or equipment damage.
- Do not apply too much force to switches and buttons on this product. Failure to follow this instruction could result in equipment damage.

◆ Installation

- Turn off the power when wiring, inspecting, or repairing this product. Failure to follow this instruction could result in equipment damage.
- Do not install in locations near fire, or environments with high temperature and humidity. Do not install this product where corrosive or flammable gas is present.
- Do not install on an unstable surface. Failure to follow these instructions could result in injury or equipment damage.
- This product is rated for indoor use only. Please install and use this product indoors only.
- Avoid the following locations for installation of this product.
 - * Places exposed to direct sunlight.
 - * Places near fire or environments with high temperatures and humidity.
 - * Environments where temperature changes are severe, and where there is condensation.
 - * Environments with poor breathability and ventilation.
 - * Places where external vibrations are directly transmitted to this product.
 - * Environments where corrosive gas is present.
 - * Locations exposed to salty sea air.
 - * Locations near strong magnetic fields.
 - * Environments where there is dust, iron powder, and so on.
 - * Environments where chemicals and oil mist are present.

◆ About maintenance

- Do not clean this product with volatile chemicals such as benzene or thinners, or with chemical wiping cloths as it could damage the product.
- Please clean this product with a soft, dry cloth.
- If the dry cloth is unable to clean off any dirt and grime, wipe the product firmly with a slightly water-moistened cloth.

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	~	~	6	30	120	300	1000	LR6-USBW-W18		6 / 7		
	精 f	10	50	100	精 f	0.05	0.1	0.2	0.4	0.6	改訂 Rev.	年月日 Date	改訂履歴 Revisions
	粗 v	3	1.5	1	0.5	中 m	0.1	0.3	0.5	0.7	1		
					粗 c	0.3	0.5	1	1.2	2			

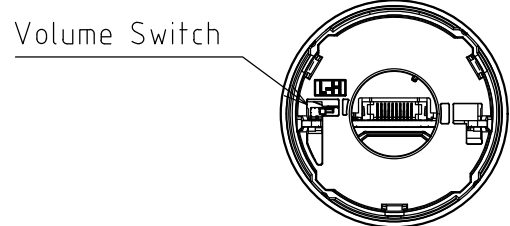
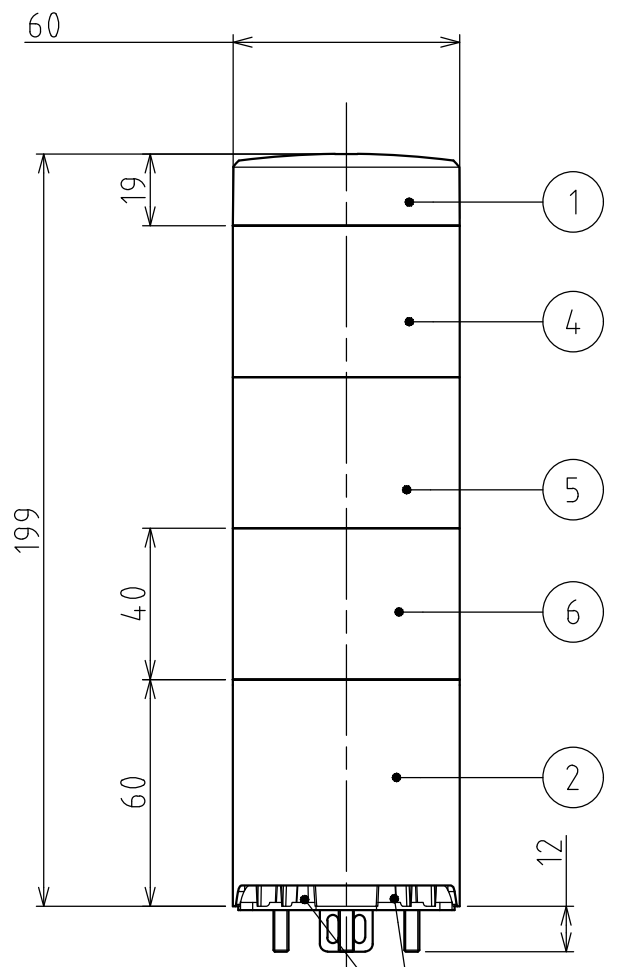


fig.4 Removed Head Cover



Buzzer Aperture

Mounting Hole(φ5×3places)

