



**UFLED INTELLIGENT-IR™**  
POWERED BY **BLACKDIAMOND™**



**INSTALLATION INSTRUCTIONS**

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## **UFLED INTELLIGENT-IR™ POWERED BY BLACK DIAMOND™ INSTALLATION INSTRUCTIONS**

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### **BOX CONTAINS**

- 1 x IR illuminator and bracket
- 1 x 5m Power Cable

## 1. DESCRIPTION

UFLED INTELLIGENT-IR™ POWERED BY BLACK DIAMOND™ is the world's first Intelligent-IR™ illuminator from Extreme CCTV, the recognised industry leader in active infrared solutions. Incorporating the latest technology and installer friendly design, UFLED INTELLIGENT-IR™ provides absolute performance in low light and no light conditions.

### **BLACK DIAMOND™ TECHNOLOGY**

Extreme CCTV's Black Diamond™ (patent pending) technology gives increased distance performance especially at wide angles and ensures even illumination throughout the depth of view.

### **CONSTANT LIGHT™**

Constant Light™ (patent pending) technology compensates for LED degradation, a common problem with all LED based infrared illuminators to guarantee a constant level of lighting performance for the life of the illuminator. Constant Light™ technology ensures repeatable performance at varying temperatures, from device to device and over the lifetime of the product.

### **12 VDC / 24 VAC POWER-ON-BOARD™**

UFLED INTELLIGENT-IR™ POWERED BY BLACK DIAMOND™ incorporates Power-on-Board™ technology which means the unit can be directly powered from the industry standard 12VDC / 24VAC supply.

### **HIGH POWER SMT LEDs**

UFLED INTELLIGENT-IR™ uses high power surface mount LEDs for longer life and high reliability.

### **DAY/NIGHT CAMERA SWITCHING**

Integration with day night cameras is accommodated with relay contacts COM/NC/NO that indicate when the photocell has activated the IR illuminator.

### **PRESSURE EQUALISATION**

For greater reliability and longer product lifetime EXTREME CCTVs UFLED INTELLIGENT-IR™ uses a pressure equalisation valve that removes thermal expansion and pressure cycling within the illuminator head.

## 2. SPECIFICATION

<b>LEDs</b>	850nm Black Diamond™ Night Vision
<b>Average Life</b>	> 5 years guaranteed, typical 10 years
<b>Temperature Range</b>	+50°C (122°F) to -50°C (-58°F) max on full power
<b>Construction</b>	Robust, aluminium construction with acrylic front fascia
<b>Colour</b>	Black anodized heat sink with black front fascia
<b>Dimensions</b>	152mm x 130mm x 90mm [6.0" x 5.1" x 3.5"]
<b>Weight</b>	3.1lbs   1.4Kg
<b>Cable Length</b>	Supplied with IP67 power connector with 5m [16ft] of connecting lead(10m (32ft) and 15m (49ft) lengths available on request)
<b>Bracket</b>	Wall mount u-bracket included
<b>Power Consumption</b>	26- 45W (45W Max Power) Power consumption will vary over time due to the Intelligent-IR's optical output control which compensates for LED degradation and ambient temperature fluctuations.
<b>Environmental</b>	IP67

### LENS / BEAM PATTERN

The illuminator must be matched to the scene and to the camera lens focal length. Before installation ensure that the infrared illuminator has been correctly specified to support the CCTV system. The system planning must take into account the product achievable distances, lens/beam pattern and filter.

### ACHIEVABLE DISTANCES

Illumination distance achievable depend on the infrared characteristics of the CCD camera and lens used.

Model	Beam Pattern	Achievable Distance	HOV
UFLED850-10BD	10°	720ft   220m	125ft   40m
UFLED850-20BD	20°	490ft   150m	175ft   55m
UFLED850-30BD	30°	360ft   110m	195ft   60m
UFLED850-60BD	60°	230ft   70m	265ft   80m
UFLED850-90BD	95°	165ft   50m	360ft   110m
UFLED850-120BD	120°	115ft   35m	400ft   120m

Note: Achievable distance based on a 20dB s/n ratio using a 1/2" Ex-View CCD and F1.4 lens aperture

### 3. INSTALLATION

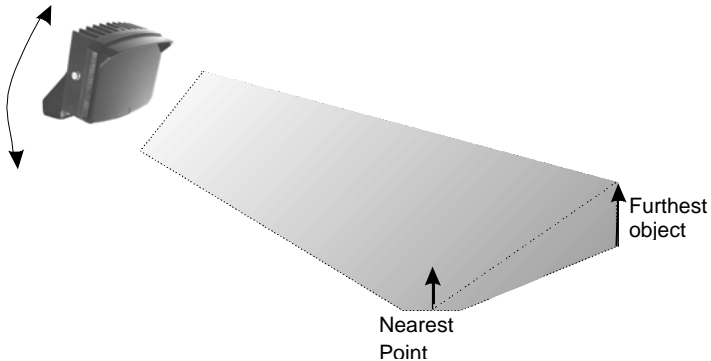


Fig.1

Tilt the illuminator slowly until the top of the illuminator is directed at the top of the furthest object.

