

DENTAL LIGHT

iO 5000

INSTALLATION  
AND  
OPERATION INSTRUCTIONS

 **IMPORTANT**

After installation is completed, check all the bolts, screws and fasteners to confirm that they are securely fastened.

 **Belmont**

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### Intended Use of the Product

This product is **intended for the exclusive use for diagnoses, treatments and relative procedures of dentistry**, and must be operated or handled by the qualified dentists or by dental staffs under the supervision of the dentist.

Such dentists or dental staffs should instruct and/or assist the patients to approach to and leave from the product.

Patients should not be allowed to operate or handle the product unless he/she is so instructed.

### Environmental Requirements

Ambient Temperature	Operating +5°C - +40°C	Storage -10°C - +50°C
Humidity	10 % - 80%	
Atmospherical Pressure	600 hPa - 1060 hPa	

### Important Notes

In case of the troubles, please contact Takara Belmont offices or your dealers.

Do not disassemble or attempt to repair.

Disassembly, repair or modifications should only be done by a qualified repair technician.

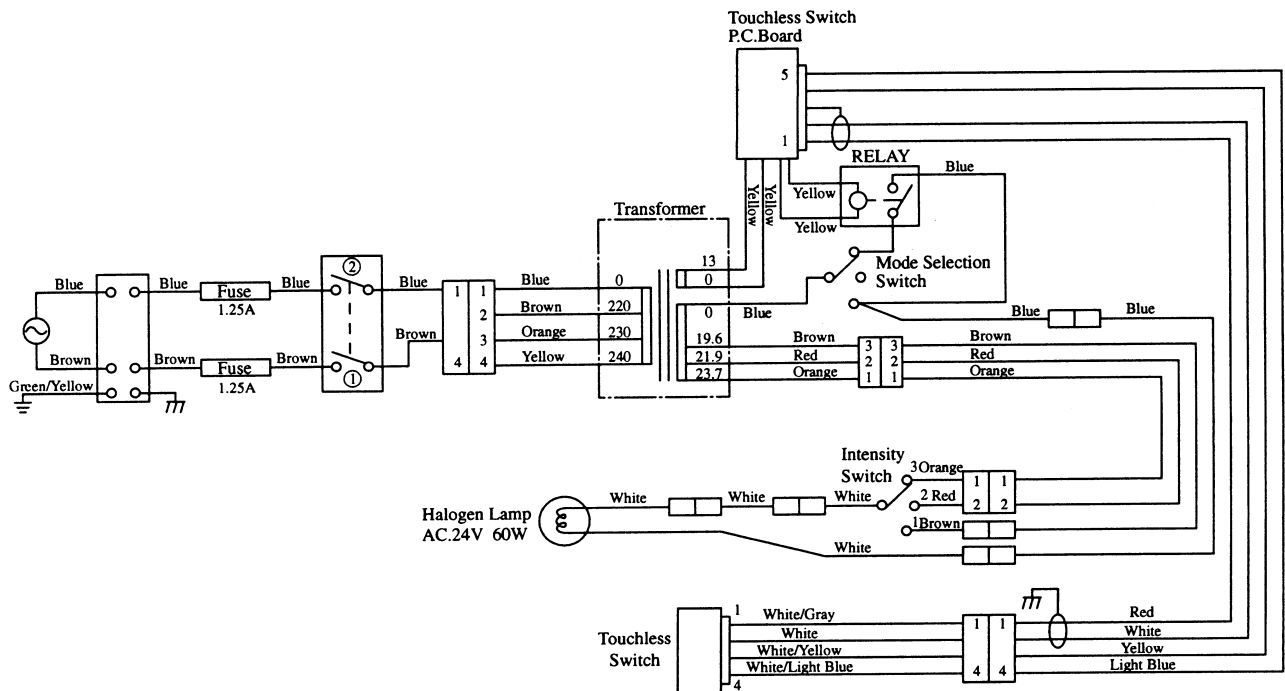
Attempts at disassembly, repair or modifications may lead to abnormal operation and accidents.