Buzzer Aperture Side

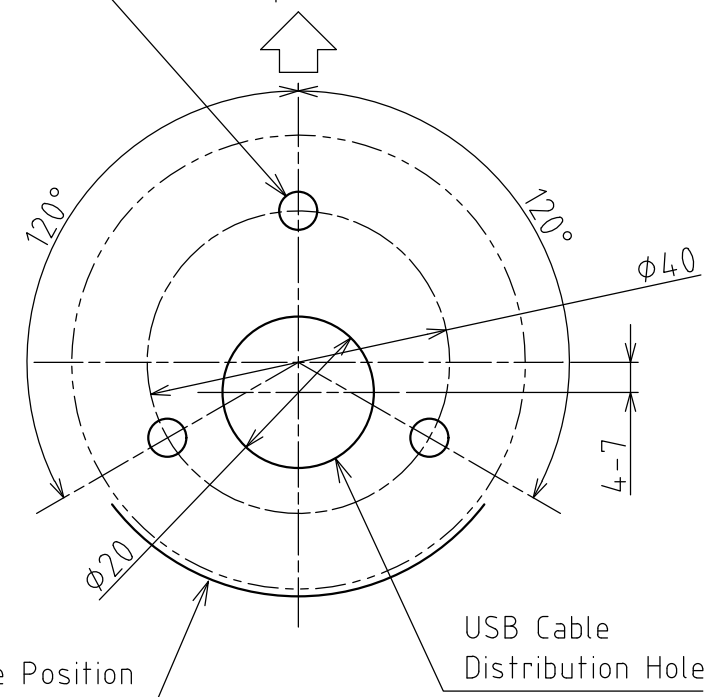


fig.2 Mounting Dimensional Drawing

Nameplate

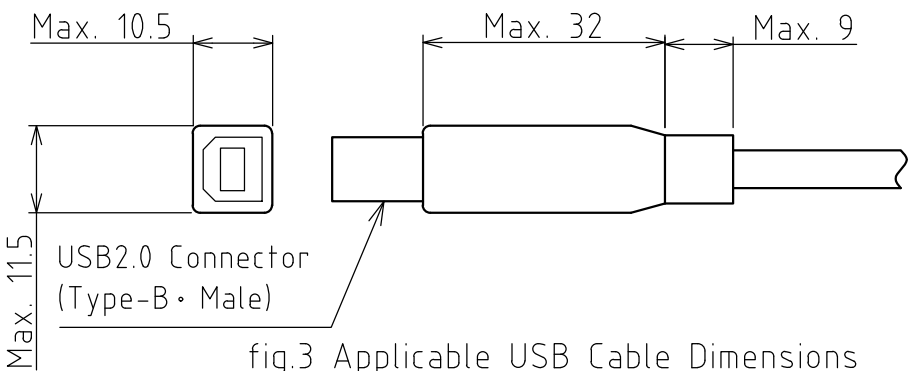
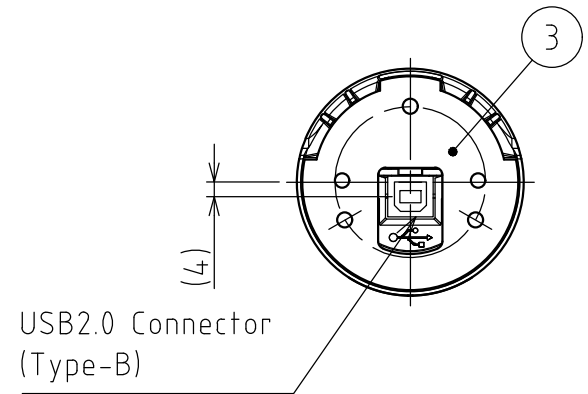


fig.3 Applicable USB Cable Dimensions



[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	

指定 外公差 General Tolerance	角度公差 ±[°] Angular tolerance ±[°]			寸法公差 ±[mm] Dimensional tolerance ±[mm]					図番 Drawing No. LR6-USBW-W18		ページ Page 7 / 7	
	短辺 長さ Length of short side	~	~100	精 f	0.05	0.1	0.2	0.4	0.6	改訂 Rev.	年月日 Date	改訂履歴 Revisions
	精 f	1	0.5	0.3	0.1	中 m	0.1	0.3	0.5	0.7	1	
	粗 v	3	1.5	1	0.5	粗 c	0.3	0.5	1	1.2	2	

