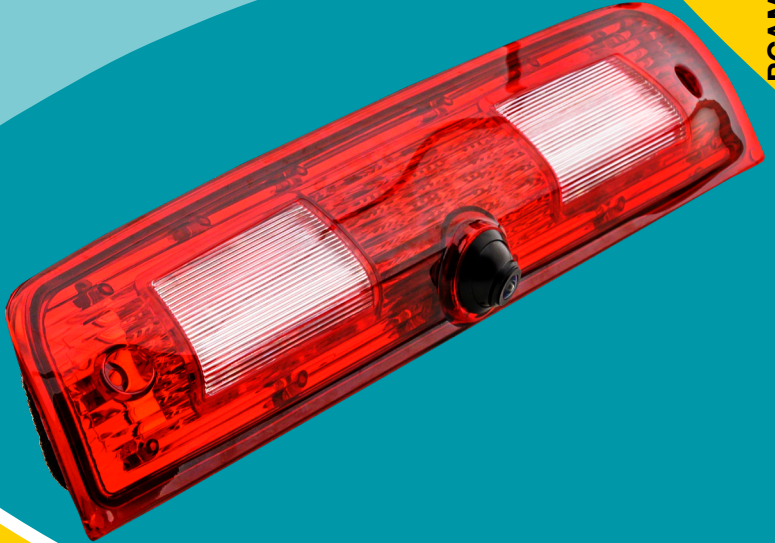


# Installation Guide

PCAM-CHMSL2-DR08



## Replacement Third Brake Light with Camera with Cargo and Side Blind Spot Views

Ram Truck (2008-2018)  
Ram Truck (2019 Classic)



**ECHOMASTER**  
**PRO**



# Introduction

Thank you for purchasing your EchoMaster Pro automotive camera.

EchoMaster cameras are designed to improve safety while driving by providing high quality images of surrounding areas and obstacles in the vicinity of the vehicle. They will also improve vehicle maneuvering capability by displaying blind spots not normally visible to the driver.

Please ensure you read and understand all aspects of this manual before installing or using your EchoMaster camera.

## Key Features

- ▶ 1/3" CMOS Sensor
- ▶ Operates at 0.3 LUX
- ▶ Water/debris proof rating: IP67
- ▶ 3 Viewing Angles
  - Right 95°
  - Left 95°
  - Rear 90 °

## PCAM-CHMSL2-DR08

Replacement Third Brake Light Camera



### Box Contents

- ▶ Replacement Third Brake Light Camera
- ▶ 17.5' Extension Cable
- ▶ Camera Adjustment Tool
- ▶ Installation Guide
- ▶ Warranty Card



Illustrations are typical and may not match exact vehicle details.



## PCAM-CHMSL2-DR08

Replacement Third Brake Light Camera

## Installing CHMSL Camera

### Step 1

Remove the 2 screws that secure the third brake light to the vehicle.



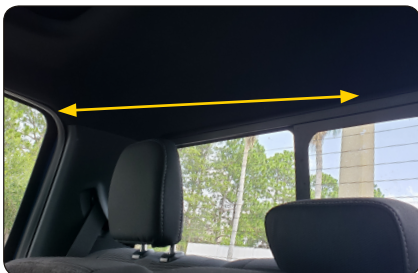
### Step 2

Remove the third brake light from the vehicle and disconnect connector on the back. Replace the factory third brake light with the PCAM-CHMSL2-DR08. Connect the new third brake light to the factory connector.



### Step 3

Using a long zip tie or fish tape with the camera cable attached to it, feed the camera cable from the third brake light opening into the vehicle and towards the b / c pillar to the right or the left. (The weather seal may need to be removed to gain access to the fish tool used to run the cable.)



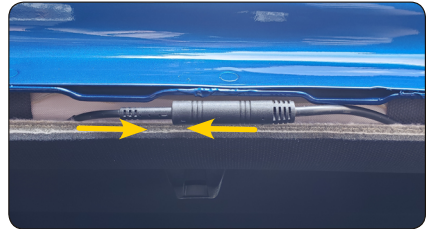
## PCAM-CHMSL2-DR08

Replacement Third Brake Light Camera



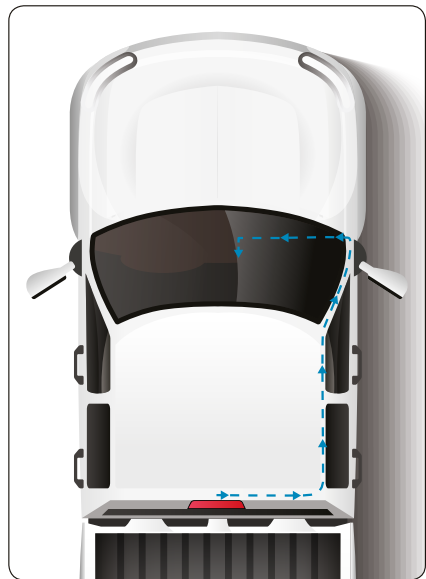
### Step 4

Connect the extension cable to the camera.