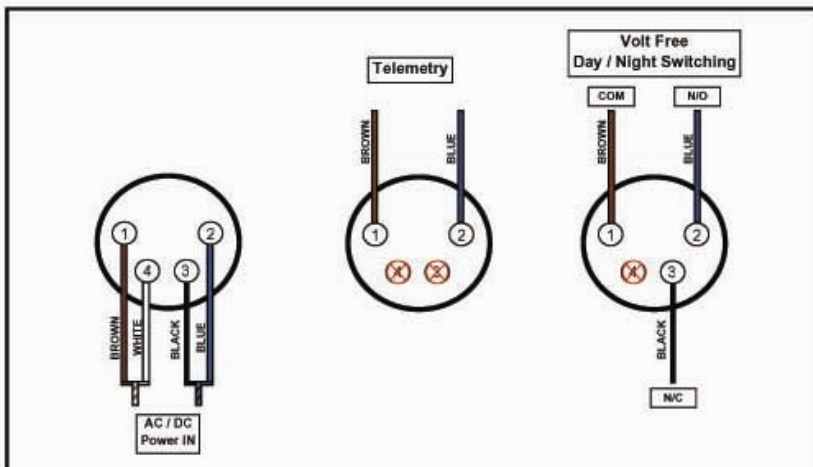
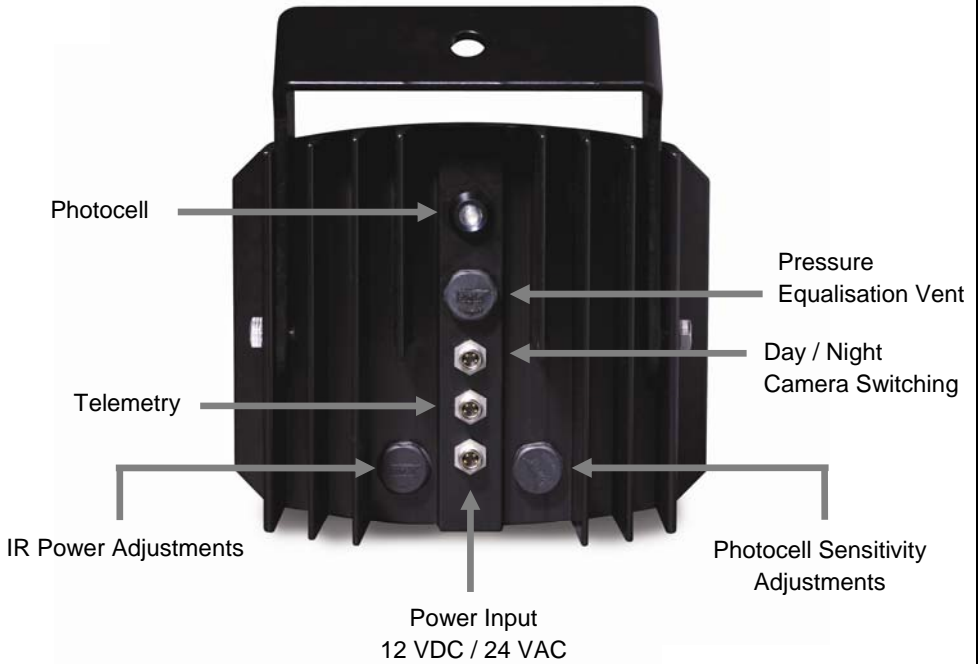
**NOTE:** The UFLED illuminator is low voltage 12VDC / 24VAC.

**Setting up is critical to obtaining the best performance from your Extreme CCTV IR illuminator. Optimum results are achieved by setting up at night and viewing the results on a monitor.**

1. Attach the infrared illuminator bracket to the pan and tilt unit, wall bracket or camera housing as required.
2. Connect the illuminator to 12VDC to 24VAC.
3. Commission the mains supply, camera and monitoring control equipment.
4. Adjust the pan of the illuminator to match the camera field of view.
5. Adjust the vertical alignment by loosening the side bolts (one on each side of the main body) to maximise the results.
6. Tilt the illuminator downwards until the near part of required field of view is saturated with infrared light, as viewed on the monitor. SLOWLY and GRADUALLY tilt the illuminator upwards until the far part of the required field of view is illuminated correctly on the monitor screen.

# CONNECTIONS

Fig.2



## PHOTOCELL SENSITIVITY

To adjust photocell sensitivity, first remove the sealing cap. Then adjust the potentiometer to turn the illuminator on when the lighting conditions are lighter or darker. Adjust further clockwise to make the illuminator turn on when it's lighter and counter clockwise when it's darker.

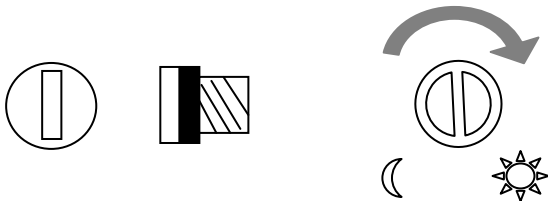


Fig 3.