# [1] SPECIFICATIONS

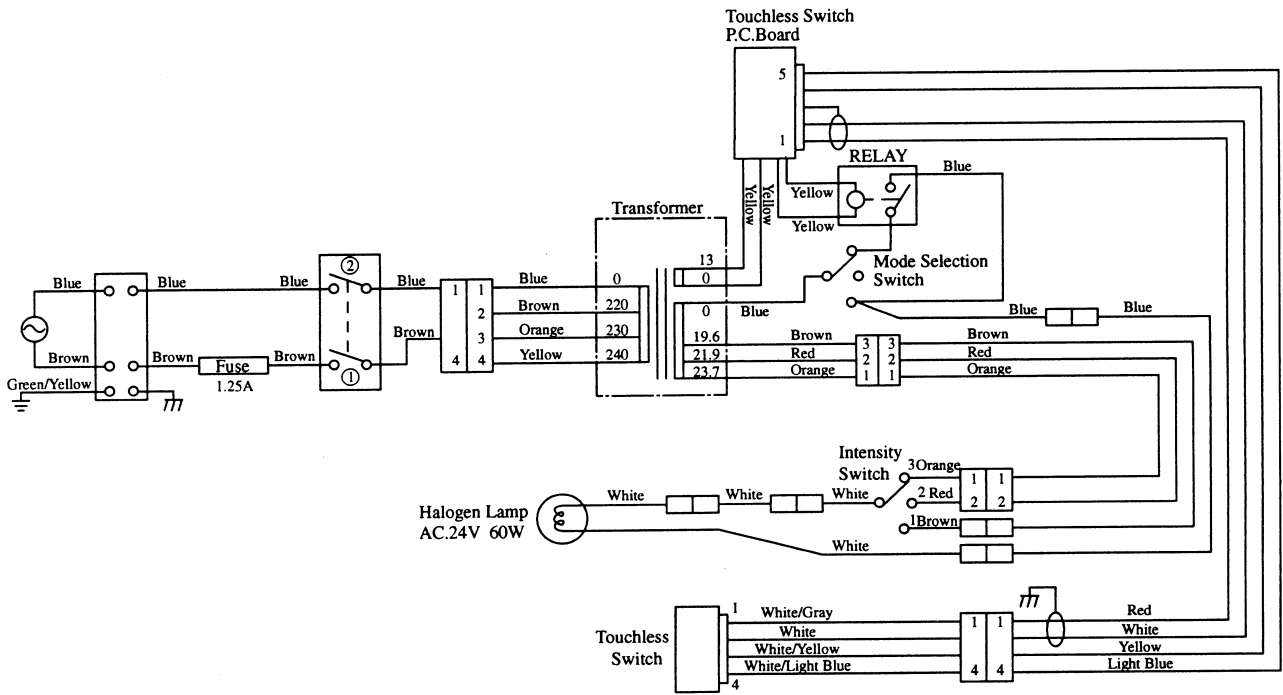
1. Focal Distance.....700 mm
2. Color Temperature ..... 5000° Kelvin at 28000 Lux
3. Light Intensity ..... H : 28000 Lux  
M: 22000 Lux  
L : 15000 Lux
4. Light Pattern..... 194 x 72 mm at 700 mm
5. Power Requirement..... AC. 100V / 110V / 115V 50/60Hz  
AC. 220V / 230V / 240V 50/60Hz
6. Bulb Type ..... Tungsten Halogen Type (JA 24V 60W)
7. Service Life ..... 10 years

