

Installation Manual

Type H4

Type HB3/HB4/HIR1/HIR2

Type H8/H9/H11/H16

Type H7

PIAA

Installation Manual for HYPER ARROS LED Bulbs (Type H4)

Thank you very much for purchasing PIAA product. Read this instruction manual thoroughly for proper use of the product. After completing your installation, please keep this manual for future reference.

For customers Please forward this manual to the next owner.

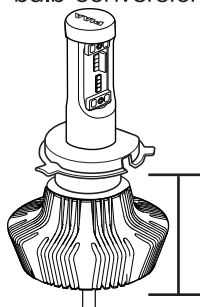
For installation service agents Be sure to hand over this instruction manual to the customer after installation.

※ ⚠ **CAUTION** marks and ⚠ **WARNING** marks in this manual indicates important notices for installing this product. Be sure to follow these notices in order to ensure safe and reliable work.

⚠ **CAUTION** Indicates procedures or situations that may cause bodily harm if used improperly.

⚠ **WARNING** Indicates items that may cause damage or malfunction to products if used improperly.

• In some countries, these LED bulbs are not recommended for on-road use. Please check the local regulation for the usage of LED bulb conversion. For those countries which LED bulb conversion is restricted, these bulbs will be for off-road use only.

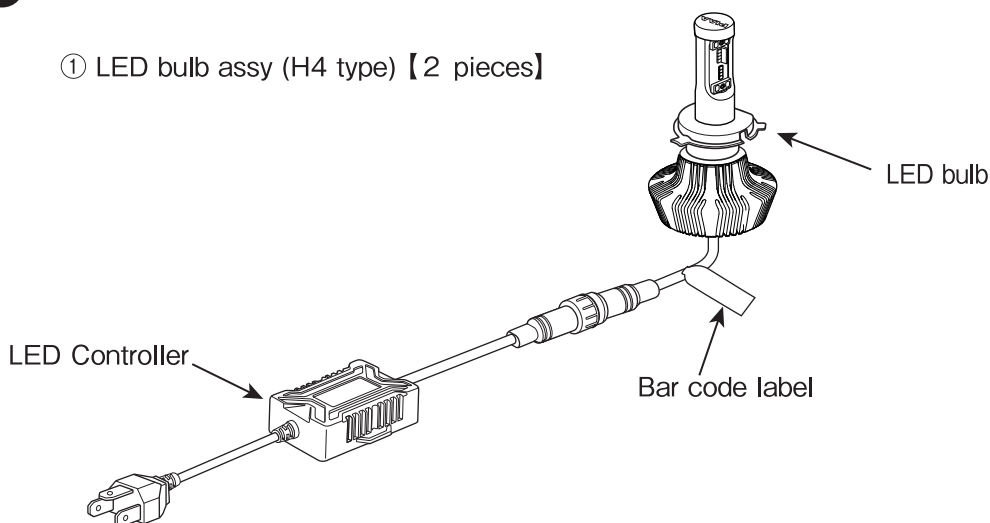


*Measure clearance from bulb collar back. Make sure there is no obstructions and is clear from any moving parts that could come in contact with the bulb base.

LED bulbs are larger than stock bulbs. Please check the clearance behind the factory housing to make sure these bulbs will fit without any obstruction. If your vehicle has a dust cap over the factory bulbs, measure the depth to make sure the LED bulbs will fit.

Contents

- ① LED bulb assy (H4 type) 【 2 pieces】



※DO NOT REMOVE BARCODE LABEL from the wire. Barcode label is used for product tractability. REMOVING THE BARCODE WILL VOID FACTORY WARRANTY.

About bulb replacement

Please read before starting work.

CAUTION

- When replacing the LED bulb, make sure the vehicle's power is turned off and remove the battery minus (-) terminal before carrying out the replacement procedure. Not doing so may result in not only a fire hazard but possible electrocution or bodily injury. Please use rubber gloves when carrying out this work process.
- When installing the bulb, make sure to firmly connect the bulb connector and also verify that the rubber cap is installed. In addition, make sure the harness section (electric wire) is not snagged in the cap or other sections.
- As a result of replacing the bulb, the axis of the light may become misaligned. Therefore, after replacement, check the lamp position and make necessary alignment.
- Make sure not to touch the base part or the area that illuminates light. Also, prevent any type of oil or dirt from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction.
- Never turn the vehicle's switch to "ON" when the LED bulb and the bulb connector are not connected.
- Make sure to prevent moisture from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction. If moisture is present, let it dry out thoroughly before use.
- Bulb replacement should be done safely on a flat surface where a wide space is available. Before replacement, stop the vehicle's engine, apply the emergency brake, place the shift in parking or neutral position, and pull out the key.
- Do not tug on the harness when disassembling. Doing so may damage the harness leading to overheating and potential failure.
- Be careful not to lose the original bulbs. Keep them in a safe place after removal.
- Verify the position of the product as well as the metal base of the connector. Check the proper direction and install it securely.
- Connectors and terminals should be held firmly and must be inserted / removed at a straight direction. Please note that if excessive force is applied to the terminal it may break or it may no longer connect. As a result it may cause damage leading to overheating and potential failure.
- Make sure not to apply excessive force to the light emitting part. If this part is damaged, it may cause a lighting malfunction. Please handle this product with extreme care.

Precautions for Use

WARNING

- Do not touch the LED bulb directly as it is extremely hot when it is illuminated and also retains considerable heat immediately after turning it off.
- Do not look directly at the lamp for an extended period of time while it is illuminated. This may cause pain to the eyes and may cause adverse effects to your eyesight.
- Do not disassemble or modify the unit in any way. Doing so may cause damage, fire or result in bodily injury.
- If there is abnormal vibration or sound when the vehicle is in motion, immediately stop the vehicle in a safe location and inspect the vehicle.
- Keep the product out of reach of infants. Otherwise infants may swallow or break the product, leading to injury.
- When the lamp is lit, the lens becomes hot. Do not wash the vehicle while the lights are on or immediately after turning them off.

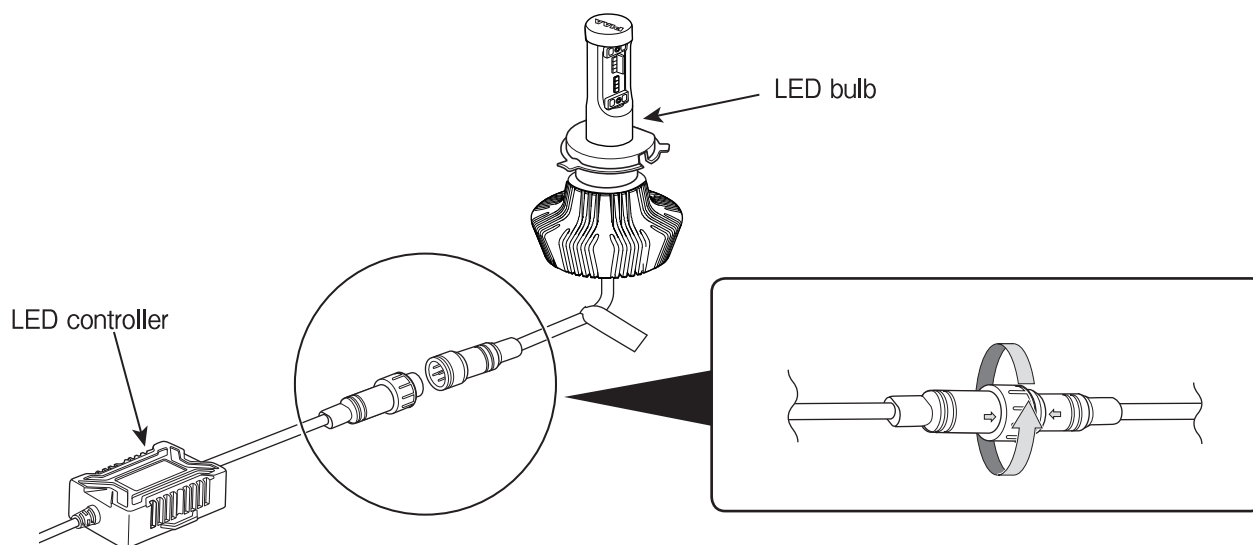
⚠ CAUTION

- This product is for 12V and 24V vehicles. Check the bulb type before use. Do not mount or use the product for different types.
- This product can be installed in lamps that use a H4 bulb. Before replacing the bulb, make sure to check the markings on the old bulb. Make sure the socket type is correct.
- On some vehicles a warning lamp may turn on the dash indicating that the bulb has burned out or some other type of abnormal indication may occur. This phenomenon is common to LED products. In addition, in order for the system to sense that a bulb has burned out, a small amount of electric voltage continues to flow even when the switch is turned off. Therefore, please be aware beforehand that when the bulb is replaced, the LED bulb may light up slightly but this is not a product malfunction. (The amount of voltage that is consumed when the LED lights up is minimal. The amount is equal to what is used to power the vehicle's clock and will not lead to a sudden drop in battery power.)
- Because LEDs have a different luminescence process from H.I.D. or halogen bulbs, even if the light color is the same it may look different when seen from a human eye. In addition, depending on the lamp setting, the light color may change. (Even when installing a bulb with the same color temperature in a lamp housing, the color may vary.)
- With regards to this bulb, turn on the light after switching the engine's ignition to the "ON" position. In the case of hybrid engines, switch the engine's ignition to the "READY-ON" position. (If the engine's ignition indicates "Engine-OFF" or in the case of hybrid vehicles, "READY-OFF", the light may not turn on in some cases. The light will go on normally if the ignition indication reads "Engine-ON" or "READY-ON")
- When using this product in vehicles that have idling stop systems or have weak battery power, the light may fail to light up or may flicker when starting the engine.
- If this product is installed and used in a lamp that has deteriorated after extended use, the functional performance of this product may not have the original intended effect. As a result, there is a possibility that it may not successfully pass the required automobile inspection. In this case, replace it with the original bulb.
- When installing this product on vehicles that have "corner sensors" (sonar), there is a possibility that these type of sensors may not operate properly. Make sure to install the LED controller approximately 20cm or more away from the sensor.
- Below features to the vehicle are designed based on usage of original light bulb. Replacement to LED light bulb may cause malfunction of these functions. If these functions fail, stop using the LED bulb and replace them back to original bulb.
 - Automatic Brake, · Adaptive Cruise Control, · Advanced Safety Vehicle (ASV)
 - Clearance sonar · Parking assist · Adaptive headlamp · Lane Departure Warning
 - Other systems which use: infrared laser, Camera, ultrasonic sound wave, millimeter-wave radar
- When this bulb/lamp is turned on, there is a possibility that noise interference may influence the radio or other devices. Please note that this is not a malfunction of any kind.
- During heavy rain or when putting the vehicle through a car wash, condensation may build up inside the lamp due to the difference in temperature inside and outside the lamp. Please note that it will not affect the overall function of the lamp.
- Do not leave the light illuminated while the vehicle is stopped for extended periods of time. (Not to exceed 30 minutes or more).
- Before installing the LED bulb, make sure there is no visible damage or that there is no evidence of the bulb being dropped. If any part is broken or damaged, it may cause malfunction.

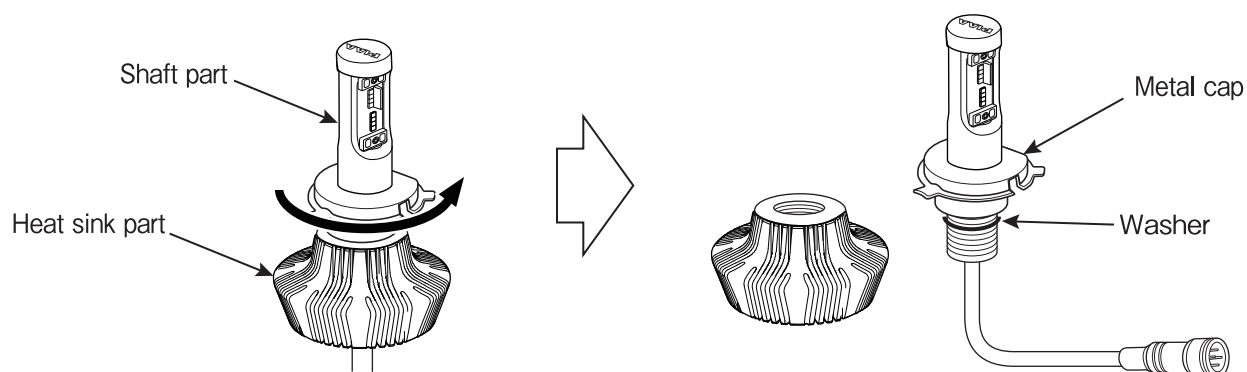
【1】 Replacement procedure

※The installation work may be easier with parts, such as the lamp, front bumper or front grill removed. Remove such parts before installation if necessary.

- (1) Refer to the vehicle's user manual to verify the location of the original bulbs, and remove them.
- (2) Disconnect the LED bulb and LED controller.



