

Notice to Customer Thank you very much for purchasing our PATLITE product.
 ● Request the installation and wiring be performed by a professional contractor if construction work is involved.
 ● Prior to installation, read this manual thoroughly before using this product to ensure correct use.
 ● Visit our homepage (<http://www.patlite.com/>) and download the "Complete Operation Manual:LR" to find more about the operating method and features.
 ● If there are any questions concerning this product, refer to the contact information at the end of this document and contact your nearest PATLITE Sales Representative.

Notice to Contractor ● Read this manual carefully prior to installation. ● Be sure to return this manual to the customer.

1 Read this First (Safety Precautions)

Warning Failure to observe the following may result in death or serious injury.
 ● To prevent from short-circuits, electric shock or damage, observe the following:
 - Be sure the power is disconnected before replacement or repair, including the replacement of the fuse.
 - Use this product in a properly maintained condition. (Replace or repair if the body, LED unit, etc. are damaged.)
 ● Request the installation and wiring be performed by a professional contractor if construction work is involved. Failure to comply may result in fire, electric shock or falling from high places may occur.

Caution Failure to comply with the following points may result in injury, physical loss or damage.
 ● Avoid long exposure to the Buzzer sound from a close distance. Failure to observe this may lead from irritation to permanent damage to the ears.
 ● In order to maintain protection of this product against dust and waterproofing performance, be sure to use the head cover, LED unit and buzzer unit in the condition that it was originally attached.
 ● Do not operate this product without the O-ring or the waterproof packing material. Failure to comply will result in lower waterproofing performance. Possible cause of failure may occur.
 ● Do not apply voltage to the Flashing Common line (01, 02). Apply voltage to the power source line (M2) only. Product failure will occur.
 ● When removing covers or packing from the equipment, which is attached to this product, be careful not to snag the product. Failure to comply may result in damage to the product.

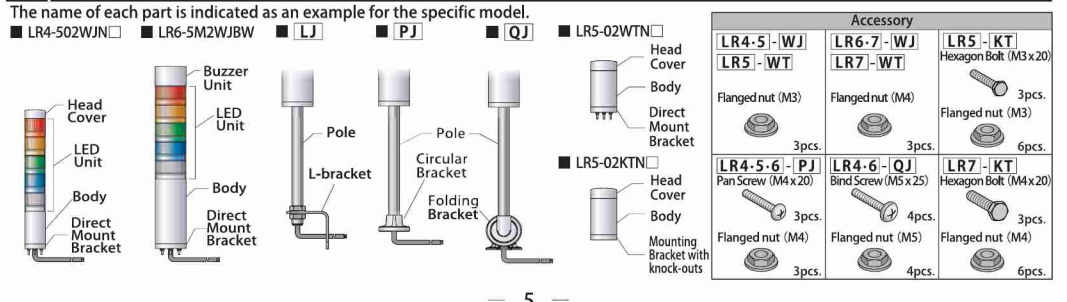
Notice ● To ensure proper safety while using the signal tower, observe the following:
 - Perform periodic pre-maintenance. As a precaution against problems occurring, use this product together with other equipment.
 ● Be sure to discharge any static electricity from the body before handling static sensitive parts of this product.
 ● To prevent damage from static electricity, touch hands or other body parts to metals or an earth ground to discharge the body from static charge.
 ● Use a soft cloth moistened with water when the LED Unit or body must be cleaned up. (Do not use thinner, benzine, gasoline or oil.)
 ● To ensure safety when this product is installed onto equipment, observe the following:
 - Do not remove parts beyond those designed to be removed from this product. - Do not modify or disassemble this product.
 - Use only the specified replacement parts listed in the "Complete Operation Manual:LR".

2 Model Number Configuration

Model	Tiers	Rated Voltage	Mounting/Wiring	Flashing/Buzzer	Body Color	LED Unit Color	Globe Color
Assembly Model	LR	-	-	-	-	RYGBC	-
Unit Model (Body Unit)	LR	-	-	-	-	(None)	Color Globe