# [2] WIRING DIAGRAM

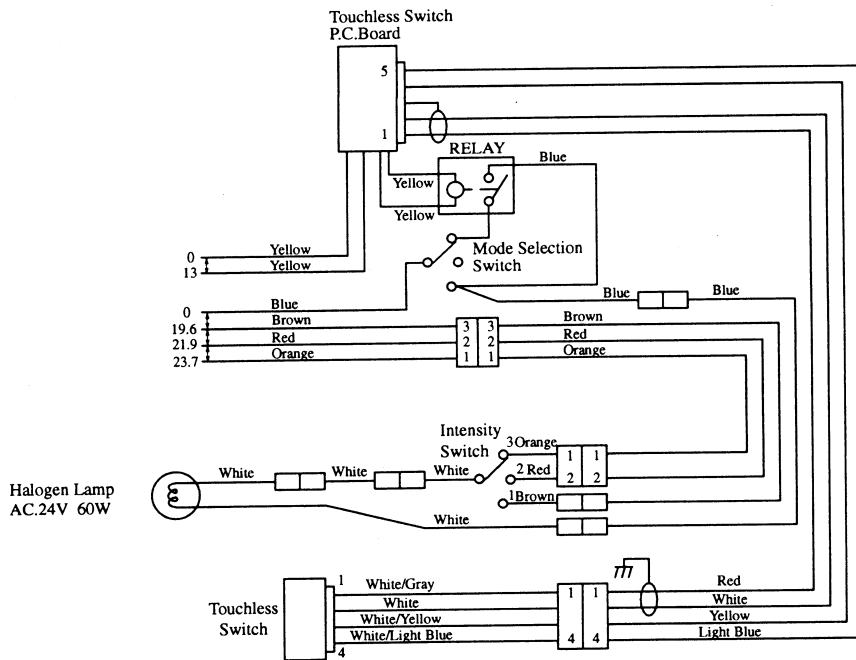
## 2-1. 501 Wiring Diagram



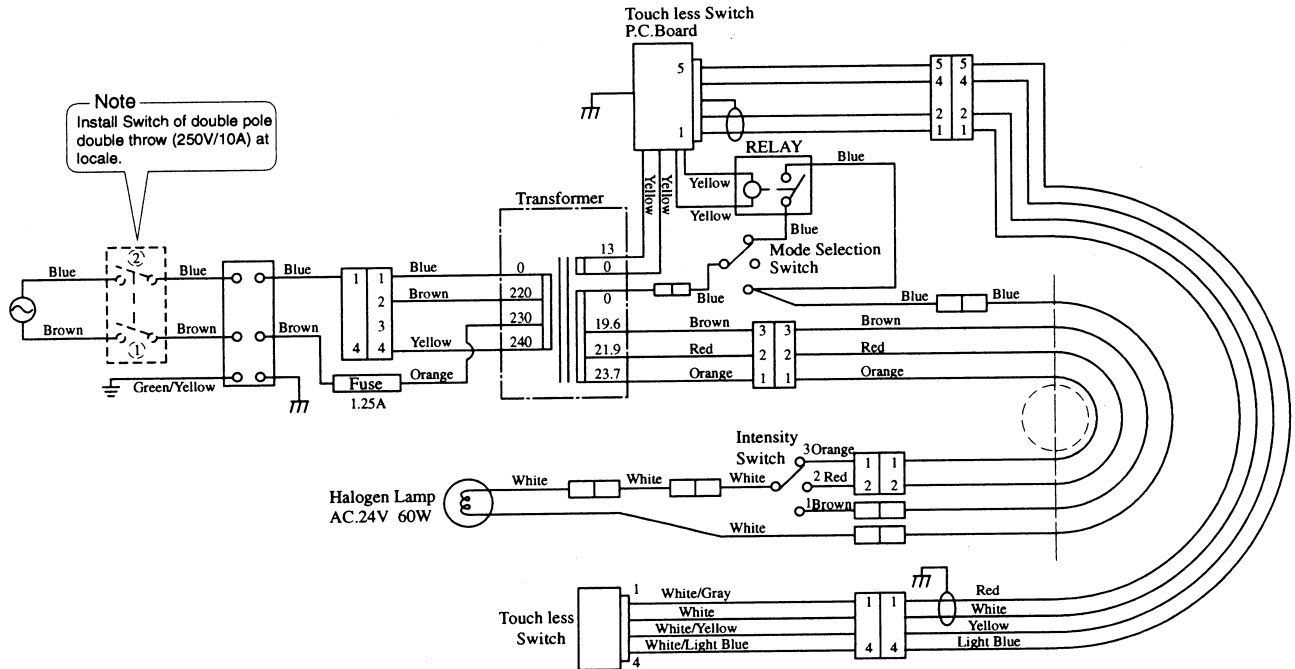
## 2-2. 502 Wiring Diagram



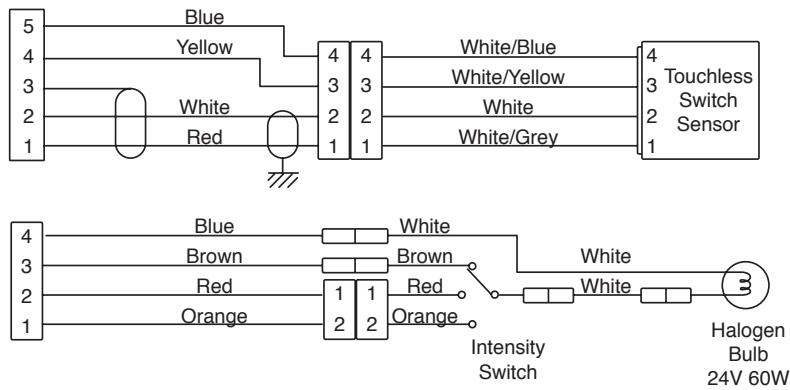
## 2-3. 504 Wiring Diagram



## 2-4. 505 Wiring Diagram



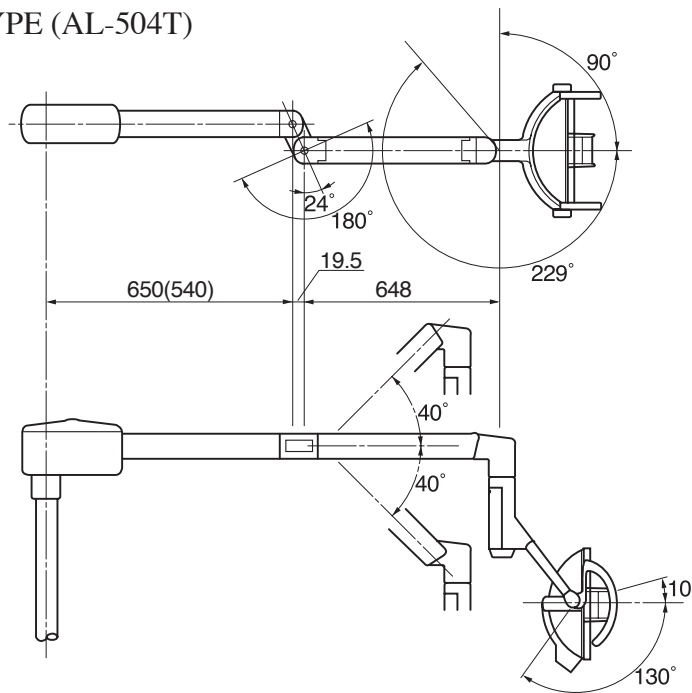
## 2-5. 520 Wiring Diagram



### [3] UNIT MOUNT TYPE (AL-501)

#### 3-1. DIMENSIONS

( ) : SP MOUNT TYPE (AL-504T)



#### 3-2. INSTALLATION INSTRUCTIONS

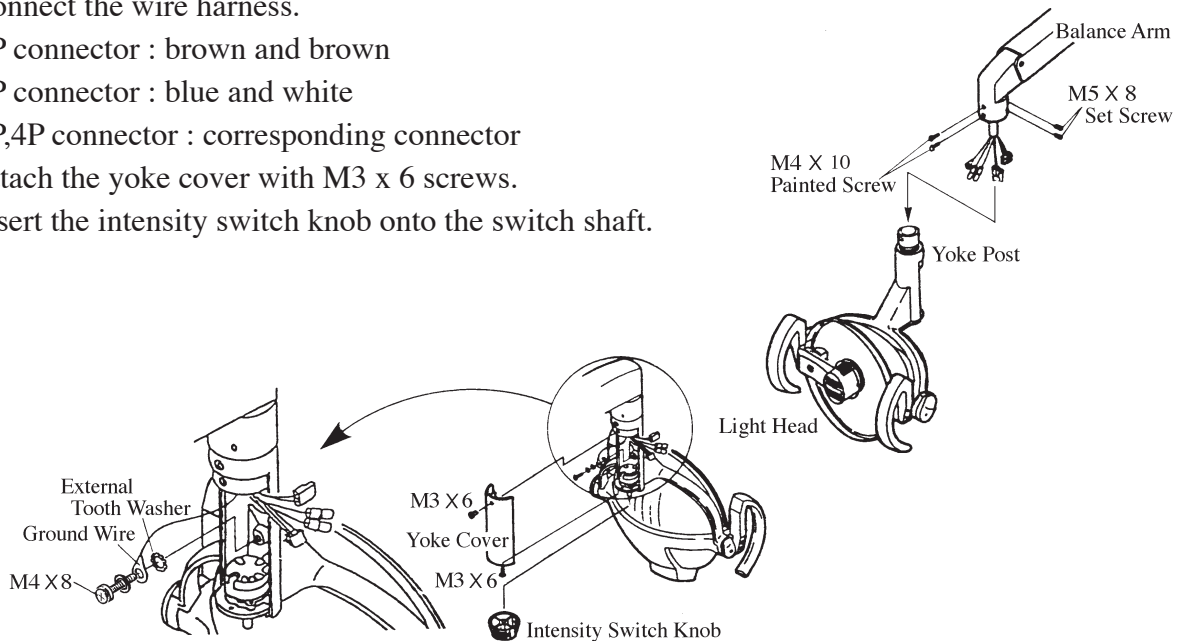
\* All necessary parts are included in the carton box.