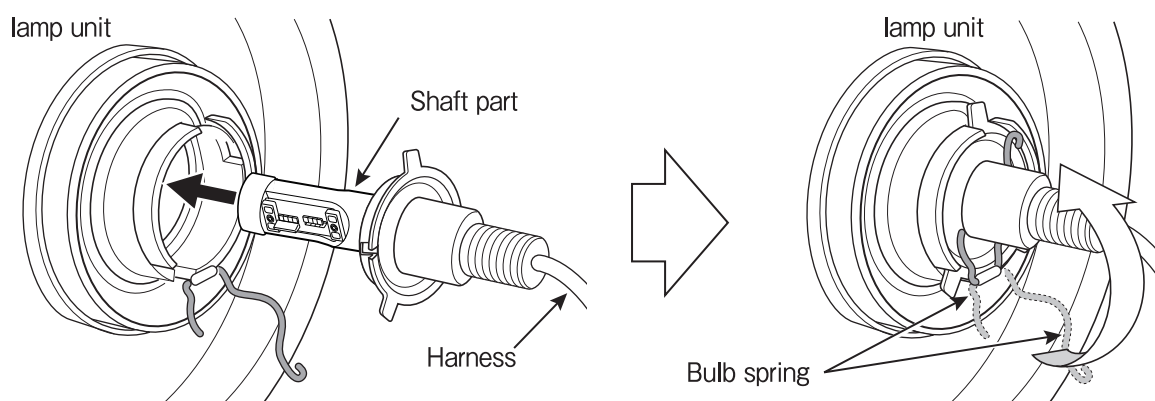
- (3) Hold the heat sink part of the LED bulb and then turn the shaft part as shown in the illustration below. Then separate the heat sink part from the shaft portion. Do not lose the washer which is inserted between the shaft and heatsink.



ADVICE

- Be extremely careful when pulling the metal cap section out of the LED bulb, because this section is very thin. If it is held too tightly, it may cut your fingers.
Recommended to hold the metal cap section with a soft cloth when carrying out the work.

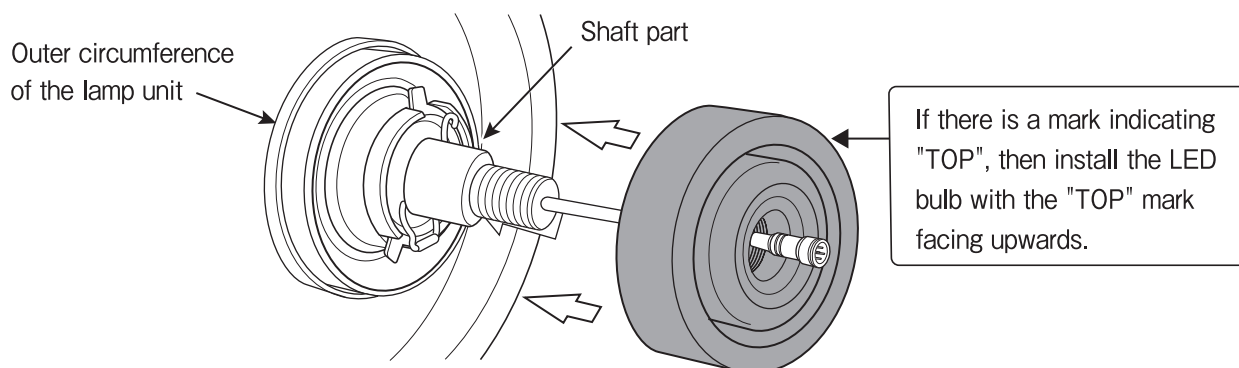
(4) Install the shaft part to the headlamp unit and fix it firmly in place with the bulb spring.



CAUTION

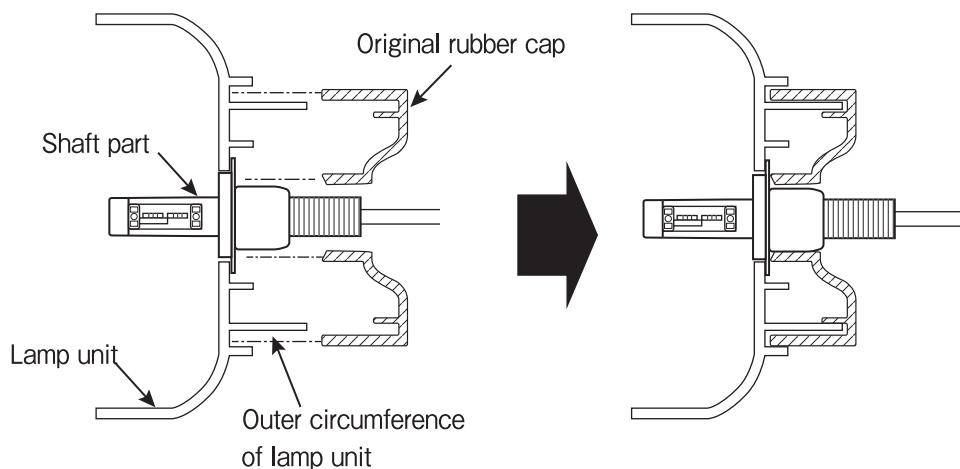
- When fixing the bulb spring in place, make sure it does get snagged on the harness. (If the harness is pulled too strongly, it may cause disconnection)

(5) Insert the original rubber cap back to cover the bulb and headlamp unit.



Cross section of LED bulb assembly viewed from the side

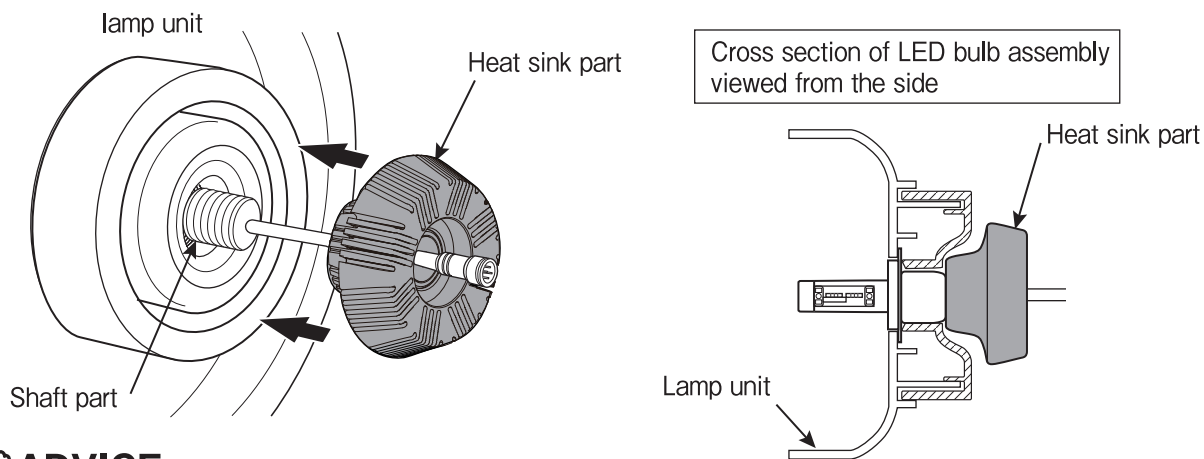
※ Press the original rubber cap firmly as shown in below illustration



ADVICE

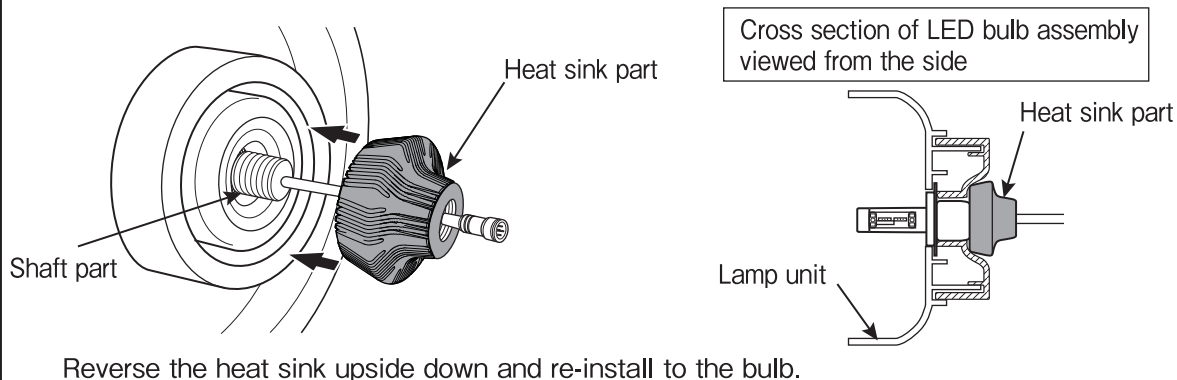
- If the rubber cap is too tight and will not go in further, lubricate the end with silicon spray or apply synthetic detergent diluted in water. (Please do not use products that use organic liquids such as CRC556, which may cause the rubber material to deteriorate.)

(6) Take the heat sink part that was removed in step (3) and install it to the shaft part.

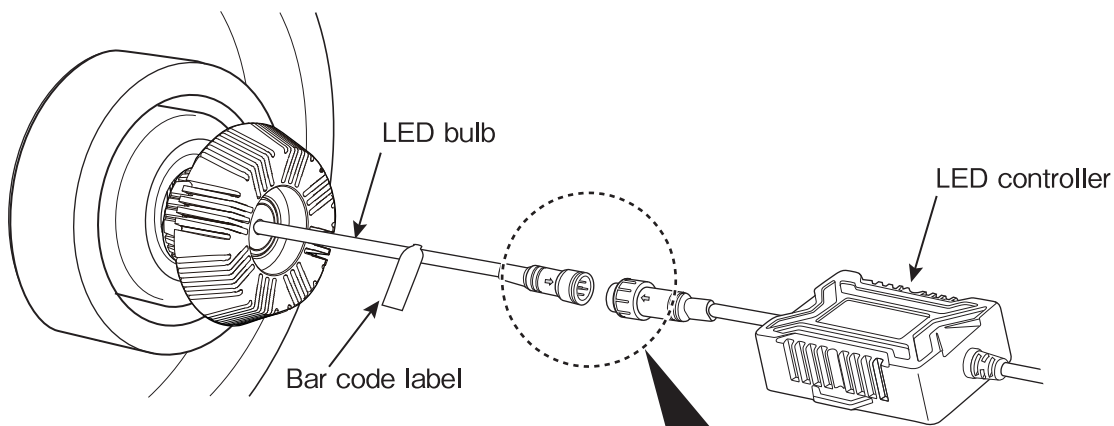


ADVICE

- Reverse the heat sink part to get more clearance when needed.

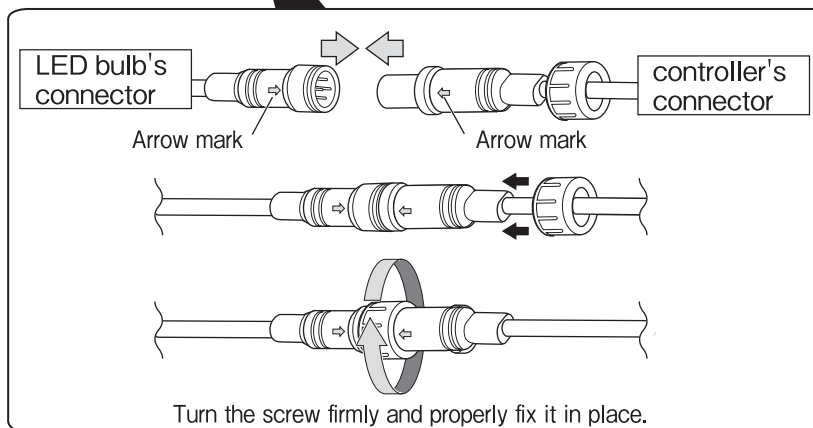


(7) Connect the LED bulb assembly and the controller .

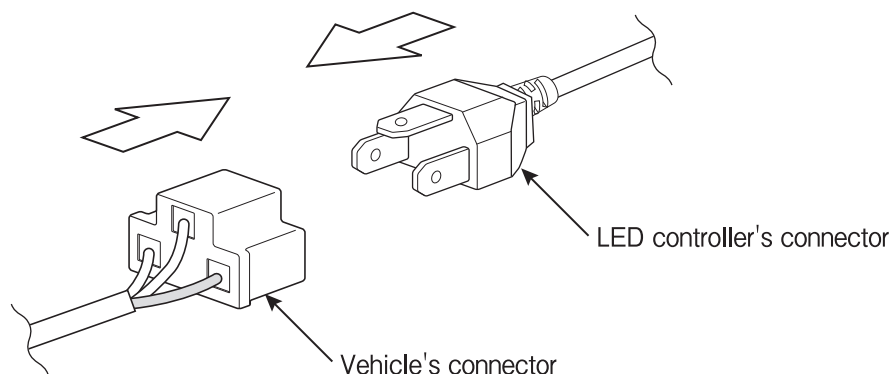


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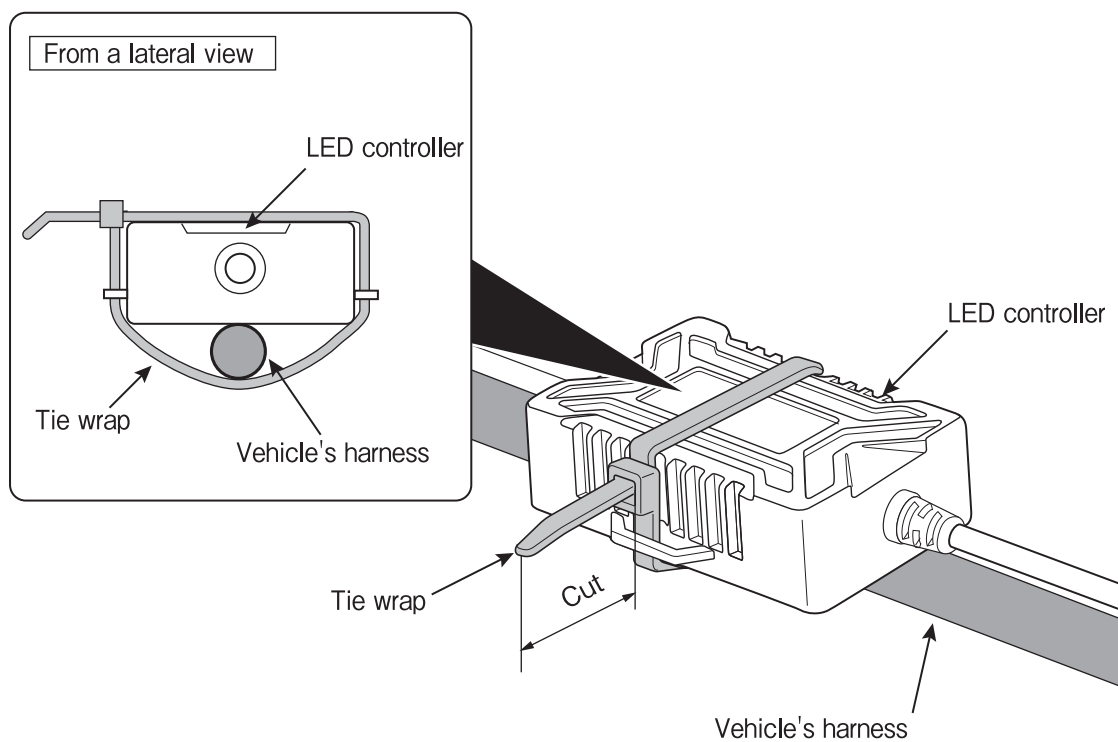
- DO NOT REMOVE BARCODE LABEL from the wire.
- Insert straight into the unit according to the arrow mark indicated on the connector, otherwise, it may not illuminate properly.



