



## INSTALLATION MANUAL

# Color IR Camera


Please read this manual carefully before operating your set and retain it for future reference.

MODELS  
LCU3100R-DN / LCU3100R-DP



C O V 3 1 5 7 2 2 0 1

### Important Safety Instructions

1. Read these instructions.
  2. Keep these instructions.
  3. Heed all warnings.
  4. Follow all instructions.
  5. Do not use this apparatus near water.
  6. Clean only with dry cloth.
  7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
  8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
  9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
  10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
  11. Only use attachments/accessories specified by the manufacturer.
  12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
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13. Unplug this apparatus during lightning storms or when unused for long periods of time.
  14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### Disposal of your old appliance

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1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
  2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
  3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
  4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.
- EEE Compliance with Directive, (for Turkey only)

CE LG Electronics hereby declares that this/these product(s) is/are in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC, 2006/95/EC, European Standards Centre, Krijgsman 1, 1186 DM Amstelveen The Netherlands

이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바랍니다. 가정외의 지역에서 사용하는 것을 목적으로 합니다.



This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or reproductive harm. **Wash hands after handling.**

**FCC WARNING:** This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

### REGULATORY INFORMATION: FCC Part 15

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- A suitable conduit entries, knock-outs or glands shall be provided in the cable entries of this product in the end user.
- Caution: Danger of explosion if battery is incorrectly replaced. Replaced only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
- Holes in metal, through which insulated wires pass, shall have smooth well rounded surfaces or shall be provided with brushings.

This Class A digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

**Warning:** Do not install this equipment in a confined space such as a bookcase or similar unit.

**Warning:** Wiring methods shall be in accordance with the National Electric Code, ANSI/NFPA 70.

**Warning:** This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**Warning:** To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

**Warning:** The product has been dropped or the case is broken, turn off the power and unplug the power cord. (This may cause fire, electric shock, or injury.)

**Warning:** If the product has no video out or sound, please stop using. Unplug the power cable immediately and contact the service center. (This may cause fire or electric shock.)

**Caution:** This installation should be made by a qualified service person and should conform to all local codes.

**Caution:** To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel.

**Caution:** The apparatus shall not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, shall be placed on the apparatus.

**Caution:** Prevent the power cable from being severely bent or having pressure exerted on it by a heavy object.

To disconnect power from mains, pull out the mains cord plug. When installing the product, ensure that the plug is easily accessible.

### Power Supply

This camera must always be operated a DC 12 V, Certified/Listed Adaptor which comply with LPS.

### Handling of the unit

Be careful not to spill water or other liquids on the unit. Be cautious not to get combustible or metallic material inside the body. If used with foreign matter inside, the camera is liable to fail or get cause of fire or electric shock.

- Remove dust or dirt on the surface of the lens with a blower.
- Use a dry soft cloth to clean the body. If it is very dirty, use a cloth dampened with a small quantity of neutral detergent then wipe dry.
- Avoid the use of volatile solvents such as thinners, alcohol, benzene and insecticides. They may damage the surface finish and/or impair the operation of the camera. They may damage the surface finish and/or impair the operation of the camera.

### Operating and storage location

Avoid viewing a very bright object (such as light fittings) during an extended period. Avoid operating or storing the unit in the following locations.

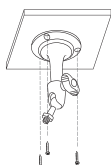
- Extremely hot or cold places (operating temperature -10 °C to 50 °C, however, we recommend that the unit be used within a temperature range of 0 °C to 45 °C)
- Damp or dust place
- Places exposed to rain
- Places subject to strong vibration
- Close to generators of powerful electromagnetic radiation such as radio or TV transmitters.

### SPECIFICATIONS

Signal System	NTSC	PAL
Total / Effective Pixels No.	520,000/480,000PIXELS	610,000/570,000PIXELS
Imaging Sensor	1/3" 960H Interline Color CCD (Super HAD II)	
Horizontal Resolution	650TVL @ Color, 700TVL @ B/W	
Image Signal Processor	E.Effio-E	
Lens Type	4mm	
Minimum Illumination (30 IRE)	Color : 0.1Lux, B/W : 0 Lux (IR LED ON)	
Day & Night	AUTO(Photo Sensor)	
Sync. System	Internal	
Scanning Frequency (H/V)	15.734 KHz / 59.94 Hz	15.625 KHz / 50 Hz
S/N Ratio	50dB	
Video Output Signal	1Vp-p Composite (75Ω)	
IR LED	24EA	
IR OPTIMIZER	AUTO	
Exposure	ELC	
Auto Gain Control	Auto	
Electronic Shutter Speed	Auto (1/60 ~ 1/100,000)	Auto (1/50 ~ 1/100,000)
White Balance	Auto (1,800 °K ~ 10,500 °K)	
Power Source	DC12V , 290mA (3.5W)	
Operating Temperature/Humidity	-10 °C ~ 50 °C / 0% ~ 80%RH	
Storage Temperature/Humidity	-20 °C ~ 60 °C / 0% ~ 85%RH	
Dimension	152 x 108 x 72 mm	
Weight	420 g	

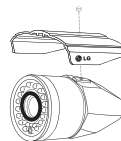
## INSTALLATION

### 1 Install the camera mounting bracket to the ceiling.



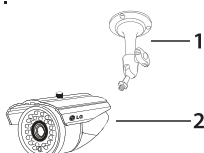
<日本語> カメラ取付け金具を天井に取り付けます。  
 <한국어> 카메라 설치 브래킷을 천장에 설치하세요.  
 <فارسی> پایه نگه دارنده دوربین را به سقف وصل کنید.  
 <عربی> ركب دعامة تثبيت الكاميرا في السقف.  
 <עברית> חבר את מסגרת חיבור המצלמה לתקרה.