- |                              |       |                              |       |
|------------------------------|-------|------------------------------|-------|
| •M3 x 6 Screw .....          | 2pcs. | •External Tooth Washer ..... | 1pce. |
| •M4 x 8 Screw .....          | 1pce. | •Yoke Cover.....             | 1pce. |
| •M4 x 10 Painted Screw ..... | 2pcs. | •Intensity Switch Knob.....  | 1pce. |
| •M5 x 8 Set Screw .....      | 2pcs. |                              |       |

- 1) Install the light head to the balance arm with M4 x 10 painted screws and M5 x 8 set screws.
- 2) Fix the ground wire to yoke post with M4 x 8 screw and washers.
- 3) Connect the wire harness.

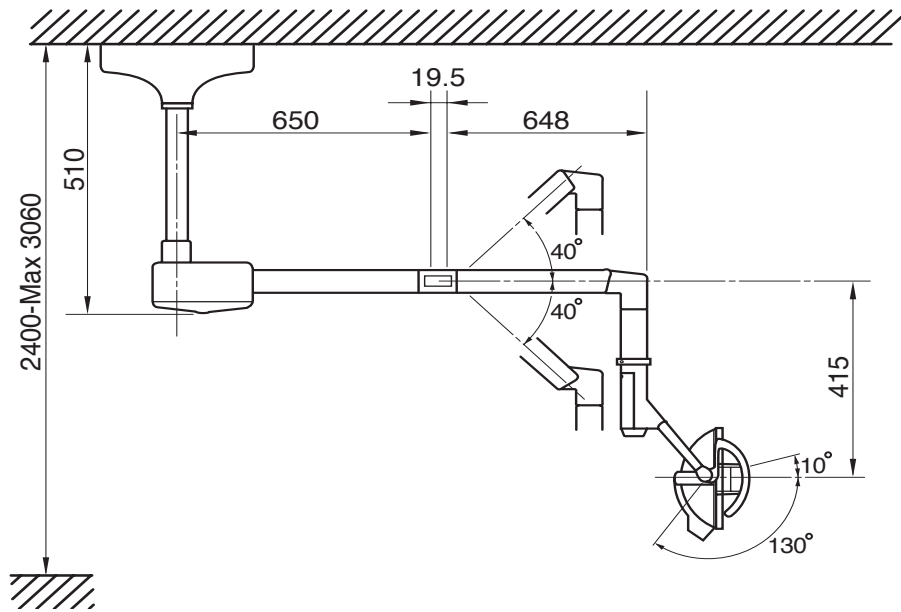
- 1P connector : brown and brown
- 1P connector : blue and white
- 2P,4P connector : corresponding connector

- 4) Attach the yoke cover with M3 x 6 screws.
- 5) Insert the intensity switch knob onto the switch shaft.



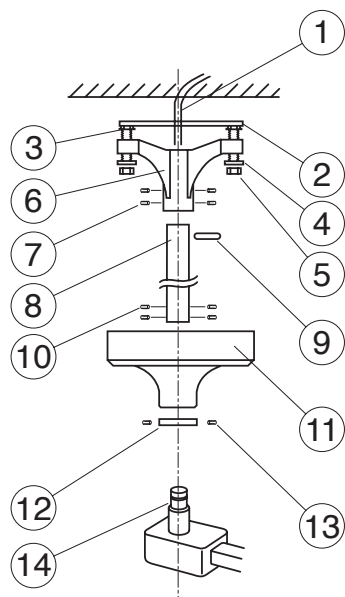
## [4]CEILING MOUNT TYPE (AL-502)