- (8) Attach the vehicle's connector to LED controller's connector. Reconnect the vehicle's battery and test the function of newly installed LED bulb



- (9) Fix the controller in place on the vehicle side using a tie wrap.



- (10) Check that the LED bulb lights up properly and make sure the light beam is not set too high or too low. If the light beam is not properly aligned, make necessary adjustments.

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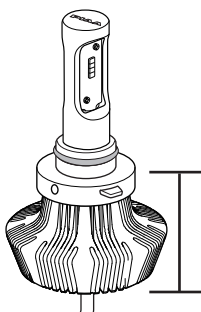
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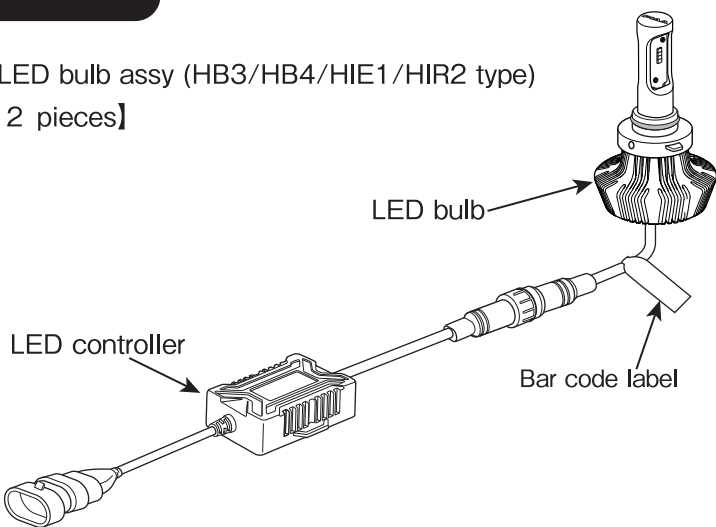


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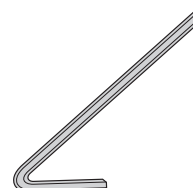
① LED bulb assy (HB3/HB4/HIE1/HIR2 type)
【2 pieces】



② O-ring (Red) 【2 pieces】



③ Hexagon wrench 【1 piece】



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About bulb replacement

Please read before starting work.

CAUTION

- When replacing the LED bulb, make sure the vehicle's power is turned off and remove the battery minus (-) terminal before carrying out the replacement procedure. Not doing so may result in not only a fire hazard but possible electrocution or bodily injury. Please use rubber gloves when carrying out this work process.
- When installing the bulb, make sure to firmly connect the bulb connector and also verify that the rubber cap is installed. In addition, make sure the harness section (electric wire) is not snagged in the cap or other sections.
- As a result of replacing the bulb, the axis of the light may become misaligned. Therefore, after replacement, check the lamp position and make necessary alignment.
- Make sure not to touch the base part or the area that illuminates light. Also, prevent any type of oil or dirt from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction.
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- Do not tug on the harness when disassembling. Doing so may damage the harness leading to overheating and potential failure.
- Be careful not to lose the original bulbs. Keep them in a safe place after removal.
- Verify the position of the product as well as the metal base of the connector. Check the proper direction and install it securely.
- Connectors and terminals should be held firmly and must be inserted / removed at a straight direction. Please note that if excessive force is applied to the terminal it may break or it may no longer connect. As a result it may cause damage leading to overheating and potential failure.
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Precautions for Use

WARNING

- Do not touch the LED bulb directly as it is extremely hot when it is illuminated and also retains considerable heat immediately after turning it off.
- Do not look directly at the lamp for an extended period of time while it is illuminated. This may cause pain to the eyes and may cause adverse effects to your eyesight.
- Do not disassemble or modify the unit in any way. Doing so may cause damage, fire or result in bodily injury.
- If there is abnormal vibration or sound when the vehicle is in motion, immediately stop the vehicle in a safe location and inspect the vehicle.
- Keep the product out of reach of infants. Otherwise infants may swallow or break the product, leading to injury.
- When the lamp is lit, the lens becomes hot. Do not wash the vehicle while the lights are on or immediately after turning them off.

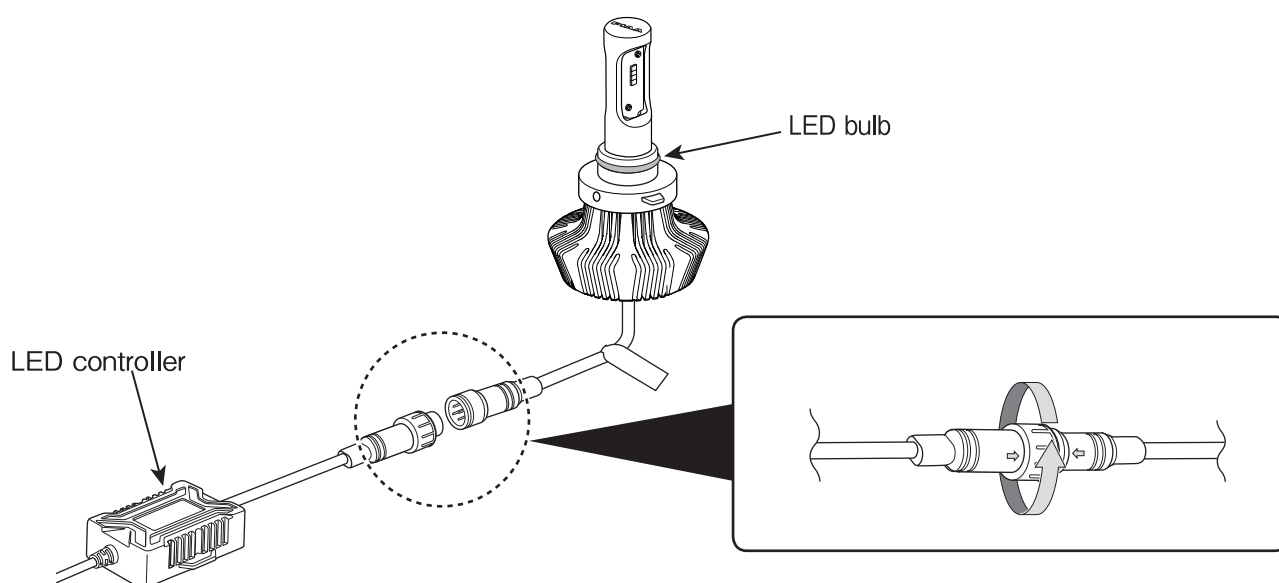
 **CAUTION**

- This product is for 12V and 24V vehicles. Check the bulb type before use. Do not mount or use the product for different types.
- This product is for Headlamp (Hi beam / Lo beam) use only. Do not use for other applications.
- This product can be used in HB3/HB4/HIR1/HIR2 type bulb socket lamps. Before installation, confirm the vehicle's original bulb socket is either HB3/HB4/HIR1/HIR2.
- On some vehicles a warning lamp may turn on the dash indicating that the bulb has burned out or some other type of abnormal indication may occur. This phenomenon is common to LED products. In addition, in order for the system to sense that a bulb has burned out, a small amount of electric voltage continues to flow even when the switch is turned off. Therefore, please be aware beforehand that when the bulb is replaced, the LED bulb may light up slightly but this is not a product malfunction. (The amount of voltage that is consumed when the LED lights up is minimal. The amount is equal to what is used to power the vehicle's clock and will not lead to a sudden drop in battery power.)
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- If this product is installed and used in a lamp that has deteriorated after extended use, the functional performance of this product may not have the original intended effect. As a result, there is a possibility that it may not successfully pass the required automobile inspection. In this case, replace it with the original bulb.
- When installing this product on vehicles that have "corner sensors" (sonar), there is a possibility that these type of sensors may not operate properly. Make sure to install the LED controller approximately 20cm or more away from the sensor.
- Below features to the vehicle are designed based on usage of original light bulb. Replacement to LED light bulb may cause malfunction of these functions. If these functions fail, stop using the LED bulb and replace them back to original bulb.
 - Automatic Brake, • Adaptive Cruise Control, • Advanced Safety Vehicle (ASV)
 - Clearance sonar • Parking assist • Adaptive headlamp • Lane Departure Warning
 - Other systems which use: infrared laser, Camera, ultrasonic sound wave, millimeter-wave radar
- When this bulb/lamp is turned on, there is a possibility that noise interference may influence the radio or other such devices. Please note that this is not a malfunction of any kind.
- During heavy rain or when putting the vehicle through a car wash, condensation may build up inside the lamp due to the difference in temperature inside and outside the lamp. Please note that it will not affect the overall function of the lamp.
- Do not leave the light illuminated while the vehicle is stopped for extended periods of time. (Not to exceed 30 minutes or more).
- Before installing the LED bulb, make sure there is no visible damage or that there is no evidence of the bulb being dropped. If any part is broken or damaged, it may cause malfunction.

[1] Replacement procedure

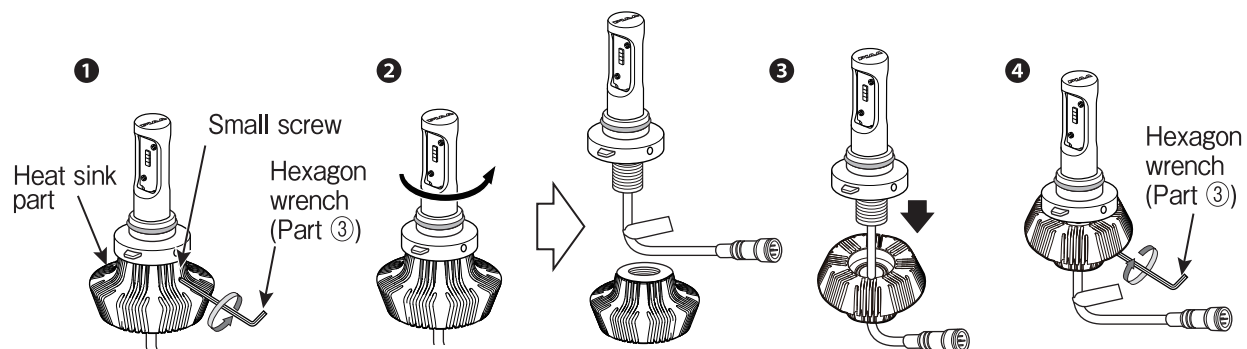
※The installation work may be easier with parts, such as the lamp, front bumper or front grill removed. Remove such parts before installation if necessary.

- (1) Refer to the vehicle's user manual to verify the location of the original bulbs, and remove them.
- (2) Disconnect the LED bulb and LED controller.



ADVICE

- The heatsink portion can be reversed and installed. Reverse the heatsink if extra clearance is needed. Loosen the 2 small screws to rotate and reverse install the heatsink portion as shown below.



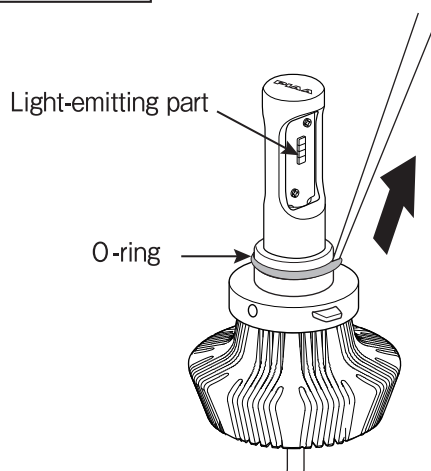
- (3) First verify the bulb socket type currently installed to the vehicle. Replace the O-ring depending on the original bulb socket type.