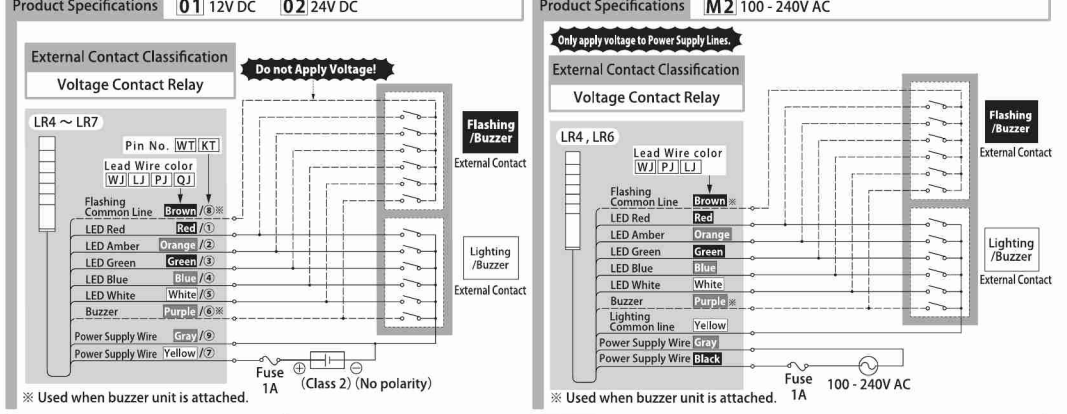
Model Number Example	LR4-502PJB-U-RYGB-C
Model	LR4-502PJB-U-RYGB-C
LED Unit Color	RYGBC
Globe Color	(None) Color Globe
Rated Voltage	02 24V DC
Mounting/Wiring	M2 100-240V AC
Flashing/Buzzer	WT Direct Mount / Terminal (Body Unit)
Body Color	U Silver
Accessories	WJ Pole Mount with / L-bracket / Cable

3 Part Names



The name of each part is indicated as an example for the specific model.
 ■ LR4-502WJN ■ LR6-5M2WJBW ■ LJ ■ PJ ■ QJ ■ LR5-02WTN
 ■ LR5-02KTN

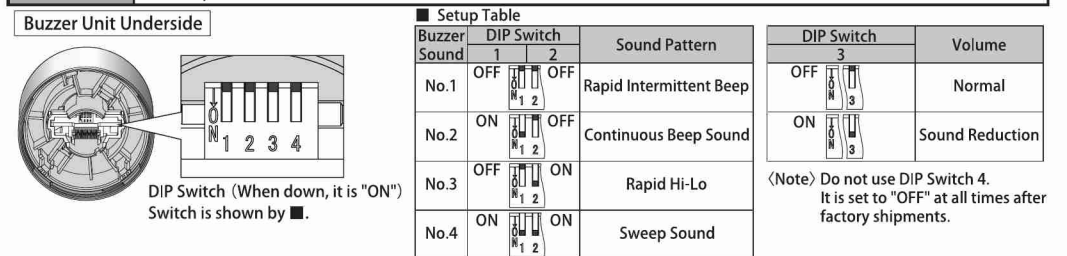
Wiring Example
 The following is a basic wiring example. If there are any special applications that require asking questions concerning this product, feel free to contact your PATLITE Sales Representative. Accidental wiring will result in product failure.
 <Note> When lighting and flashing are used together, it is necessary to prepare an external contact for each lighting or flashing.



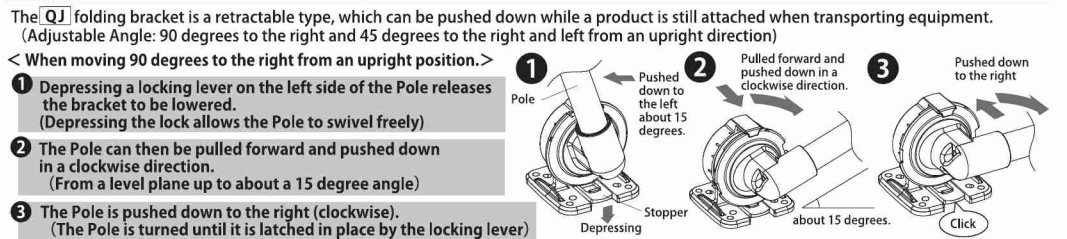
WT, KT Terminal Block Connector Array
 ● Recommended lead wire specifications
 Wire Type: UL1007 / UL1430 (0.14~1.5mm²) AWG30~14
 Wire Gauge (Solid Wire): 0.14~1.5mm²
 Wire Gauge (Frayed Wire): AWG30~14
 * Temperature rating should be above 75°C, and the conductor material should be of copper wire.
 Point: The minus driver blade should be at about 2mm by 0.4mm in size. Do not forcibly push the lever more than necessary with the driver. Failure to comply may damage the unit. Strip 9~10mm of wire insulation from the wire to insert it in the Terminal Block. When removing the lead wire, do not pull to remove, be sure to operate the lever to release the lock.

6 Buzzer Pattern Set-up

The B Flashing/Buzzer type includes a set up for four different patterns and sound reduction.