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

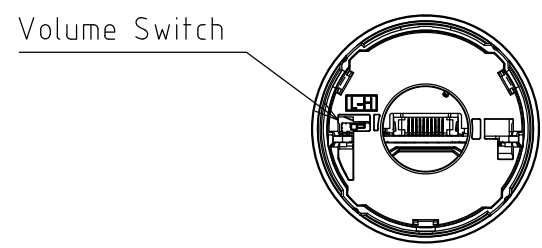


fig.4 Removed Head Cover

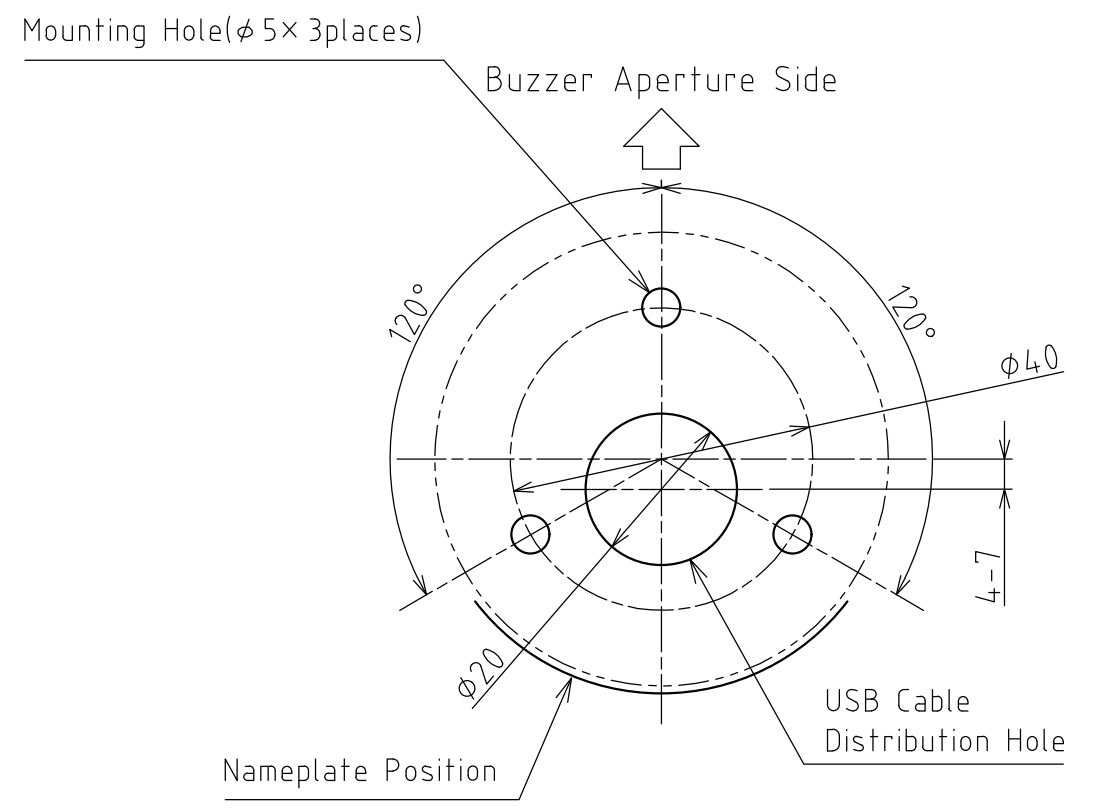


fig.2 Mounting Dimensional Drawing