HB4/HIR2 : Black O-ring (The O-ring is preinstalled to the LED bulb)
 HB3/HIR1 : Red O-ring (Part ②)

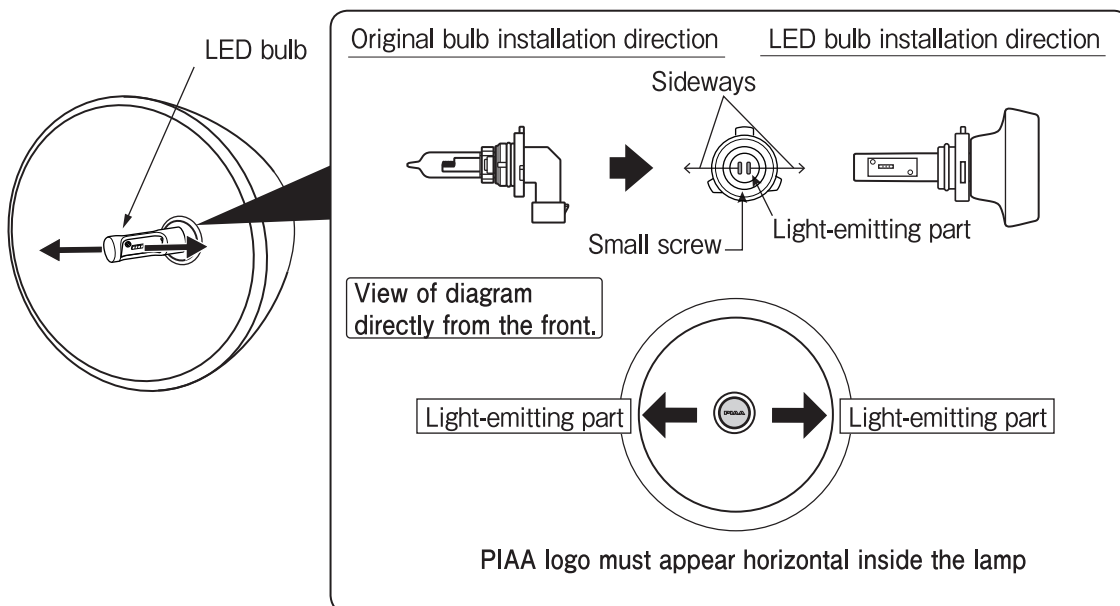
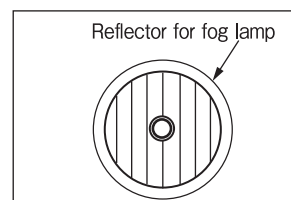
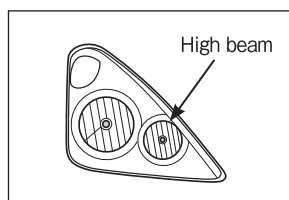
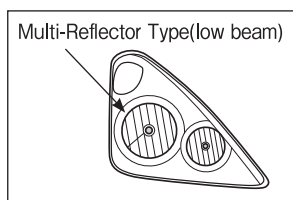
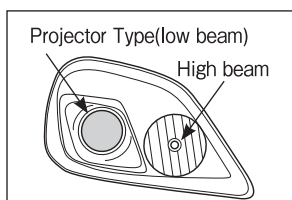
Procedures for replacing the O-rings (HB3/HIR1)

If necessary to replace the O-ring, use a tool with the thin, narrow end to remove the O-ring as shown in the illustration on the right. Select the O-ring that matches the bulb type using the list above. Set the new O-ring into the same groove.

※ When carrying out the replacement process, do not touch the illuminating part of the LED bulb with your bare hands.



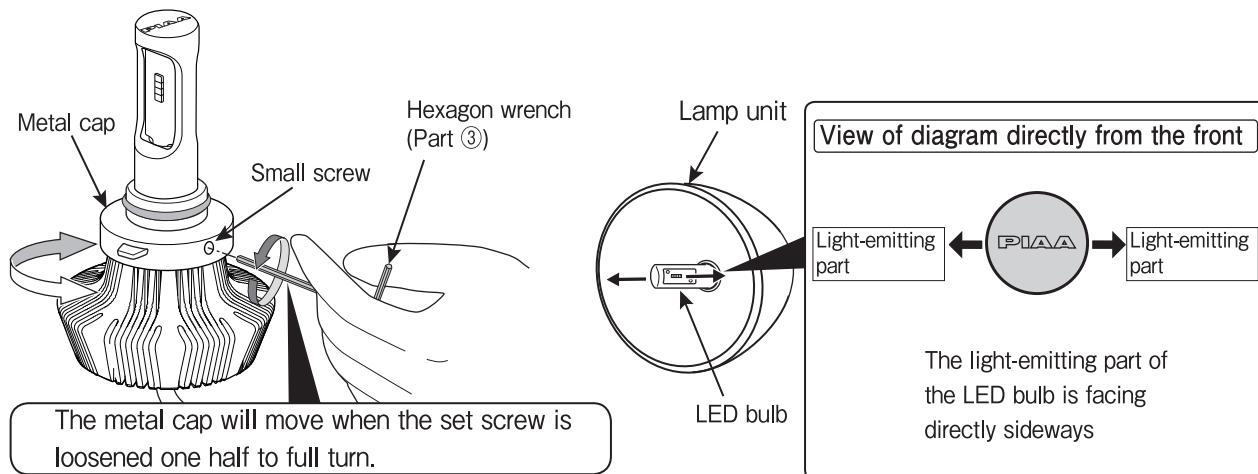
- (4) This product requires that the light-emitting section of the LED bulb must be properly adjusted depending on the type of lamp it will be installed on. Verify the type of lamp it will be installed on from the list below. Follow the procedures according to each type of lamp and install the LED bulb to the lamp.
- (5) In either installing to: Projector type, Multi-Reflector type, high beam, fog lamp lamp units, The PIAA logo on top of the bulb shaft must appear horizontal inside the vehicle's lamp unit. If the PIAA logo does not appear horizontal inside the lamp, refer to ■ Adjusting the position of the light-emitting section instruction and adjust position of the bulb shaft.



■ Adjusting the position of the light-emitting section

Use the hexagon wrench (part ③) that is attached and loosen the small screw on the LED bulb (part ①) by turning half to one full turn. This will allow you to adjust the metal cap. After adjustment, tighten the small screw and fix the metal cap in place.

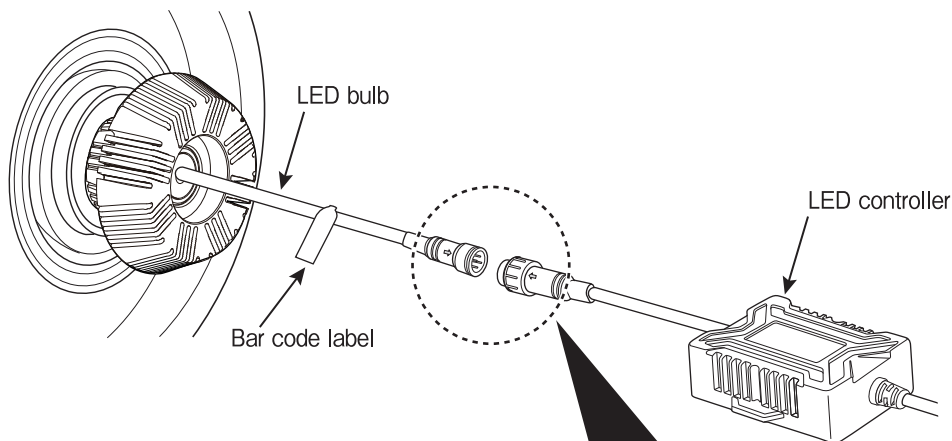
When PIAA logo appears horizontal inside the lamp unit, the Light-emitting part will be at 3 O'clock / 9 O'clock position inside the lamp.



⚠ CAUTION

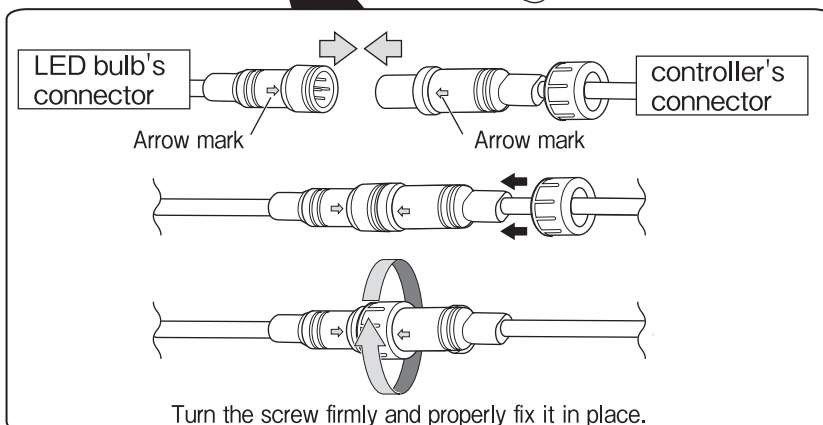
- Do not loosen the small screw more than one full turn. The small screw will come off if loosened more than one full turn.
- If you tighten the small screw too strongly when setting into position, it may damage the small screw as well as the LED bulb. Therefore use the short end of the hexagon wrench to carefully tighten.
- Make sure the installation position is correct and the **PIAA** logo will NOT be upside down inside the lamp.

(6) Connect the LED bulb assembly and the controller .

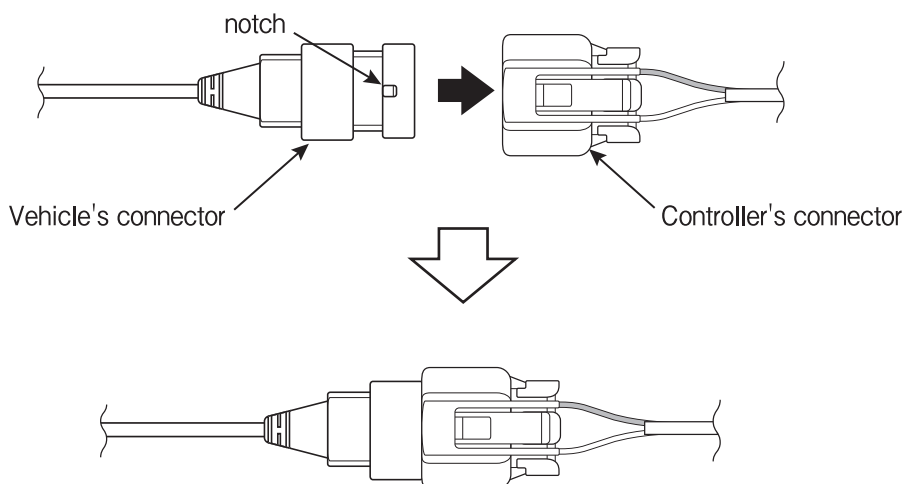


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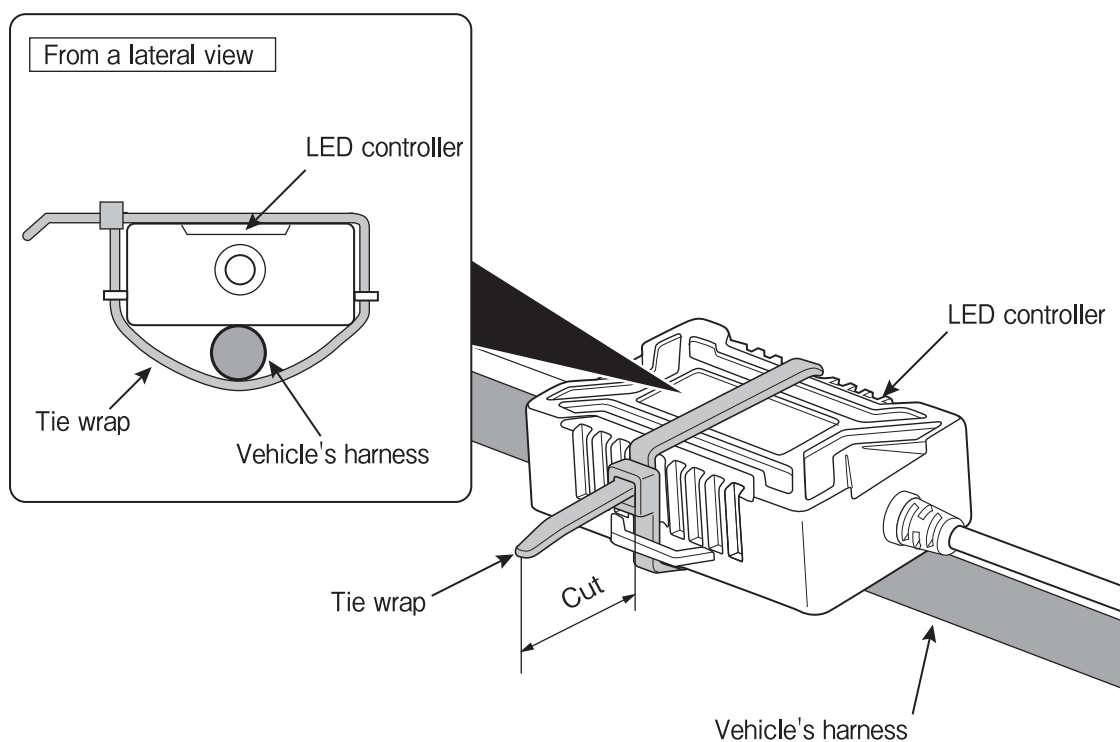
- DO NOT REMOVE BARCODE LABEL from the wire.
- Insert straight into the unit according to the arrow mark indicated on the connector, otherwise, it may not illuminate properly.



- (7) Attach the vehicle's connector to LED controller's connector. A click sound will be heard when both connectors are thoroughly connected. Reconnect the vehicle's battery and test the function of newlyinstalled LED bulb.



- (8) Fix the controller in place on the vehicle side using a tie wrap.



- (9) Check that the LED bulb lights up properly and make sure the light beam is not set too high or too low. If the light beam is not properly aligned, make necessary adjustments.

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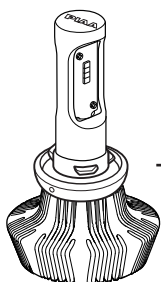
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• In some countries, these LED bulbs are not recommended for on-road use. Please check the local regulation for the usage of LED bulb conversion. For those countries which LED bulb conversion is restricted, these bulbs will be for off-road use only.