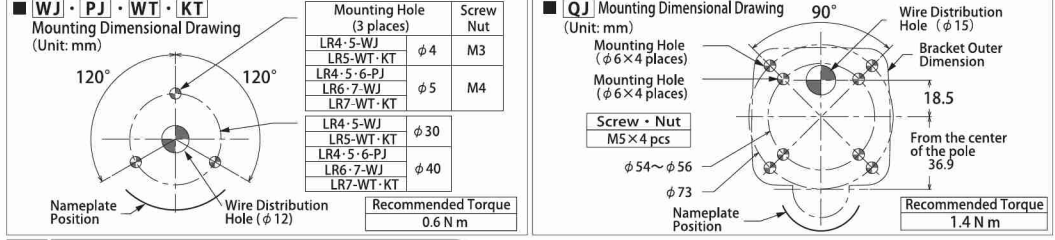
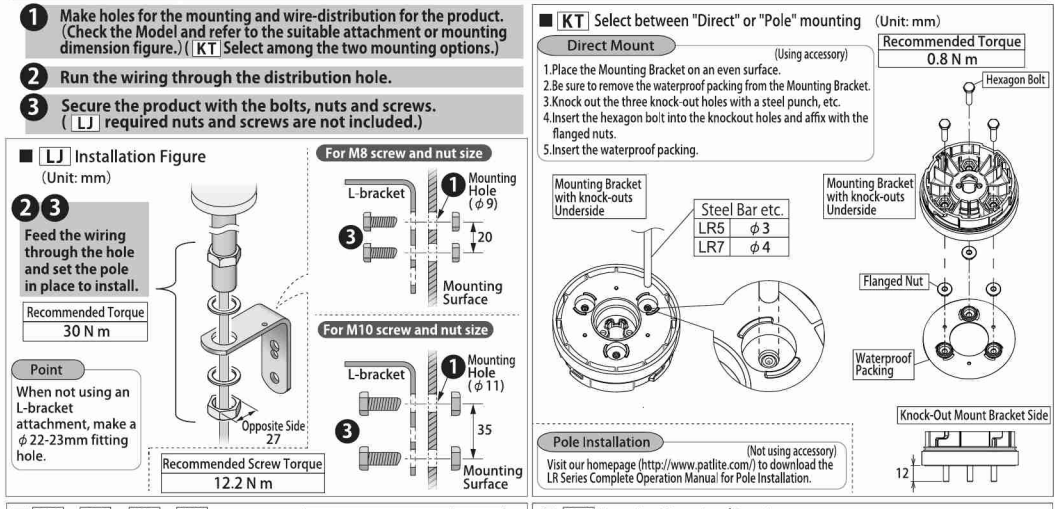
7 How to use the Folding Bracket



4 Installation

Notice ● The following requirements are necessary for proper installation: -Install the signal tower where excessive vibration is not present. -Install the signal tower on a sturdy surface. -Install the signal tower on a level surface.
 ● Only install the signal tower in an upright position.
 ● When the installation location is unavoidably irregular and waterproof performance is required, use a sealant between the product and the installation surface.
 ● If the pole type requires an IP65 rating, apply sealant to the screws, nuts and wire distribution hole when installing the compatible bracket onto the installation surface. (P, J, Q)
 ● Although the LR4-WJ mounting bolt moves prior to assembly, it is not a quality issue. Be sure to mount the product in the manner indicated below.

Basic Mounting Instructions



5 Wiring

Warning ● Be sure the power is disconnected before wiring and changing fuses. Possible cause of short-circuiting may occur.
 ● Ensure the proper working voltage is used and that direct current or alternating current is properly applied.
 Possible cause of combustion may occur.

Caution ● Do not apply voltage to the Flashing Common line (01, 02). Apply voltage to the power source line (M2) only.
 Product failure will occur.
 ● Do not control the flashing display by switching the power source ON and OFF for M2. Product failure will occur.
 ● It is not necessary to connect to an external lead for tiers not used. When an extra lead is not connected, it should be individually insulated with electrical tape or something similar. Failure to comply will result in damage due to short circuiting.
 ● Do not pull the lead wire or push it inside the body. Product failure may occur.

Notice ● When using multiple LED units of the same color, make the contact capacity equal to the number of same color LED units multiplied by the contact capacity for 1 tier. (This is because LED units of the same color light up for one signal line.)
 ● To protect the power supply and other internal circuitry, be sure to install an external fuse.
 ● If wiring is extended beyond its factory length, a relevance in the length of the wire and wire gauge will cause a voltage drop.