### 4-1. DIMENSIONS



### 4-2. INSTALLATION INSTRUCTIONS

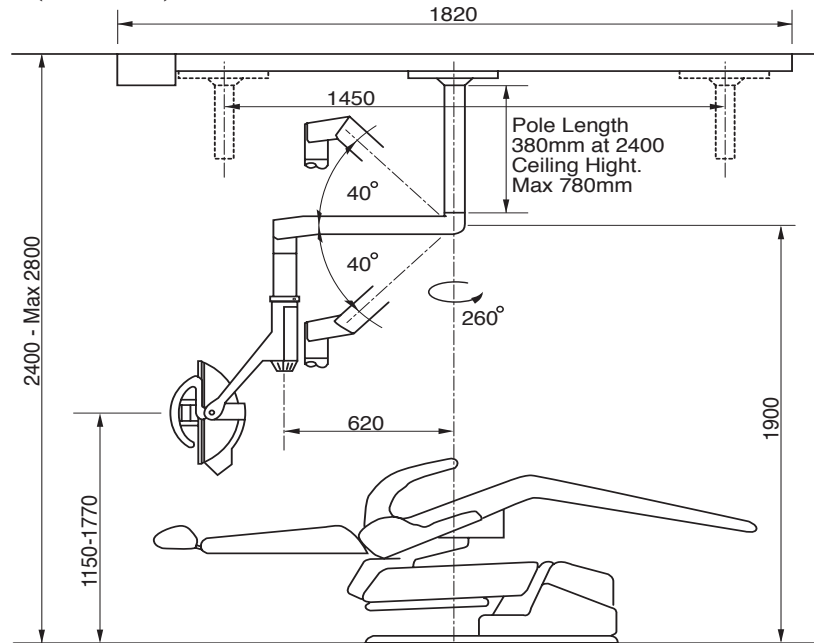
- 1) Lead out the power supply cable from the ceiling where the ceiling light is mounted.
- 2) Run the power supply cable through the mounting plate and attach the mounting plate to ceiling.
- 3) Insert the suspension tube to the ceiling flange and secure them with roll pin.
- 4) Run the power supply cable through the suspension tube and ceiling flange.
- 5) Insert adjusting nuts between mounting plate and ceiling flange, then fix the flange with 4 washers and nuts.
- 6) Make sure that suspension tube is perpendicular.
- 7) Slide the flange cover on the suspension tube up to the mounting plate. And hold it.
- 8) Slide the cover ring up to the cover - flat surface of ring must be flush against cover and tighten the 3 socket screws.
- 9) Connect wires of the power supply cable to the wires from suspension tube of arm.
- 10) Insert the suspension tube of transformer part to the suspension tube and tighten the 4 socket screws.



- (1) Power Supply Cable
- (2) Mounting Plate
- (3) Adjusting Nut
- (4) Washer
- (5) Nut
- (6) Ceiling Flange
- (7) Socket Screw for Flange
- (8) Suspension Tube
- (9) Roll Pin
- (10) Socket Screw for Arm
- (11) Flange Cover
- (12) Cover Ring
- (13) Socket Screw for Ring
- (14) Suspension Tube of Arm

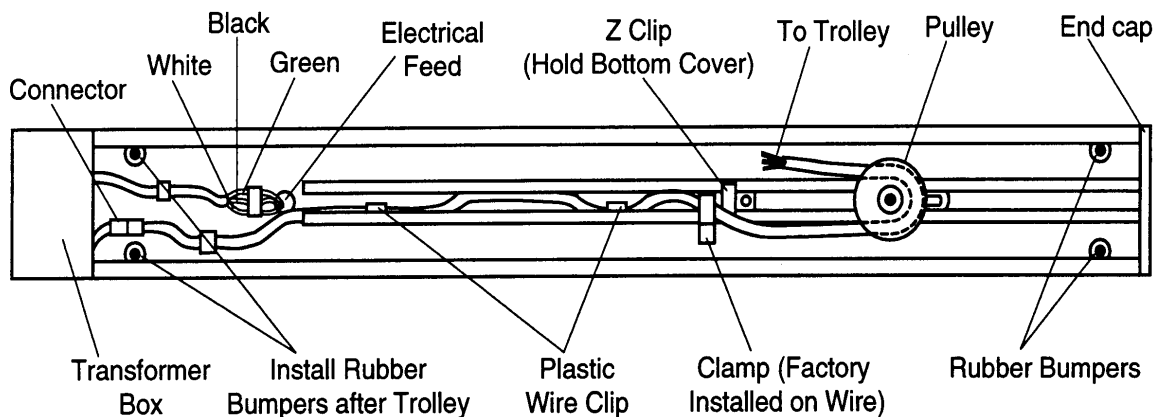
## [5] TRACK LIGHT (AL-505)

### 5-1. DIMENSIONS



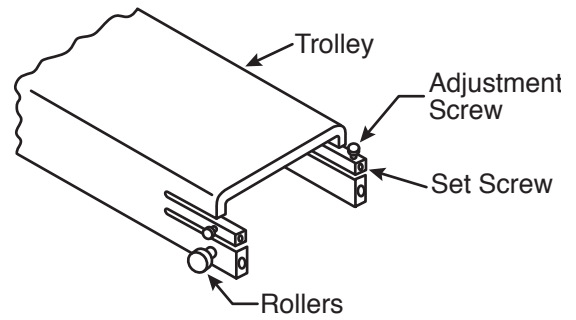
### 5-2. INSTALLATION INSTRUCTIONS

- 1) Lead out the power supply cable from the ceiling where the track light is mounted.
- 2) Run the power supply cable through the pallet and mount the pallet.
- 3) Place track against the pallet and slightly engage two mounting bolts at the end opposite to the electrical opening.
- 4) Allowing the free end to hang down slightly for access, install the conduit box connector to the track.
- 5) Finish bolting the track securely to the pallet.
- 6) Connect the wires from the feed to the terminal block.
- 7) Slide the trolley onto the track (end near electrical opening) with the arrow on the trolley oriented toward the pulley on the track.
- 8) Carefully guide the wire from the trolley, around spring-loaded pulley and back toward the end of track.
- 9) Attach retainer clamp to small screw in track. Clip the free end of the trolley wire into the plastic clip near end.
- 10) Install rubber bumpers at the end of the track in the holes provided.