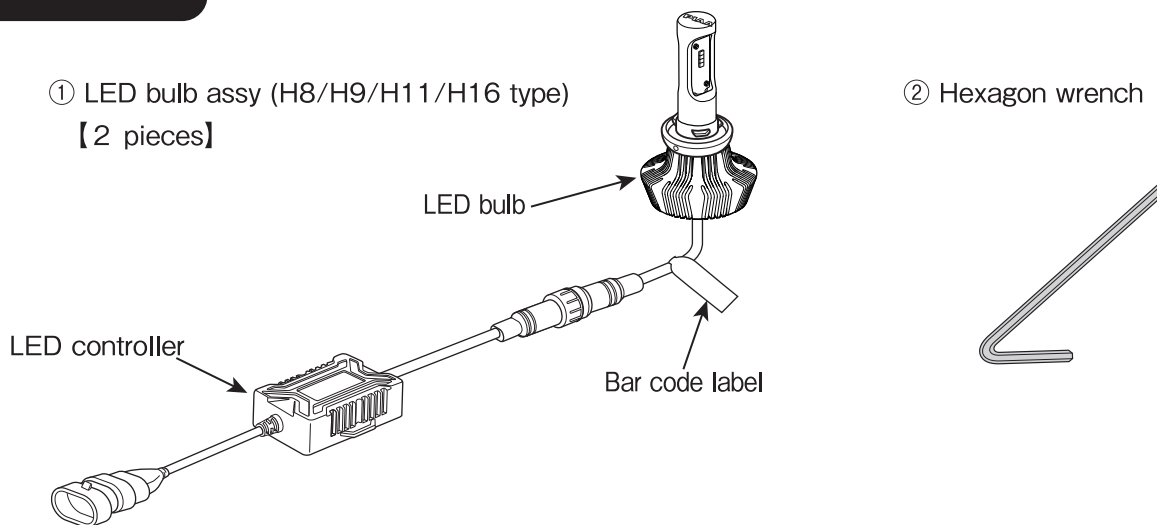
*Measure clearance from bulb collar back. Make sure there is no obstructions and is clear from any moving parts that could come in contact with the bulb base.

LED bulbs are larger than stock bulbs. Please check the clearance behind the factory housing to make sure these bulbs will fit without any obstruction. If your vehicle has a dust cap over the factory bulbs, measure the depth to make sure the LED bulbs will fit.

内 容 品

① LED bulb assy (H8/H9/H11/H16 type)
【 2 pieces】

② Hexagon wrench 【1 piece】



※DO NOT REMOVE BARCODE LABEL from the wire. Barcode label is used for product tractability. REMOVING THE BARCODE WILL VOID FACTORY WARRANTY.

About bulb replacement

Please read before starting work.

CAUTION

- When replacing the LED bulb, make sure the vehicle's power is turned off and remove the battery minus (-) terminal before carrying out the replacement procedure. Not doing so may result in not only a fire hazard but possible electrocution or bodily injury. Please use rubber gloves when carrying out this work process.
- When installing the bulb, make sure to firmly connect the bulb connector and also verify that the rubber cap is installed. In addition, make sure the harness section (electric wire) is not snagged in the cap or other sections.
- As a result of replacing the bulb, the axis of the light may become misaligned. Therefore, after replacement, check the lamp position and make necessary alignment.
- Make sure not to touch the base part or the area that illuminates light. Also, prevent any type of oil or dirt from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction.
- Never turn the vehicle's switch to "ON" when the LED bulb and the bulb connector are not connected.
- Make sure to prevent moisture from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction. If moisture is present, let it dry out thoroughly before use.
- Bulb replacement should be done safely on a flat surface where a wide space is available. Before replacement, stop the vehicle's engine, apply the emergency brake, place the shift in parking or neutral position, and pull out the key.
- Do not tug on the harness when disassembling. Doing so may damage the harness leading to overheating and potential failure.
- Be careful not to lose the original bulbs. Keep them in a safe place after removal.
- Verify the position of the product as well as the metal base of the connector. Check the proper direction and install it securely.
- Connectors and terminals should be held firmly and must be inserted / removed at a straight direction. Please note that if excessive force is applied to the terminal it may break or it may no longer connect. As a result it may cause damage leading to overheating and potential failure.
- Make sure not to apply excessive force to the light emitting part. If this part is damaged, it may cause a lighting malfunction. Please handle this product with extreme care.

Precautions for Use

WARNING

- Do not touch the LED bulb directly as it is extremely hot when it is illuminated and also retains considerable heat immediately after turning it off.
- Do not look directly at the lamp for an extended period of time while it is illuminated. This may cause pain to the eyes and may cause adverse effects to your eyesight.
- Do not disassemble or modify the unit in any way. Doing so may cause damage, fire or result in bodily injury.
- If there is abnormal vibration or sound when the vehicle is in motion, immediately stop the vehicle in a safe location and inspect the vehicle.
- Keep the product out of reach of infants. Otherwise infants may swallow or break the product, leading to injury.
- When the lamp is lit, the lens becomes hot. Do not wash the vehicle while the lights are on or immediately after turning them off.

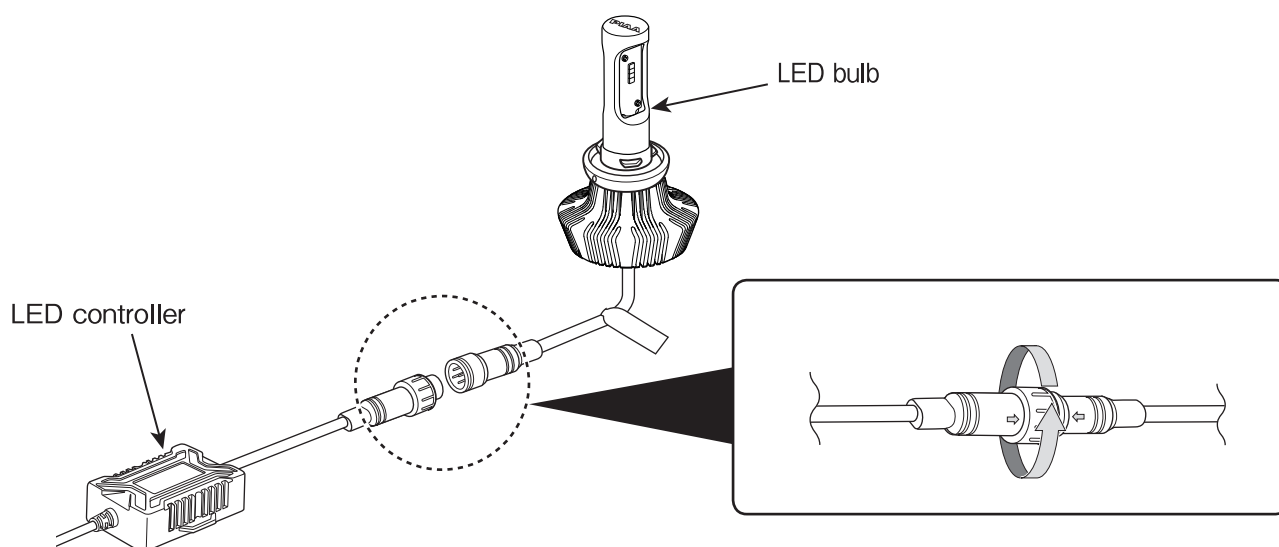
 **CAUTION**

- This product is for 12V and 24V vehicles. Check the bulb type before use. Do not mount or use the product for different types.
- This product is for Headlamp (Hi beam / Lo beam) use only. Do not use for other applications.
- This product can be used in H8/H9/H11/H16 type bulb socket lamps. Before installation, confirm the vehicle's original bulb socket is either H8/H9/H11/H16.
- On some vehicles a warning lamp may turn on the dash indicating that the bulb has burned out or some other type of abnormal indication may occur. This phenomenon is common to LED products. In addition, in order for the system to sense that a bulb has burned out, a small amount of electric voltage continues to flow even when the switch is turned off. Therefore, please be aware beforehand that when the bulb is replaced, the LED bulb may light up slightly but this is not a product malfunction. (The amount of voltage that is consumed when the LED lights up is minimal. The amount is equal to what is used to power the vehicle's clock and will not lead to a sudden drop in battery power.)
- Because LEDs have a different luminescence process from H.I.D. or halogen bulbs, even if the light color is the same it may look different when seen from a human eye. In addition, depending on the lamp setting, the light color may change. (Even when installing a bulb with the same color temperature in a lamp housing, the color may vary.)
- With regards to this bulb, turn on the light after switching the engine's ignition to the "ON" position. In the case of hybrid engines, switch the engine's ignition to the "READY-ON" position. (If the engine's ignition indicates "Engine-OFF" or in the case of hybrid vehicles, "READY-OFF", the light may not turn on in some cases. The light will go on normally if the ignition indication reads "Engine-ON" or "READY-ON")
- When using this product in vehicles that have idling stop systems or have weak battery power, the light may fail to light up or may flicker when starting the engine.
- If this product is installed and used in a lamp that has deteriorated after extended use, the functional performance of this product may not have the original intended effect. As a result, there is a possibility that it may not successfully pass the required automobile inspection. In this case, replace it with the original bulb.
- When installing this product on vehicles that have "corner sensors" (sonar), there is a possibility that these type of sensors may not operate properly. Make sure to install the LED controller approximately 20cm or more away from the sensor.
- Below features to the vehicle are designed based on usage of original light bulb. Replacement to LED light bulb may cause malfunction of these functions. If these functions fail, stop using the LED bulb and replace them back to original bulb.
 - Automatic Brake, • Adaptive Cruise Control, • Advanced Safety Vehicle (ASV)
 - Clearance sonar • Parking assist • Adaptive headlamp • Lane Departure Warning
 - Other systems which use: infrared laser, Camera, ultrasonic sound wave, millimeter-wave radar
- When this bulb/lamp is turned on, there is a possibility that noise interference may influence the radio or other devices. Please note that this is not a malfunction of any kind.
- During heavy rain or when putting the vehicle through a car wash, condensation may build up inside the lamp due to the difference in temperature inside and outside the lamp. Please note that it will not affect the overall function of the lamp.
- Do not leave the light illuminated while the vehicle is stopped for extended periods of time. (Not to exceed 30 minutes or more).
- Before installing the LED bulb, make sure there is no visible damage or that there is no evidence of the bulb being dropped. If any part is broken or damaged, it may cause malfunction.

【1】 Replacement procedure

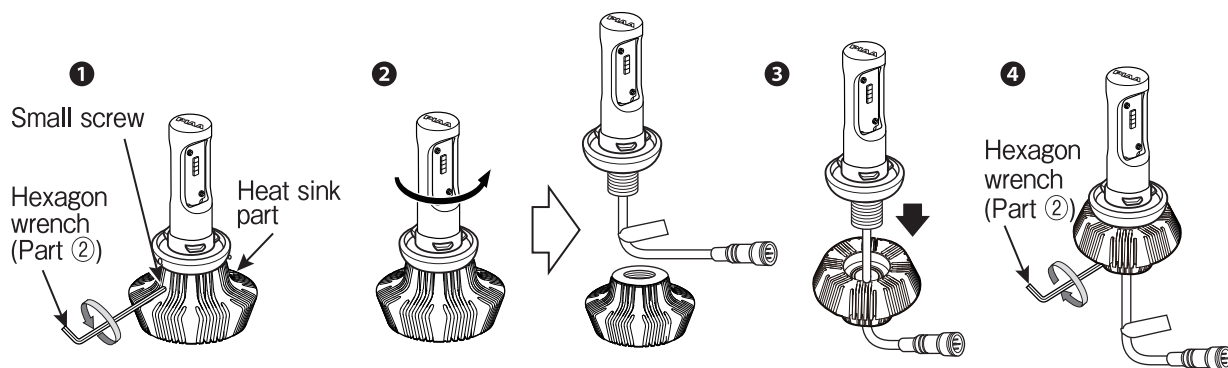
※The installation work may be easier with parts, such as the lamps, front bumpers or front grill removed. Remove such parts before installation as deemed necessary.

- (1) Refer to the vehicle's user manual to verify the location of the original bulbs, and remove them.
- (2) Disconnect the LED bulb and LED controller.



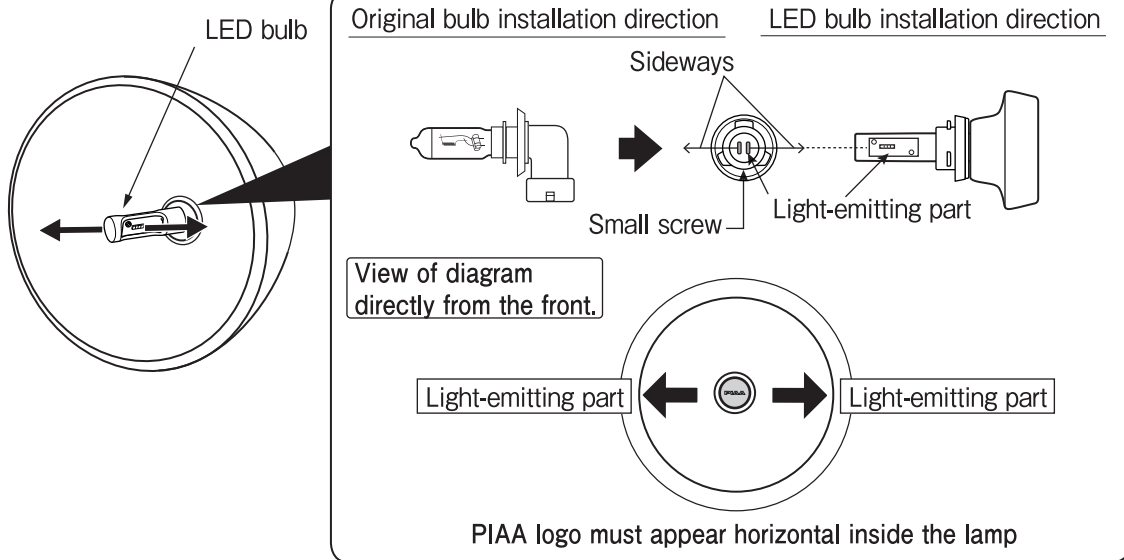
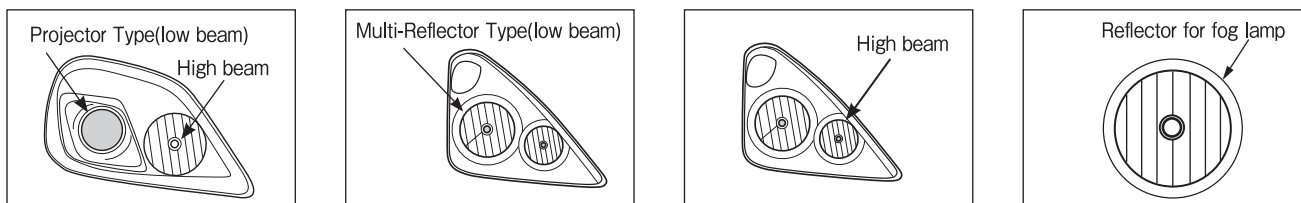
👉 ADVICE

- The heatsink portion can be reversed and installed. Reverse the heatsink if extra clearance is needed. Loosen the 2 small screws to rotate and reverse install the heatsink portion as shown below.