### Step 5

Route the cable to the front of the vehicle and behind the radio, monitor, or mirror monitor.



### Step 6

Remount brake light and camera assembly using the original screws.





## PCAM-CHMSL2-DR08

### Replacement Third Brake Light Camera

#### Step 7

Route the reverse and turn signal wires to their respective locations according to the table below. It may be necessary to extend the wires to reach the location.

| <b>2008</b>         |                     |   |   |
|---------------------|---------------------|---|---|
| Turn Signal (Left)  | White / Light Green | + | TIPM on driver fender in front of Battery, Black 10 pin plug, pin 1     |
| Turn Signal (Right) | White / Tan         | + | TIPM on driver fender in front of Battery, Black 10 pin plug, pin 2     |
| Reverse Light       | White / Light Green | + | TIPM on driver fender in front of Battery, Lt. Gray 12 pin plug, pin 11 |
| <b>2009 - 2012</b>  |                     |   |   |
| Turn Signal (Left)  | White / Light Green | + | TIPM on driver fender in front of Battery, Gray 16 pin plug, pin 12     |
| Turn Signal (Right) | White / Tan         | + | TIPM on driver fender in front of Battery, Gray 16 pin plug, pin 13     |
| Reverse Light       | White / Red         | + | TIPM on driver fender in front of Battery, Brown 40 pin plug, pin 15    |
| <b>2013 - 2019</b>  |                     |   |   |
| Turn Signal (Left)  | White / Light Green | + | BCM under driver dash, White 24 pin plug, pin 14                        |
| Turn Signal (Right) | White / Tan         | + | BCM under driver dash, Black 24 pin plug, pin 13                        |
| Reverse Light       | White / Tan         | + | BCM under driver dash, White 48 pin plug, pin 41                        |

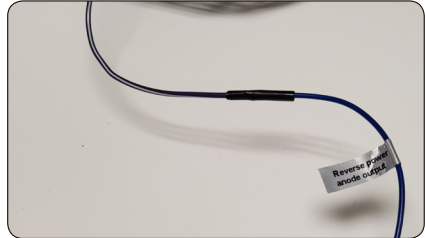
## PCAM-CHMSL2-DR08

Replacement Third Brake Light Camera



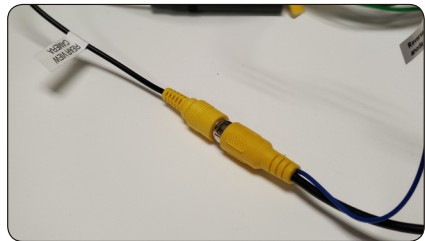
### Step 8

Connect the yellow video RCA to the rear camera input on the radio, monitor, or mirror monitor.



### Step 9

Connect the Blue "Reverse power anode output" wire to the reverse trigger input on the radio, monitor, or mirror monitor.



### Step 10

With the ignition in the on position, shift the vehicle into reverse.

### Step 11

Using the supplied tool, adjust the cameras view to desired position. (Keep in mind that this adjustment will effect the blind spot view. It may be necessary to trigger the blind spot view to confirm desired position.)





## Using the CHMSL Camera

### Rear Cargo View Camera

With the ignition in the on position, shift the vehicle into reverse. The image should appear on the screen.



### Left Blind Spot Camera

With the ignition in the on position, apply the left turn signal. The image should appear on the screen.



### Right Blind Spot Camera

With the ignition in the on position, apply the right turn signal. The image should appear on the screen.