### 2 Assemble the Sunshield.



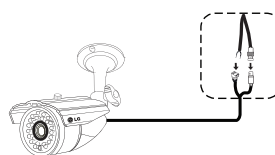
<日本語> ボルトを利用して機構物に締結します。  
 <한국어> 썬실드를 체결하세요.  
 <فارسی> است شده داده نشان عنوان به دوربین مسکن مونتاژ  
 <عربی> التجمع كما هو مبين  
 <עברית> שמוצג כפי להרכיב

### 3 Assemble the camera and mounting bracket as illustrated step "1" and "2".



<日本語> 手順 1 と 2 の図のように、カメラと取付け金具を組み立てます。  
 <한국어> 그림과 같이 1, 2 순서로 카메라 마운트 브래킷에 카메라를 결합하세요.  
 <فارسی> بر طبق شکل های 1 و 2 دوربین و پایه نگه دارنده آن را به هم وصل نمایید.  
 <عربی> ركب الكاميرا ودعامة التثبيت كما هو موضح في الخطوة 1 و 2.  
 <עברית> הרכב את המצלמה ואת מסגרת החיבור כפי שמתואר בשלבים 1 - 2.

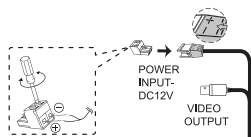
### 4 Connect the cables to the cable jacks of the camera body.



<日本語> ケーブルをカメラ本体のケーブル用端子に接続します。  
 <한국어> 전원 및 영상단자를 연결하세요.  
 <فارسی> سیم ها را به جک های نگه دارنده آنها بر روی بدنه دوربین متصل کنید.  
 <عربی> وصل الكابلات بمقابس الكابلات في جسم الكاميرا.  
 <עברית> חבר את הכבלים לשקעים המתאימים בגוף המצלמה.

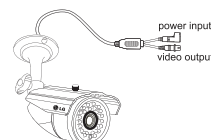
## CONNECTION & ADJUSTMENT

### 1.Power connection - DC12V



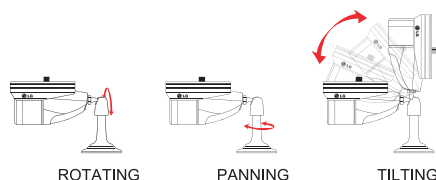
<日本語> 電源の接続 : DC12V  
 <한국어> 전원연결 : DC12V  
 <فارسی> اتصال برق : DC12V  
 <عربی> السلطة اتصال : DC12V  
 <עברית> שמשל חיבור : DC12V

### 2.Video connection



<日本語> ボータブルモニターを映像端子に接続します。  
 <한국어> 모니터를 영상단자에 연결하세요.  
 <فارسی> یک مانیتور قابل حمل را به جک ویدئو متصل کنید.  
 <عربی> وصلة شاشة محمولة بمقبس الفيديو.  
 <עברית> חבר צג נייד לשקע הווידאו.

### 3. Adjust the Pan/Tilt/Rotate position of the camera.



ROTATING

PANNING

TILTING

<日本語> カメラのパン/傾斜/回転位置を調節します。  
 <한국어> 상하 또는 좌우 각도를 알맞게 조절하세요.  
 <فارسی> موقعیت پن/کج کردن/چرخاندن دوربین را تنظیم کنید.  
 <عربی> ضبط وضع التحريك الأفقي الرأسی/تدوير الكاميرا.  
 <עברית> מוון את מצב צילום פנורמה/הטיה/סיבוב של המצלמה.

### 4. Focus : The lens is focused far from 1m.



NOTE : We recommend the lens focus as is.

<日本語> レンズは1メートル距離に焦点を合わせて出荷されます。  
 (基本値使用推奨)  
 <한국어> 렌즈초점 : 렌즈는 1m 거리에서 초점을 맞춘 후 출고됩니다.  
 (기본값 사용 권장)  
 <فارسی> تمرکز: این لنز است که به دور از 1 متر مرکز شده است. ما توصیه می کنیم تمرکز لنز را به عنوان است.  
 <عربی> التركيز: تركيز العدسة بعينا عن 1m. نوصي التركيز عدسة كما هو  
 <עברית> פוקוס: העדשה מתמקדת רחוק מ1m. אנו ממליצים להתמקד העדשה כהוא