- (3) This product requires that the light-emitting section of the LED bulb to be properly adjusted depending on the type of lamp it will be installed in. Verify the type of lamp it will be installed in from below. Follow the procedures according to each type of lamp and correctly install the LED bulb to the lamp.

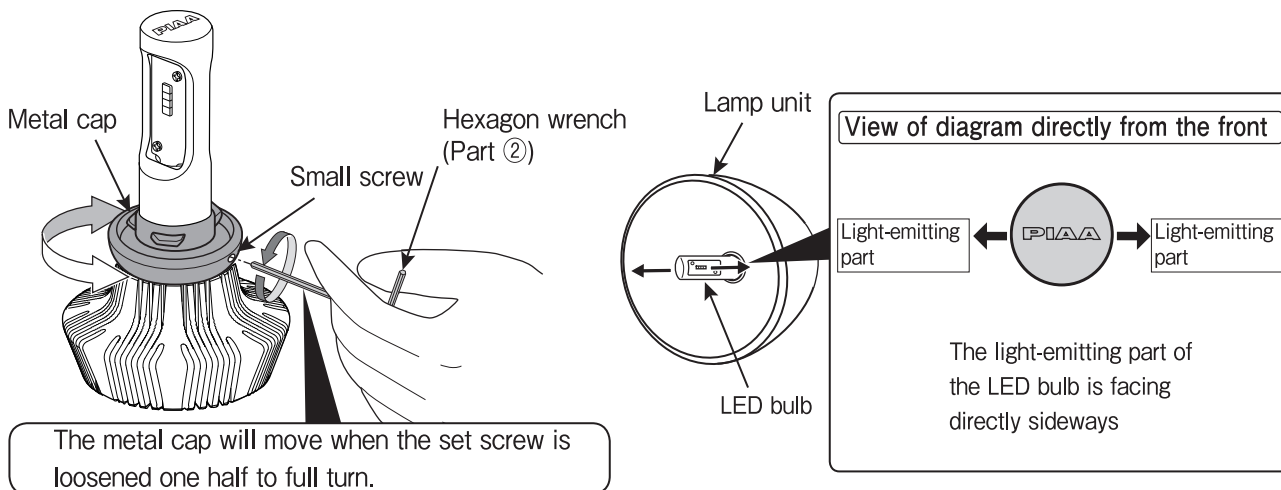
(4) In either installing to: Projector type, Multi-Reflector type, high beam, fog lamp lamp units, The PIAA logo on top of the bulb shaft must appear horizontal inside the vehicle's lamp unit. If the PIAA logo does not appear horizontal inside the lamp, refer to ■ Adjusting the position of the light-emitting section instruction and adjust position of the bulb shaft.



■ Adjusting the position of the light-emitting section

Use the hexagon wrench (part ②) that is attached and loosen the small screw on the LED bulb (part ①) by turning half to one full turn. This will allow you to adjust the metal cap. After adjustment, tighten the small screw and fix the metal cap in place.

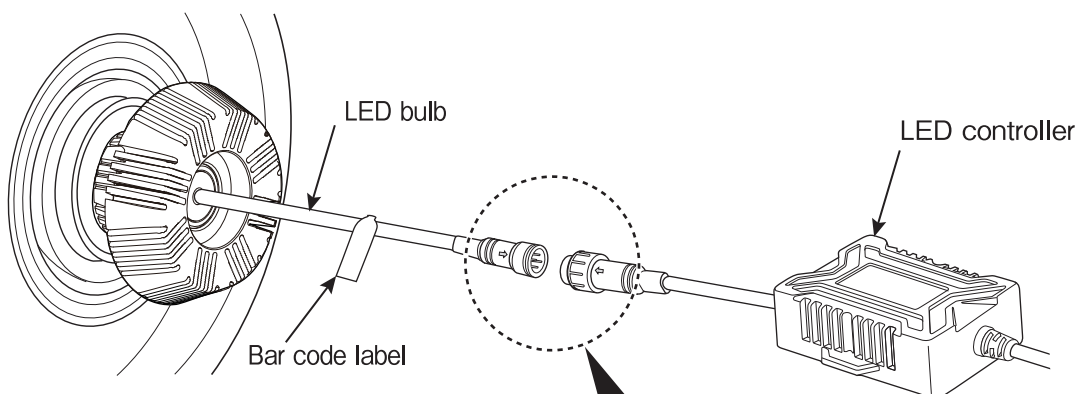
When PIAA logo appears horizontal inside the lamp unit, the Light-emitting part will be at 3 O'clock / 9 O'clock position inside the lamp.



⚠ **CAUTION**

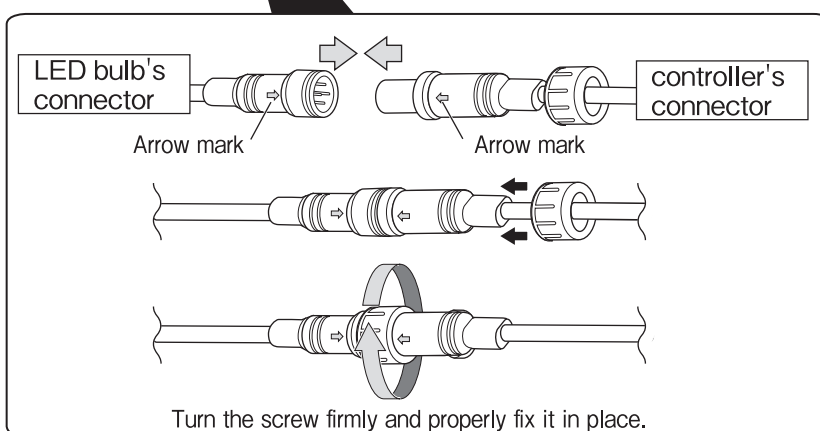
- Do not loosen the small screw more than one full turn. The small screw will come off if loosened more than one full turn.
- If you tighten the small screw too strongly when setting into position, it may damage the small screw as well as the LED bulb. Therefore use the short end of the hexagon wrench to carefully tighten.
- Make sure the installation position is correct and the **PIAA** logo will NOT be upside down inside the lamp.

(5) Connect the LED bulb assembly and the controller .

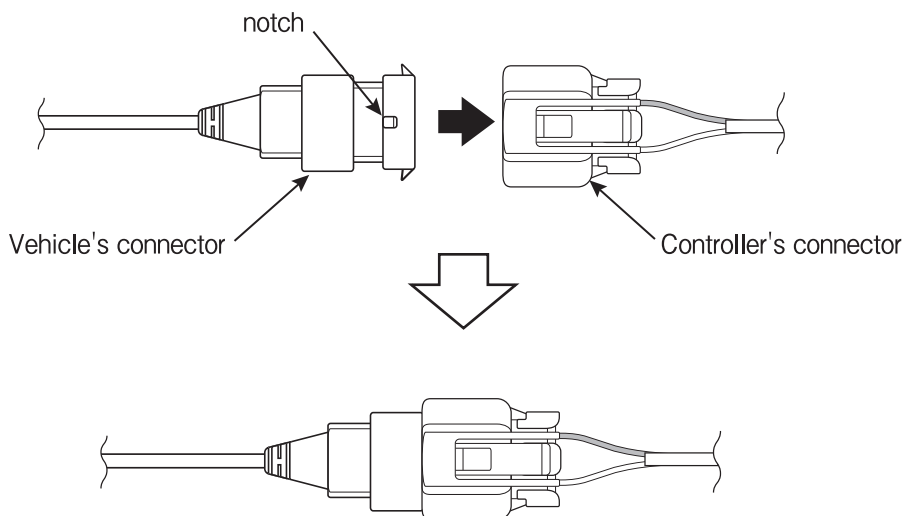


CAUTION

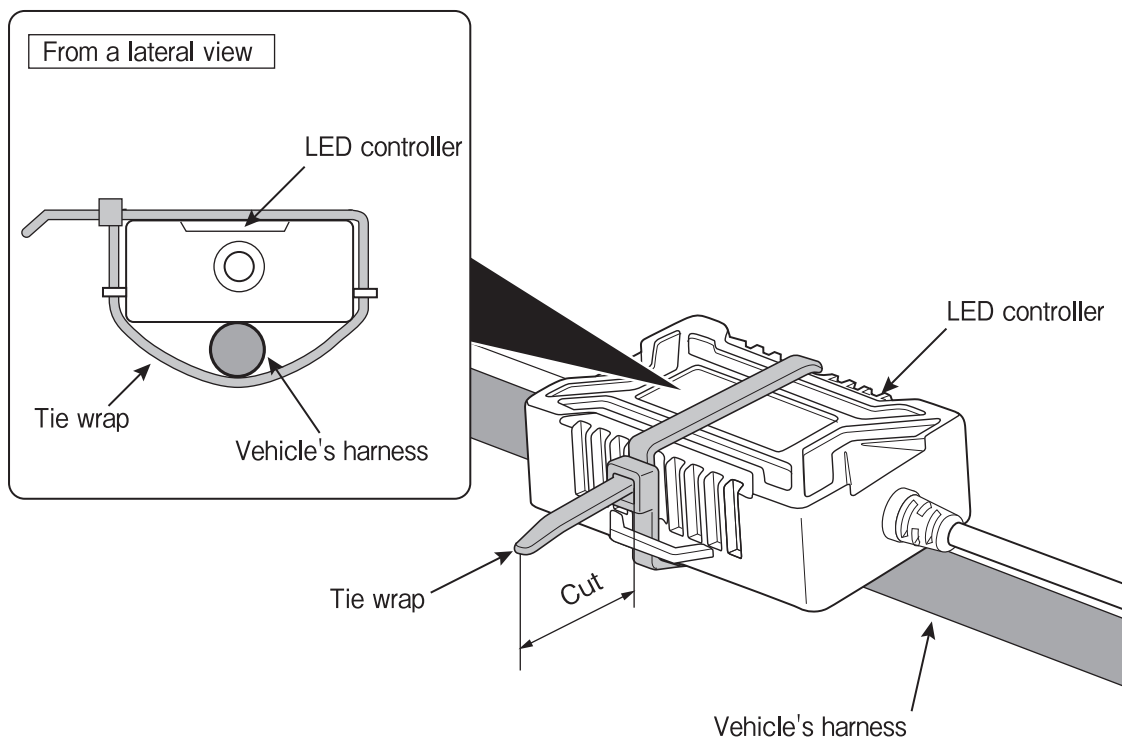
- DO NOT REMOVE BARCODE LABEL from the wire.
- Insert straight into the unit according to the arrow mark indicated on the connector, otherwise, it may not illuminate properly.



(6) Attach the vehicle's connector to LED controller's connector. A click sound will be heard when both connectors are thoroughly connected. Reconnect the vehicle's battery and test the function of newly installed LED bulb.



- (7) Fix the controller in place on the vehicle side using a tie wrap.



- (8) Check that the LED bulb lights up properly and make sure the light beam is not set too high or too low. If the light beam is not properly aligned, make necessary adjustments.

PIAA

Installation Manual for HYPER ARROS LED Bulbs (Type H7)

Thank you very much for purchasing PIAA product. Read this instruction manual thoroughly for proper use of the product. After completing your installation, please keep this manual for future reference.

For customers Please forward this manual to the next owner.

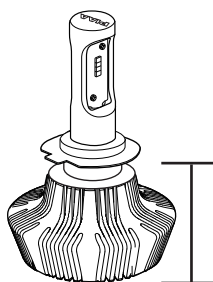
For installation service agents Be sure to hand over this instruction manual to the customer after installation.

※ ⚠ **CAUTION** marks and ⚠ **WARNING** marks in this manual indicates important notices for installing this product. Be sure to follow these notices in order to ensure safe and reliable work.

⚠ **CAUTION** Indicates procedures or situations that may cause bodily harm if used improperly.

⚠ **WARNING** Indicates items that may cause damage or malfunction to products if used improperly.

• In some countries, these LED bulbs are not recommended for on-road use. Please check the local regulation for the usage of LED bulb conversion. For those countries which LED bulb conversion is restricted, these bulbs will be for off-road use only.