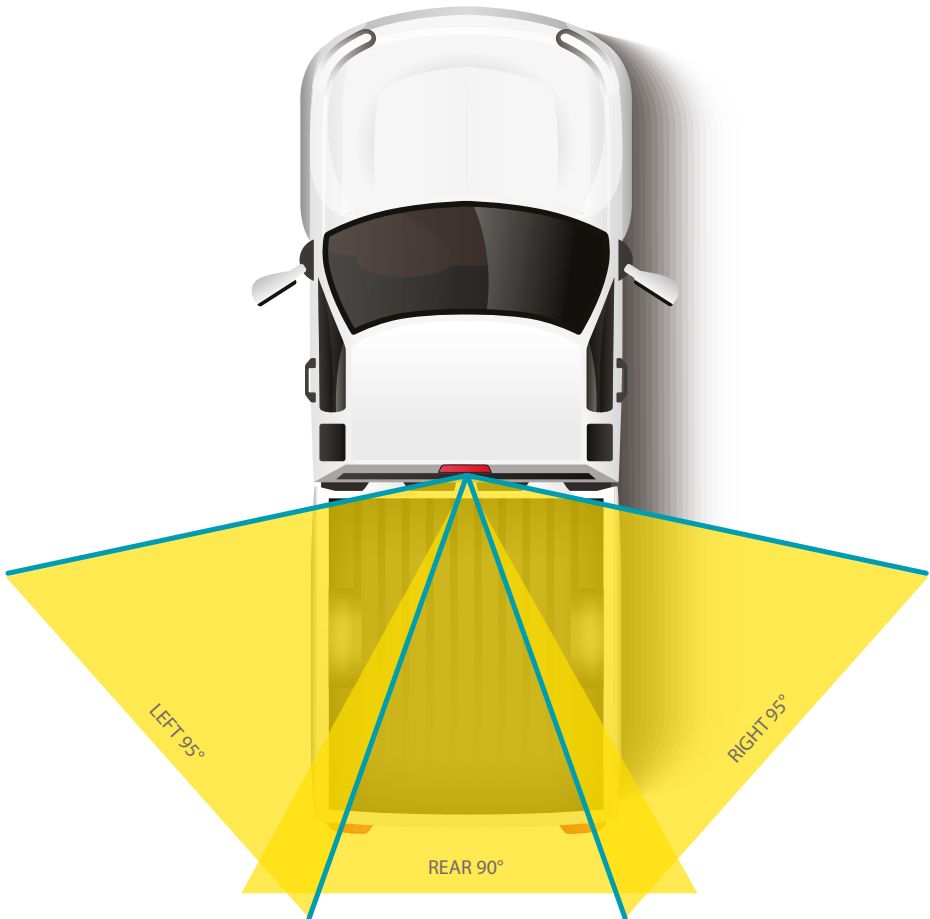


## PCAM-CHMSL2-DR08

Replacement Third Brake Light Camera



## Views

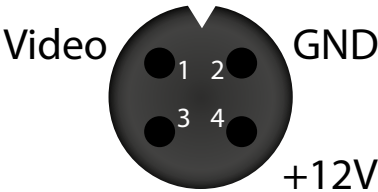
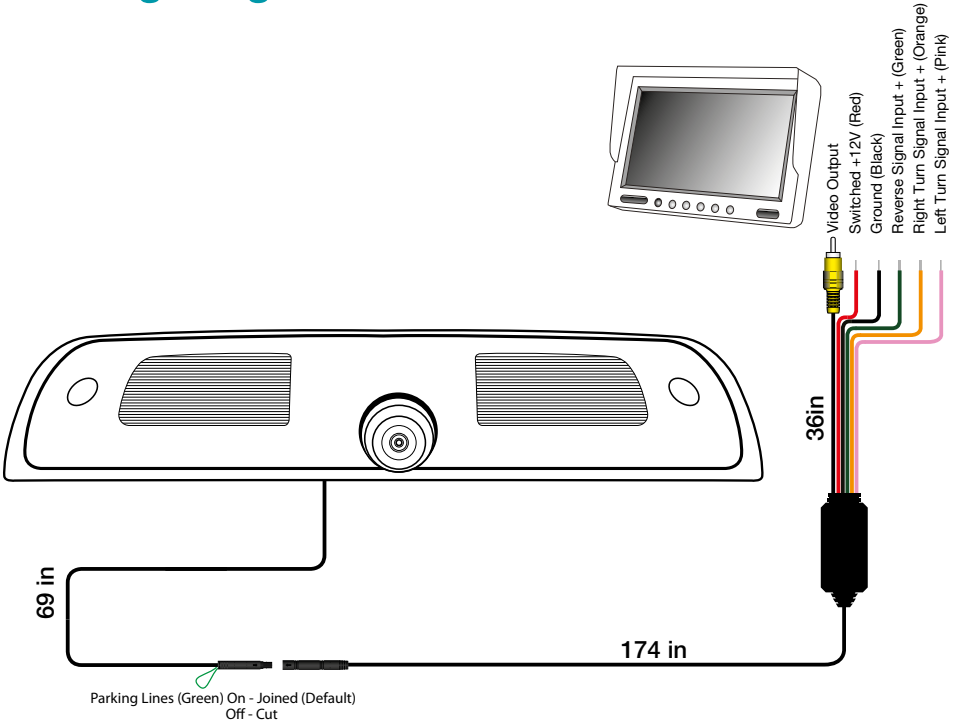




## PCAM-CHMSL2-DR08

Third Brake Light Camera

## Wiring Diagram



## **PCAM-CHMSL2-DR08**

Third Brake Light Camera



## **Notes:**

AGREEMENT: End user agrees to use this product in compliance with the instructions and terms of use above and with all State and Federal laws. EchoMaster provides instructions and safety warnings with respect to this product and disclaims all liability for any use not in conformity with those instructions or other misuse of its product. If you do not agree, please discontinue use immediately and contact EchoMaster. This product is intended for off-road use and passenger use only.



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