## DISABLING THE PHOTOCELL

To disable the photocell adjust the sensitivity fully clockwise. This should make the illuminator turn on all the time unless the telemetry input is closed circuit.

## PHOTOCELL

The photocell is designed to automatically switch the illuminators ON at dusk and turn OFF at dawn. A high degree of hysteresis is incorporated to avoid on/off switching in marginal light conditions. The unit is factory set at approximately 20 lux ON and 70 lux OFF, but can be adjusted using the photocell

## IR POWER ADJUST

To adjust the IR power, first unscrew the sealing cap. Then adjust the power potentiometer clockwise to increase the power and counter clockwise to turn the IR power down.



Fig 4.

## 4. SAFETY

**WARNING:** When the illuminator is running it is hot to touch. Before touching switch off the illuminator and allow to cool for a minimum period of 10 minutes.

Do not stare directly into the illuminator at a distance of less than 1.7 m.

## 5. DIMENSIONS

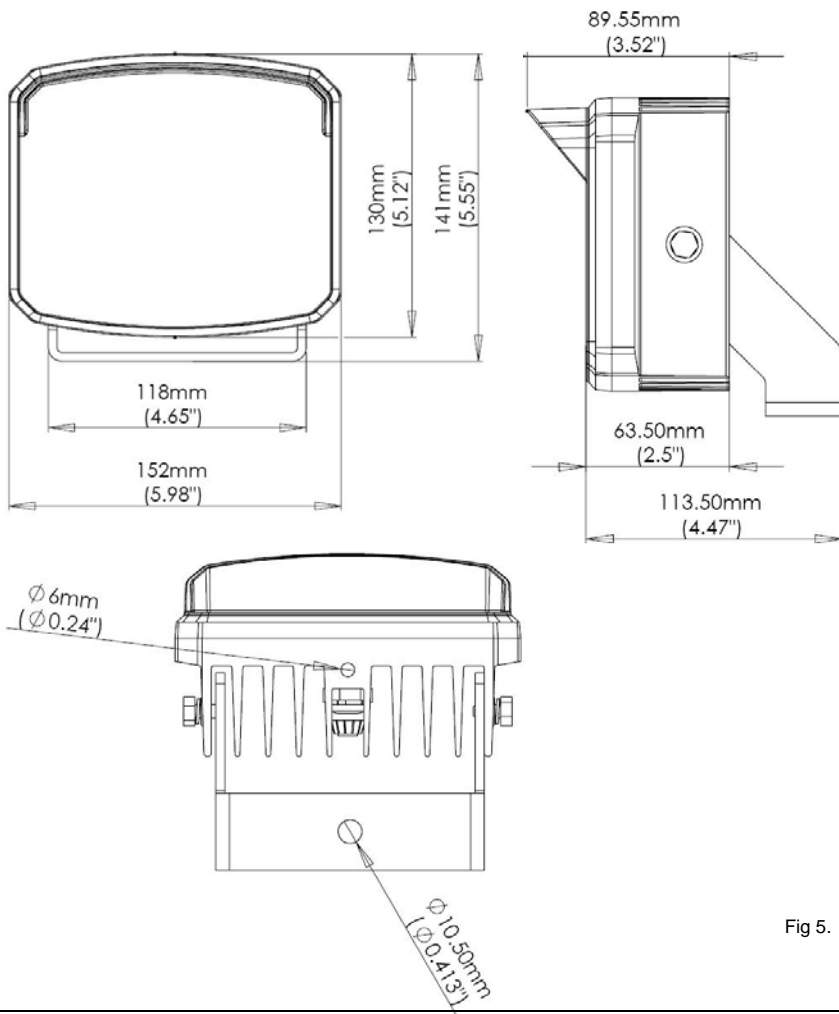


Fig 5.

## 6. REMOTE SWITCHING

The illuminator may be activated remotely by a volt-free contact latched across the telemetry connector.

## 7. TROUBLE SHOOTING

**CHECK POWER SUPPLY.** Check that the unit is connected to a voltage between 12 – 40 VDC or 24VAC +/- 30%.

**CHECK PHOTOCELL FUNCTIONS.** Check the photocell functions by covering with black tape and having the telemetry link closed. The photocell operation has an in-built delay of up to 5 seconds.

## 8. CERTIFICATION



This product complies with 89/336/EEC, 73/23/EEC  
Low Voltage Directive meeting the following:

CE Standards

EN 60742/1/1990, EN 60598/2/5

Electromagnetic Compatibility Directive meeting the following standards

EN 50081/1, EN 50130-4



This symbol on the product or in the instructions means that the electrical and/or electronic equipment to which it relates should be disposed of at the end of life separately from domestic household waste.

There are separate collection systems for recycling in the E.U.

For more information, please contact the Local Authority or supplier of the product