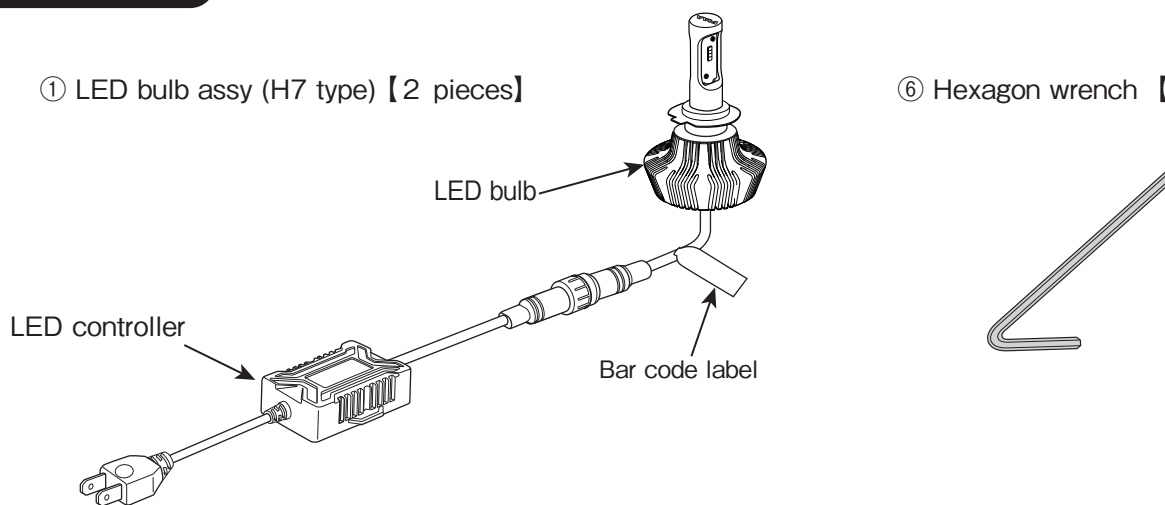
*Measure clearance from bulb collar back. Make sure there is no obstructions and is clear from any moving parts that could come in contact with the bulb base.

LED bulbs are larger than stock bulbs. Please check the clearance behind the factory housing to make sure these bulbs will fit without any obstruction. If your vehicle has a dust cap over the factory bulbs, measure the depth to make sure the LED bulbs will fit.

Contents

① LED bulb assy (H7 type) 【2 pieces】

⑥ Hexagon wrench 【1 piece】



※DO NOT REMOVE BARCODE LABEL from the wire. Barcode label is used for product tractability. REMOVING THE BARCODE WILL VOID FACTORY WARRANTY.

About bulb replacement

Please read before starting work.

CAUTION

- When replacing the LED bulb, make sure the vehicle's power is turned off and remove the battery minus (-) terminal before carrying out the replacement procedure. Not doing so may result in not only a fire hazard but possible electrocution or bodily injury. Please use rubber gloves when carrying out this work process.
- When installing the bulb, make sure to firmly connect the bulb connector and also verify that the rubber cap is installed. In addition, make sure the harness section (electric wire) is not snagged in the cap or other sections.
- As a result of replacing the bulb, the axis of the light may become misaligned. Therefore, after replacement, check the lamp position and make necessary alignment.
- Make sure not to touch the base part or the area that illuminates light. Also, prevent any type of oil or dirt from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction.
- Never turn the vehicle's switch to "ON" when the LED bulb and the bulb connector are not connected.
- Make sure to prevent moisture from adhering to the product. If the light is turned on in this condition, it may cause a lighting malfunction. If moisture is present, let it dry out thoroughly before use.
- Bulb replacement should be done safely on a flat surface where a wide space is available. Before replacement, stop the vehicle's engine, apply the emergency brake, place the shift in parking or neutral position, and pull out the key.
- Do not tug on the harness when disassembling. Doing so may damage the harness leading to overheating and potential failure.
- Be careful not to lose the original bulbs. Keep them in a safe place after removal.
- Verify the position of the product as well as the metal base of the connector. Check the proper direction and install it securely.
- Connectors and terminals should be held firmly and must be inserted / removed at a straight direction. Please note that if excessive force is applied to the terminal it may break or it may no longer connect. As a result it may cause damage leading to overheating and potential failure.
- Make sure not to apply excessive force to the light emitting part. If this part is damaged, it may cause a lighting malfunction. Please handle this product with extreme care.

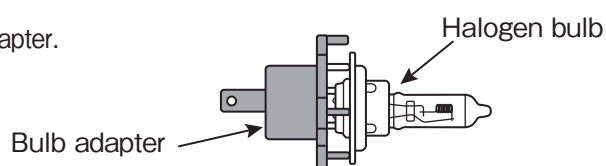
Precautions for Use

WARNING

- Do not touch the LED bulb directly as it is extremely hot when it is illuminated and also retains considerable heat immediately after turning it off.
- Do not look directly at the lamp for an extended period of time while it is illuminated. This may cause pain to the eyes and may cause adverse effects to your eyesight.
- Do not disassemble or modify the unit in any way. Doing so may cause damage, fire or result in bodily injury.
- If there is abnormal vibration or sound when the vehicle is in motion, immediately stop the vehicle in a safe location and inspect the vehicle.
- Keep the product out of reach of infants. Otherwise infants may swallow or break the product, leading to injury.
- When the lamp is lit, the lens becomes hot. Do not wash the vehicle while the lights are on or immediately after turning them off.

⚠ CAUTION

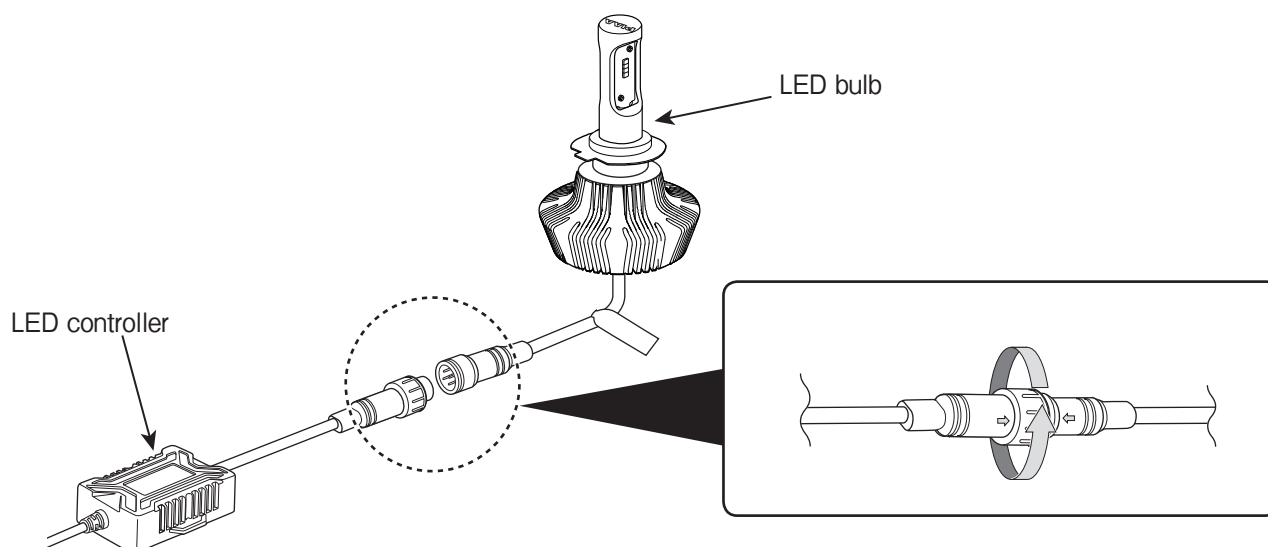
- This product is for 12V and 24V vehicles. Check the bulb type before use. Do not mount or use the product for different types.
- This product is for Headlamp (Hi beam / Lo beam) use only. Do not use for other applications.
- This product can be installed in lamps that use a H7 bulb. Before replacing the bulb, make sure to check the markings on the old bulb. Make sure the socket type is correct.
- On some vehicles a warning lamp may turn on the dash indicating that the bulb has burned out or some other type of abnormal indication may occur. This phenomenon is common to LED products. In addition, in order for the system to sense that a bulb has burned out, a small amount of electric voltage continues to flow even when the switch is turned off. Therefore, please be aware beforehand that when the bulb is replaced, the LED bulb may light up slightly but this is not a product malfunction. (The amount of voltage that is consumed when the LED lights up is minimal. The amount is equal to what is used to power the vehicle's clock and will not lead to a sudden drop in battery power.)
- Because LEDs have a different luminescence process from H.I.D. or halogen bulbs, even if the light color is the same it may look different when seen from a human eye. In addition, depending on the lamp setting, the light color may change. (Even when installing a bulb with the same color temperature in a lamp housing, the color may vary.)
- With regards to this bulb, turn on the light after switching the engine's ignition to the "ON" position. In the case of hybrid engines, switch the engine's ignition to the "READY-ON" position. (If the engine's ignition indicates "Engine-OFF" or in the case of hybrid vehicles, "READY-OFF", the light may not turn on in some cases. The light will go on normally if the ignition indication reads "Engine-ON" or "READY-ON")
- When using this product in vehicles that have idling stop systems or have weak battery power, the light may fail to light up or may flicker when starting the engine.
- If this product is installed and used in a lamp that has deteriorated after extended use, the functional performance of this product may not have the original intended effect. As a result, there is a possibility that it may not successfully pass the required automobile inspection. In this case, replace it with the original bulb.
- When installing this product on vehicles that have "corner sensors" (sonar), there is a possibility that these type of sensors may not operate properly. Make sure to install the LED controller approximately 20cm or more away from the sensor.
- Below features to the vehicle are designed based on usage of original light bulb. Replacement to LED light bulb may cause malfunction of these functions. If these functions fail, stop using the LED bulb and replace them back to original bulb.
 - Automatic Brake, • Adaptive Cruise Control, • Advanced Safety Vehicle (ASV)
 - Clearance sonar • Parking assist • Adaptive headlamp • Lane Departure Warning
 - Other systems which use: infrared laser, Camera, ultrasonic sound wave, millimeter-wave radar
- When this bulb/lamp is turned on, there is a possibility that noise interference may influence the radio or other devices. Please note that this is not a malfunction of any kind.
- During heavy rain or when putting the vehicle through a car wash, condensation may build up inside the lamp due to the difference in temperature inside and outside the lamp. Please note that it will not affect the overall function of the lamp.
- Do not leave the light illuminated while the vehicle is stopped for extended periods of time. (Not to exceed 30 minutes or more).
- Before installing the LED bulb, make sure there is no visible damage or that there is no evidence of the bulb being dropped. If any part is broken or damaged, it may cause malfunction.
- This product cannot be used on lamps installed with a bulb adapter.



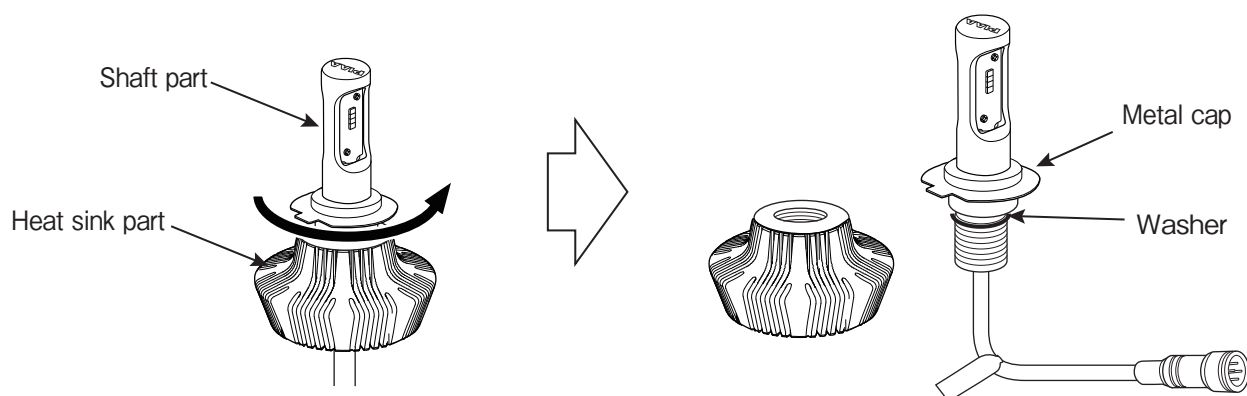
[1] Replacement procedure

※The installation work may be easier with parts, such as the lamp, front bumper or front grill removed. Remove such parts before installation if necessary.

- (1) Refer to the vehicle's user manual to verify the location of the original bulbs, and remove them.
- (2) Disconnect the LED bulb and LED controller.



- (3) Hold the heat sink part of the LED bulb and then turn the shaft part as shown in the illustration below. Then separate the heat sink part from the shaft portion. Do not lose the washer which is inserted between the shaft and heatsink.



👉 ADVICE

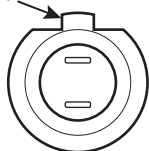
- Be extremely careful when pulling the metal cap section out of the LED bulb, because this section is very thin. If it is held too tightly, it may cut your fingers.
Recommended to hold the metal cap section with a soft cloth when carrying out the work.

(4) Use the illustration below to verify what direction the H7 type bulb has been installed. If the protective metal cap is not facing upwards or downwards, adjust the position of the shaft part of the light-emitting part.