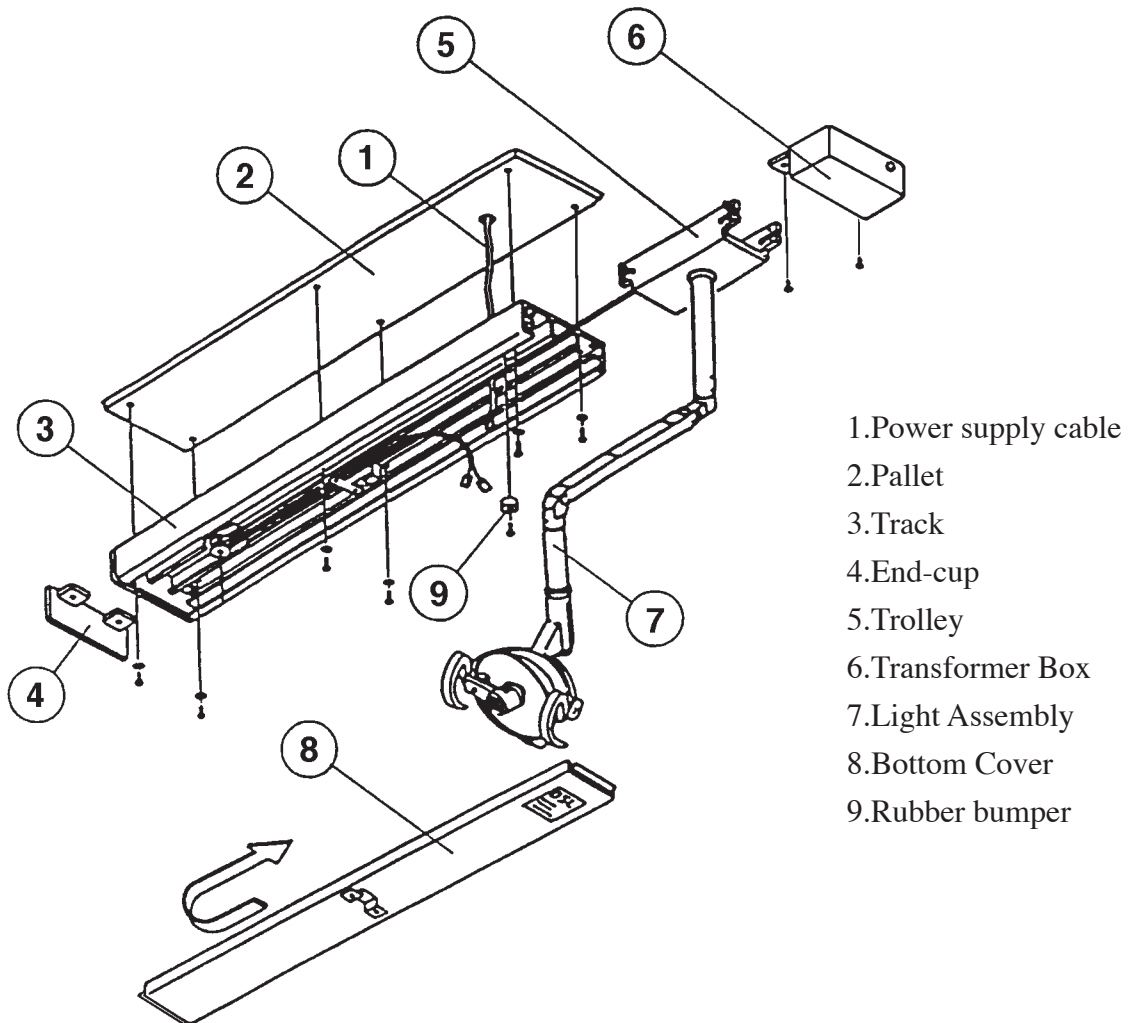




11) Check operation of the trolley. It is adjusted at factory to provide smooth effortless travel, without play; however rollers can be readjusted if necessary. Loosen the set screw and adjust the socket cap screw to vary roller clearance.

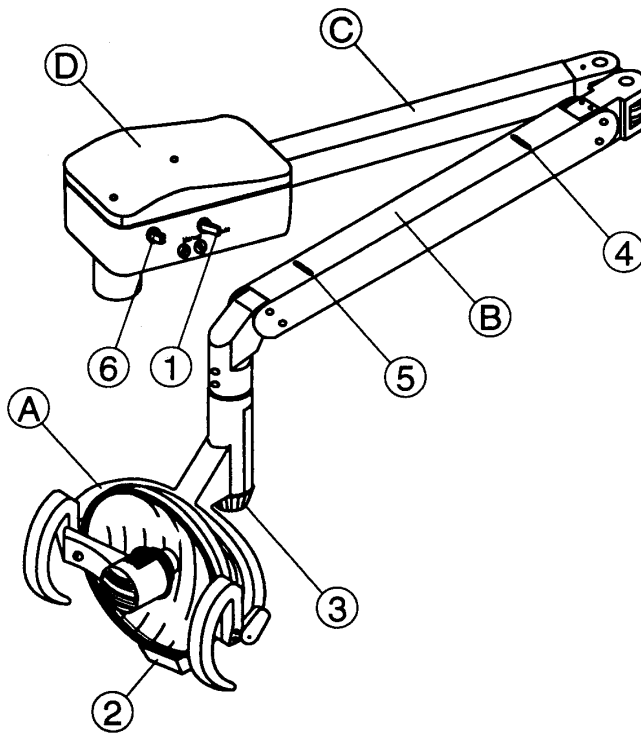


- 12) Unpack the transformer / housing assembly and mount it to the track with screws provided.
- 13) Attach the pigtail leads to the corresponding power line wires at the terminal block. Retain the wires under the plastic clip.
- 14) Connect the plug-in connector to the trolley wire.
- 15) Carefully slide bottom cover onto the track from free end. Be sure to engage lip onto Z bracket.
- 16) Install the end-cap with the screws provided.
- 17) Slide the trolley back and forth, checking for binding or rubbing.
- 18) Confirm that the swing arm is properly adjusted to stay where it is placed. If necessary, move the head up or down to expose the appropriate cross drilled nut and adjust with the tool provided.
- 19) Turn on power and check electrical operation of the light.