Rated Load Voltage	Is : Current Capacity Vs : Withstand Voltage		IL : Leakage Current	Ta : Ambient Temperature
	01 12V DC	02 24V DC		
LED Unit Signal Wire Current (Max.) / Voltage	100 mA / Power Supply Voltage	45 mA / Power Supply Voltage	45 mA / 24V DC	45 mA / 24V DC
(1 Tier) Recommended Contact Capacity	Is ≥ 100 mA Vs ≥ 20 V DC (※1)	Is ≥ 100 mA Vs ≥ 35 V DC	Is ≥ 100 mA Vs ≥ 35 V DC	Is ≥ 100 mA Vs ≥ 35 V DC
Buzzer Signal Wire Current (Max.) / Voltage	250 mA / Power Supply Voltage	250 mA / Power Supply Voltage	250 mA / 24V DC	250 mA / 24V DC
Recommended Contact Capacity	Is ≥ 300 mA Vs ≥ 20 V DC (※1)	Is ≥ 300 mA Vs ≥ 35 V DC	Is ≥ 300 mA Vs ≥ 35 V DC	Is ≥ 300 mA Vs ≥ 35 V DC
Power Supply Current Consumption (Max.)	500mA (※2)	250 mA (※2)	150mA (※2)	150mA (※2)
Recommended Contact Capacity	Is ≥ 700 mA Vs ≥ 20 V DC	Is ≥ 500 mA Vs ≥ 35 V DC	Inrush current or more contacts	Inrush current or more contacts
Inrush Current	LED None Buzzer None (※1)	LED None Buzzer None (※3)	None	None
Power Supply Wire	0.7A, 15ms or less	None (※4)	25A (Ta=25°C), 50A (Ta=50/45°C) (※5), 2ms or less	25A (Ta=25°C), 50A (Ta=50/45°C) (※5), 2ms or less
Leakage Current	IL ≤ 0.1 mA			

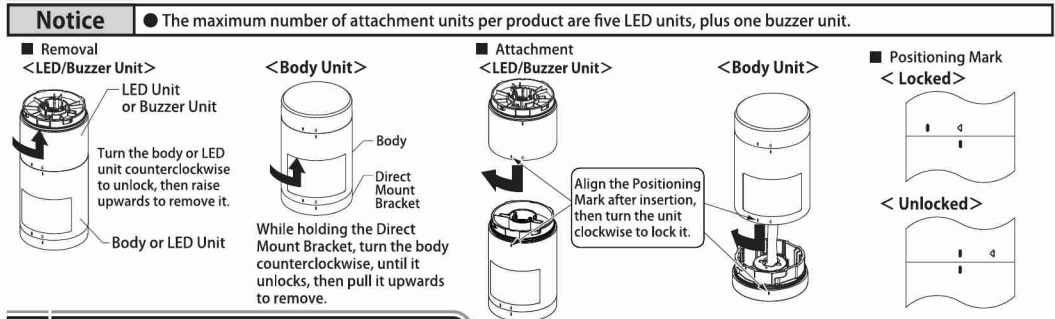
※1 ... When Gray power supply wire is not connected, inrush current or 0.7A will flow through the signal wires. Recommended Contact Capacity: Is ≥ 700 mA Vs ≥ 20 V DC
 ※2 ... When LED 5 tiers and Buzzer are in operation. ※3 ... Signal Wire Current (Max.) or less. ※4 ... The sum of Signal Wire Current (Max.) or less
 ※5 ... WJ Off-white (PS): Ta = 50°C A Off-white (ABS): Ta = 45°C

Recommended Fuse Fuse Ampere Ratings 250 V / 1 A (5x20mm Fast-Acting Glass Body Cartridge Fuse)

8 Unit Detachment Method

Warning ● Be sure the power is disconnected before working on it.

Caution ● Do not apply excessive strength with each unit or body. Failure to comply may damage the unit.
 ● Do not touch the connector area or the inside of the body and LED unit. Failure to comply may damage the unit.
 ● Be sure to lock each unit securely when attaching. Failure to comply may damage the unit.
 ● Detach the unit in the following manner. Any other method may result in damaging the product.
 Attachment : Attach one unit at a time to the body.
 Removal : Firmly hold the bottom section while removing the upper section.



9 Specifications

Model	UL Registered Model	Body Unit	LED Unit (Max. 5 Units)	Buzzer Unit	Rated Voltage	Rated Power Consumption
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-R, LR4-E-A, LR4-E-RZ, LR4-E-RZ-A	LR4-B, LR4-BA	24V DC	Max. 6.6W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-Y, LR4-E-YA, LR4-E-YZ, LR4-E-YZ-A	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-G, LR4-E-GA, LR4-E-GZ, LR4-E-GZ-A	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-B, LR4-E-BA, LR4-E-BZ, LR4-E-BZ-A	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN, LR4-02LJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02PJ	LR4-02PJB, LR4-02PJN, LR4-02PJBA, LR4-02PJNA	LR4-02PJN, LR4-02PJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02QJ	LR4-02QJB, LR4-02QJN, LR4-02QJBA, LR4-02QJNA	LR4-02QJN, LR4-02QJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02WJ	LR4-02WJB, LR4-02WJN, LR4-02WJBA, LR4-02WJNA	LR4-02WJN, LR4-02WJNA	LR4-E-C, LR4-E-CA	LR4-B, LR4-BA	100-240V AC (50/60Hz)	Max. 7.0W
LR4-02LJ	LR4-02LJB, LR4-02LJN, LR4-02LJBA, LR4-02LJNA	LR4-02LJN				