Illustration showing the H7 bulb from the rear

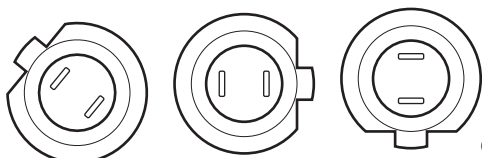
If the protective metal cap is facing directly upwards

Protective metal cap



The shaft part will be installed on the lamp as is, therefore please skip to P6 (5)

If the protective metal cap is not facing directly upwards



etc

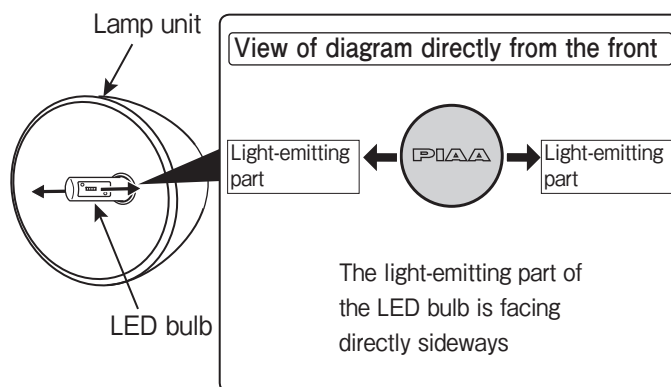
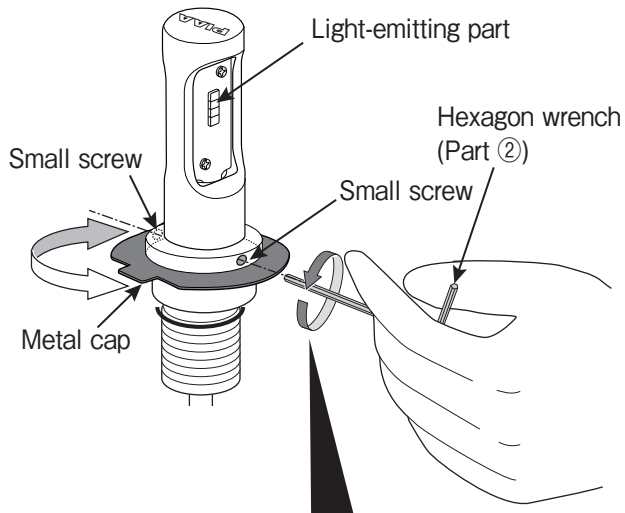


The position of the light needs to be adjusted properly. Proceed to ■ **Adjusting the position of light-emitting section.**

■ Adjusting the position of the light-emitting section

Loosen the 2 small screws using the hexagon wrench included in kit. Loosen both small screws half to one full turn and rotate the Light-emitting part to the position where PIAA logo will appear horizontal inside the vehicle's lamp unit. Once angle is adjusted, tighten both small screws.

When PIAA logo appears horizontal inside the lamp unit, the Light-emitting part will be at 3 O'clock / 9 O'clock position inside the lamp.



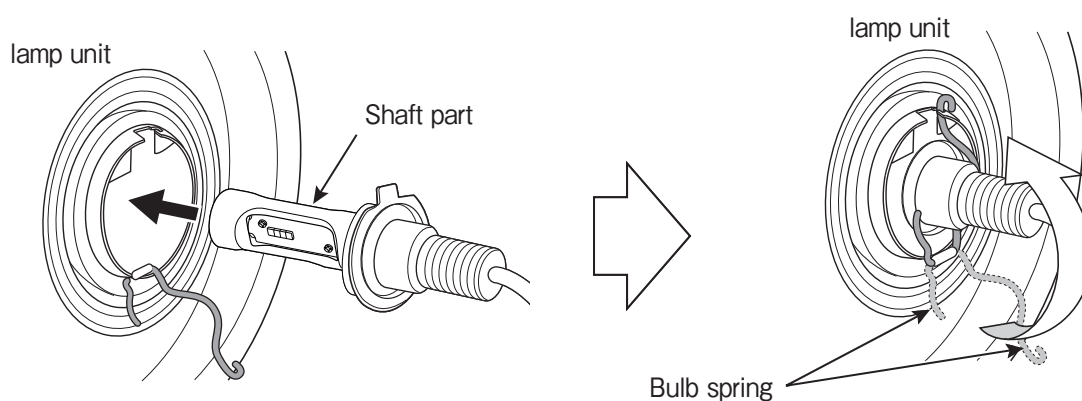
The metal cap will move when the set screw is loosened one half to one full turn.

⚠ CAUTION

- Do not loosen the set screw more than one full turn because if the set screw is loosened too much it will cause it to come off.
- If you tighten the set screw too strongly when setting it into position it may damage the set screw as well as the LED bulb. Therefore use the short end of the hexagon wrench to carefully tighten it in place.
- Make sure the installation position is correct and the **PIAA** logo will not be upside down.

※ Once the angle of Light-emitting part is adjusted, proceed to step (5)

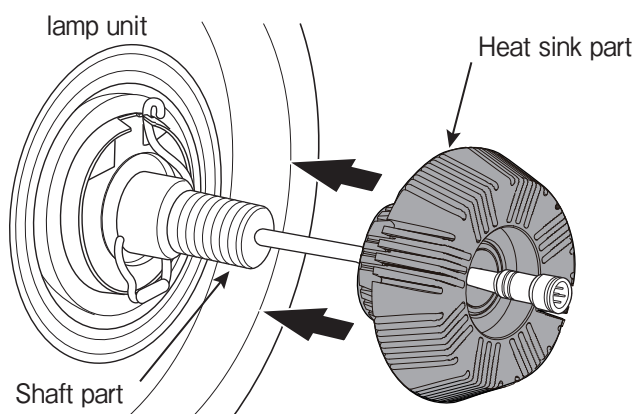
- (5) Install the shaft part to the headlamp unit and fix it firmly in place with the bulb spring.



⚠ CAUTION

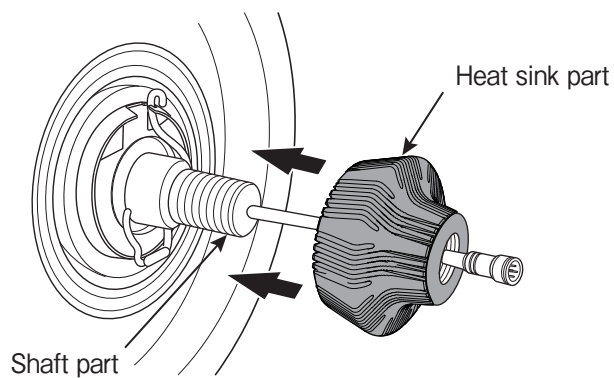
- When fixing the bulb spring in place, make sure it does not get snagged on the harness. (If the harness is pulled too strongly, it may cause disconnection)

- (6) Take the heat sink part that was removed in step (3) and install it to the shaft part.
The heat sink can be turned approx. 10 rotations before it stops. Turn it so it is firmly set in place.

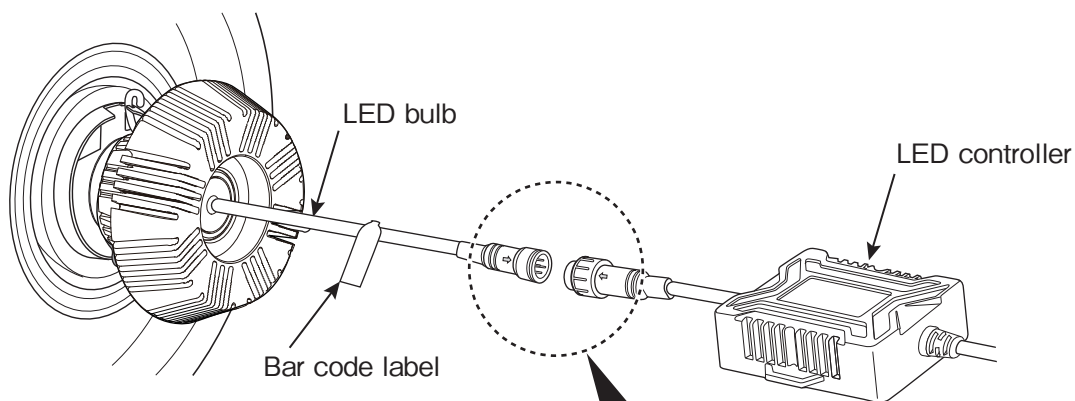


👉 ADVICE

- Reverse the heat sink part to get more clearance when needed.

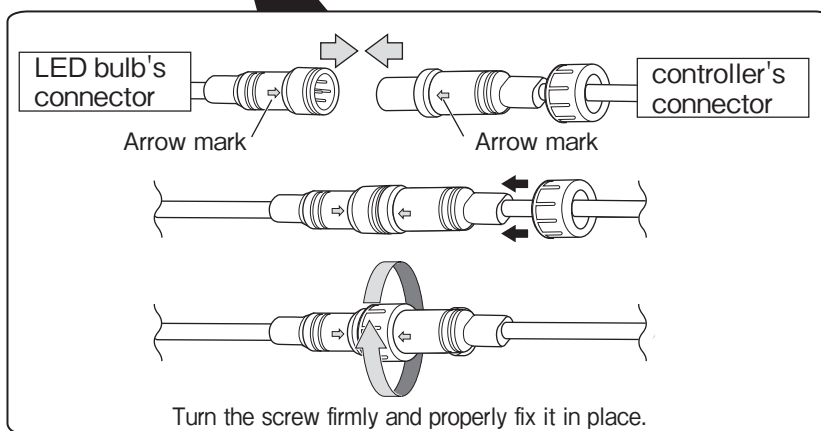


(7) Connect the LED bulb assembly and the controller .

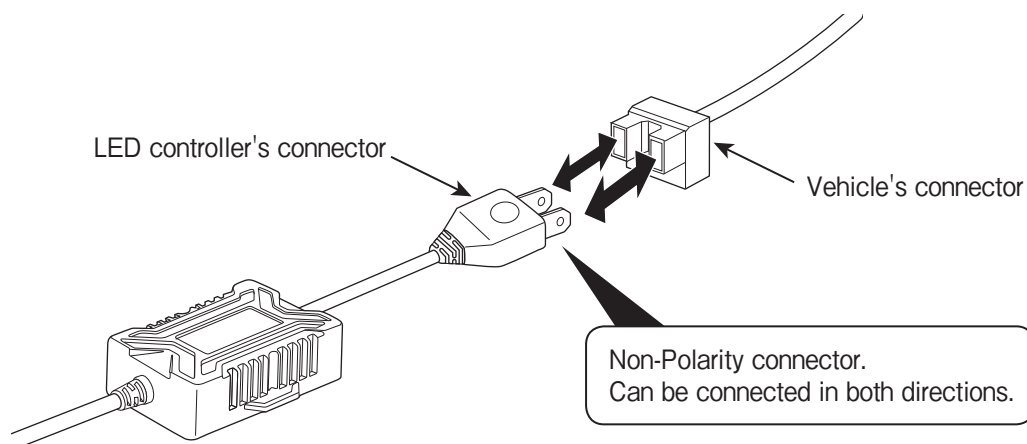


CAUTION

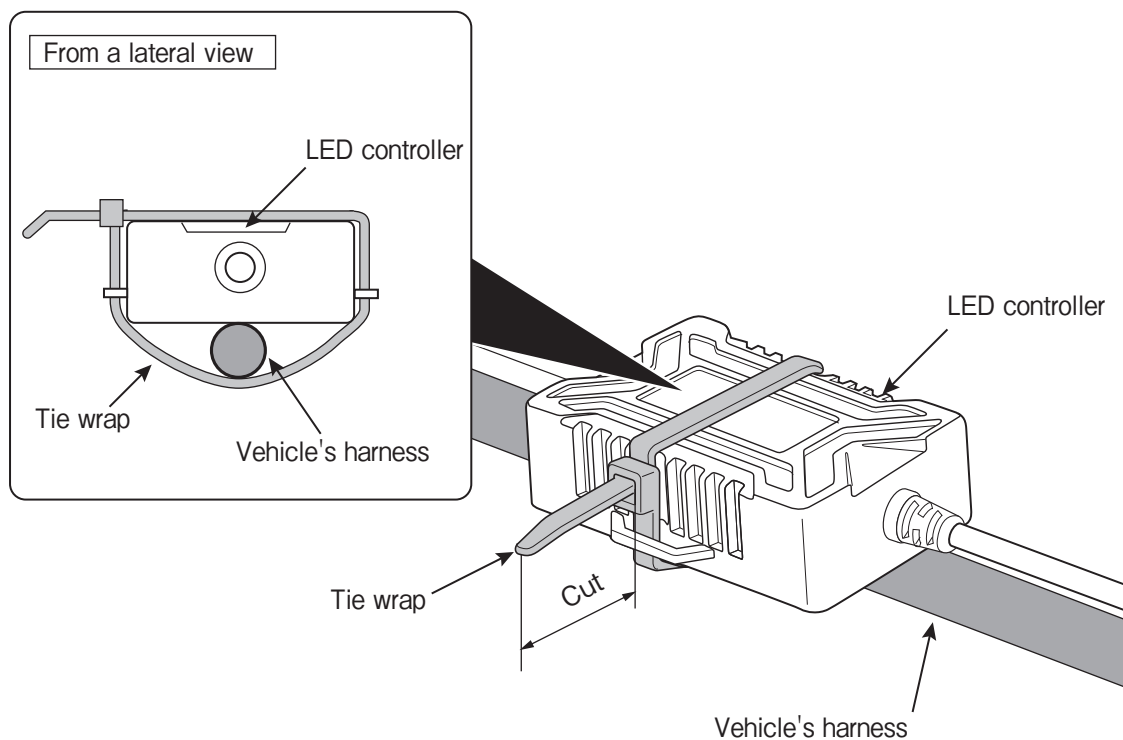
- DO NOT REMOVE BARCODE LABEL from the wire.
- Insert straight into the unit according to the arrow mark indicated on the connector, otherwise, it may not illuminate properly.



(8) Attach the vehicle's connector to LED controller's connector. Reconnect the vehicle's battery and test the function of newly installed LED bulb.



(9) Fix the controller in place on the vehicle side using a tie wrap.



(10) Check that the LED bulb lights up properly and make sure the light beam is not set too high or too low. If the light beam is not properly aligned, make necessary adjustments.