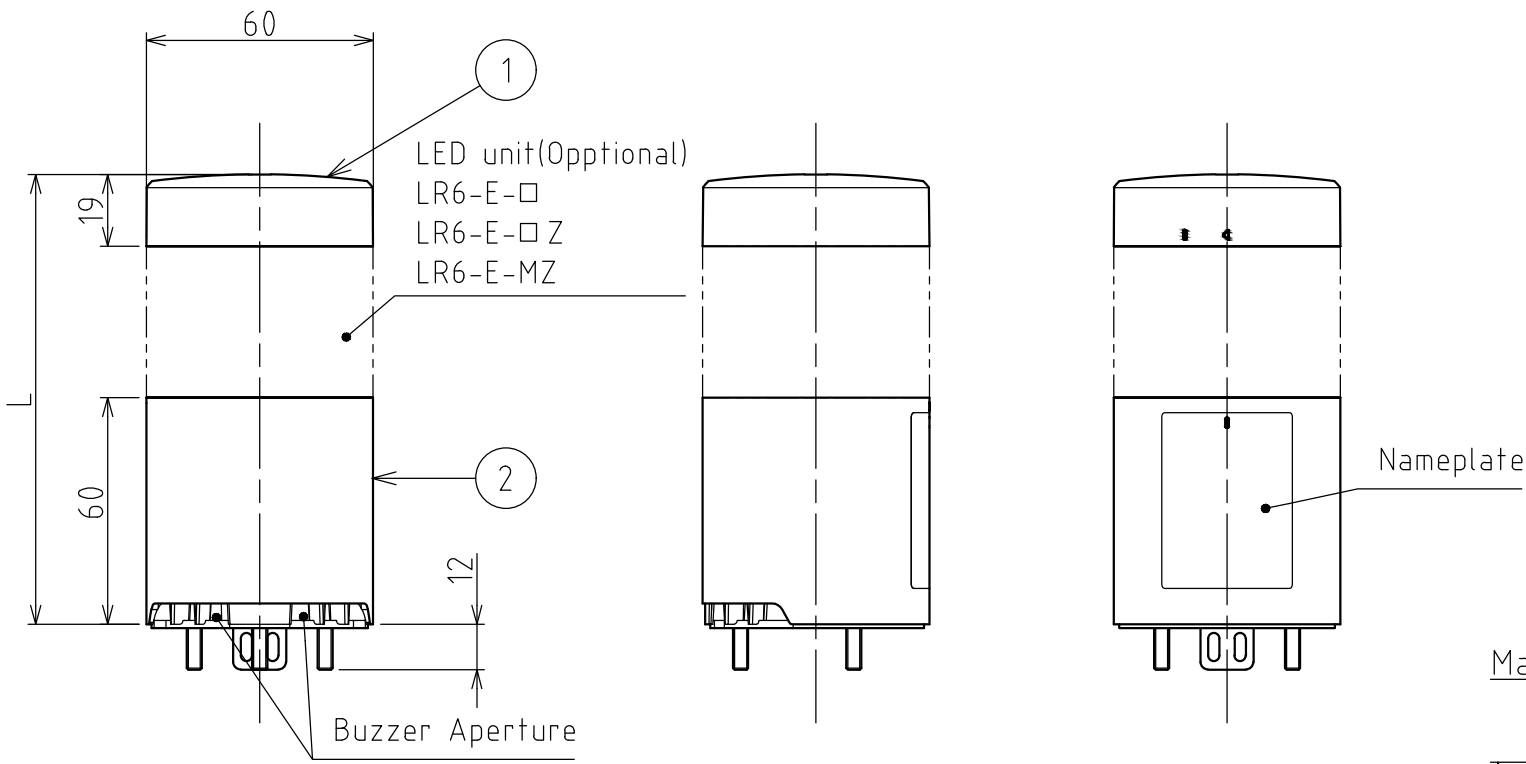
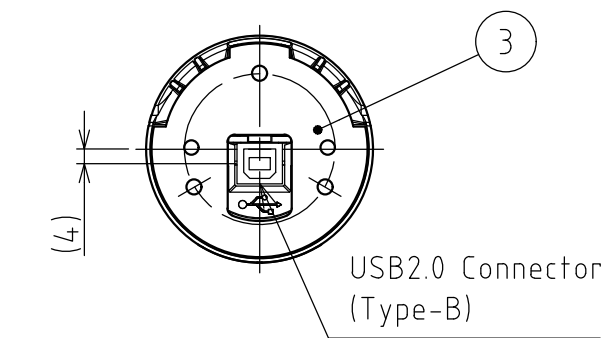


fig.3 Applicable USB Cable Dimensions



USB2.0 Connector (Type-B)

[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
株式会社 パトライト PATLITE Corporation			