## [6] OPERATING INSTRUCTIONS

### 6-1. Major Parts Identification



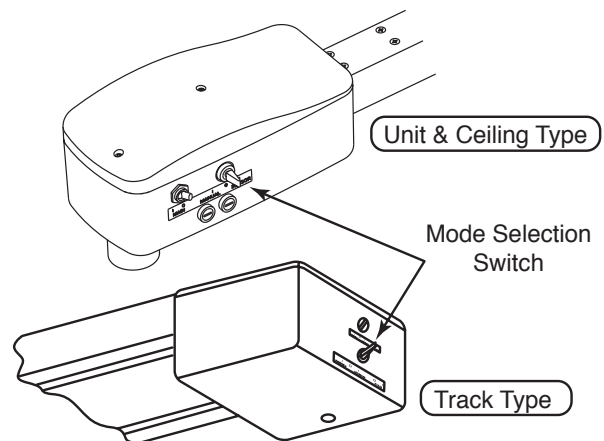
- (A) Head Assembly
- (B) Balance Arm Assembly
- (C) Swing Arm Assembly
- (D) Transformer Housing Assembly

- (1) Mode Selection Switch
- (2) Touchless Switch
- (3) Intensity Switch
- (4) Slot for Adjusting Tension of Balance Arm
- (5) Slot for Adjusting Angle of Head
- (6) Main Switch for Power

### 6-2. Mode Selection Switch

Mode can be changed by this switch.  
 This switch is located on transformer housing.

Sensor	:	Touchless ON/OFF
Manual	:	Manual Mode (ON only)
○	:	OFF



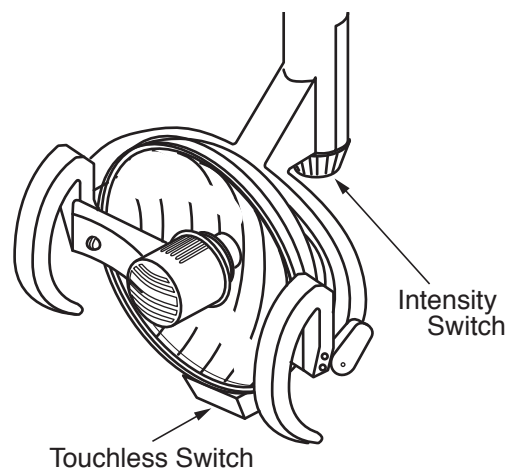
### 6-3. Touchless Switch

Touchless Switch is located on the lower part of head.  
 Approach a hand to the Touchless Switch when turning on/off the light.  
 Reaction zone : 0 ~ 60 mm

### 6-4. Intensity Switch

Intensity Switch is located on the lower part of yoke.

High : Turn the intensity switch to H position  
 Medium : Turn the intensity switch to M position  
 Low : Turn the intensity switch to L position



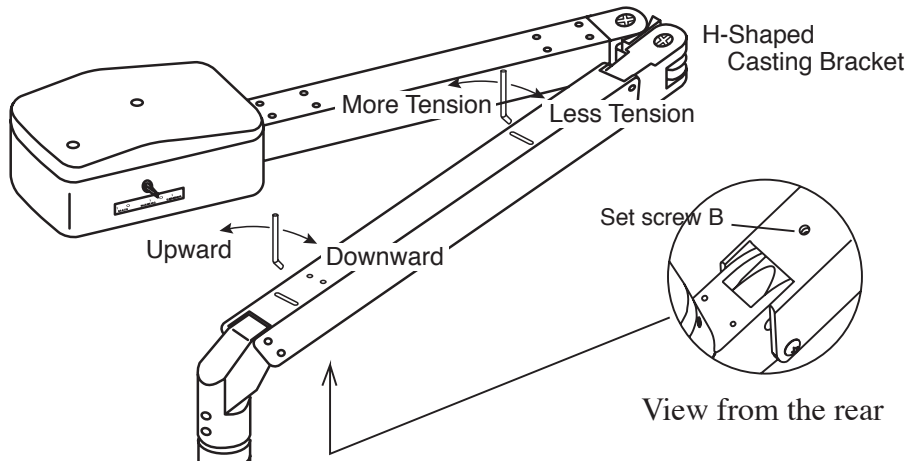
## [7] ADJUSTING TENSION of BALANCE ARM

### 7-1. Adjusting tension of Balance Arm

Use the slot closest to the H-shaped casting bracket when making adjustment for drifting of balance arm. Insert adjusting bar into the slot on top of the balance arm, turn the spring adjustment nut clockwise for more tension; counterclockwise for less tension.

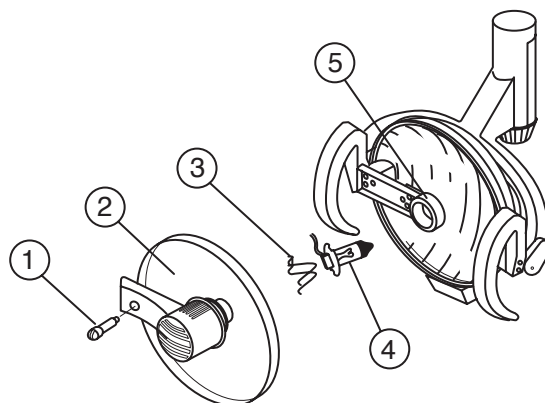
### 7-2. Adjusting Angle of Head

Use the slot closest to the head when adjusting angle of head. Loosen the set screw B shown in the figure below. Insert the adjusting bar into the slot on top of the balance arm, turn the spring adjustment nut clockwise for downward angle; counterclockwise for upward angle.



## [8] HALOGEN BULB CHANGING

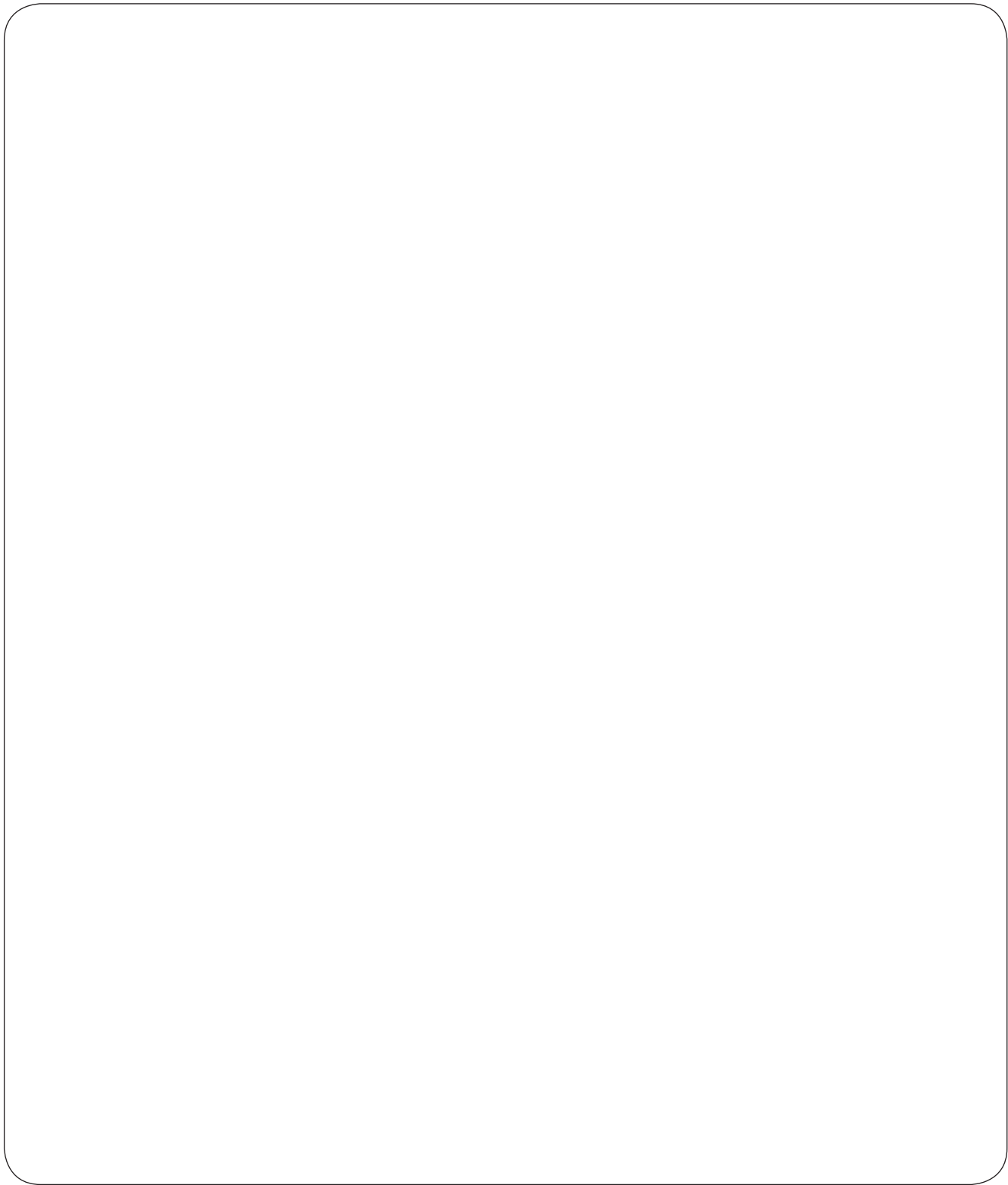
- 1) To install replacement halogen bulb, turn the light off and the turn lamp cover stopper counterclockwise ( 90° ) to remove the lamp cover.
- 2) Remove the lamp cover and disconnect the electrical connector of halogen bulb.
- 3) Unlock the spring clip and pull the electrical wire of halogen lamp to remove the halogen bulb from the socket.
- 4) Attach the electrical wire and insert a new bulb into the housing.
- 5) After the new bulb is seated in the housing. Insert and lock the spring clip in position.
- 6) Reattach the lamp cover.



- (1) Lamp Cover Stopper
- (2) Lamp Cover
- (3) Spring Clip
- (4) Halogen Bulb
- (5) Socket

## [9] CLEANING INFORMATION

Use soft cloth or cotton only. Soak with Durr FD333 cleaner. Clean both side of the lens. Inside surface of the reflector can be cleaned with a soft damp or dry cloth. Back side of the reflector should be wiped gently with a soft cloth. Extreme care should be taken not to scratch the surface, or mar appearance of the painted surface. Exterior cleaning is all that should be necessary until after many months of use.



 **Belmont**

**TAKARA BELMONT CORPORATION**



2-1-1, Higashishinsaibashi, Chuo-ku, Osaka, 542-0083, Japan

TEL : 81-6-6213-5945

FAX : 81-6- 6212-3680

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