

# BMW E46 M3 E39 M5 Oval Interior Rear View Mirror Auto Dim Dimming Electrochromatic Replacement Glass Cell Install Instruction Guide

by **x8rltd** on February 18, 2016

## **Intro:** BMW E46 M3 E39 M5 Oval Interior Rear View Mirror Auto Dim Dimming Electrochromatic Replacement Glass Cell Install Instruction Guide

The OEM mirror cell contains a corrosive fluid, extreme care should be taken when removing the OEM cell, also fluid might have leaked within the housing. Take extreme care; wear appropriate PPE including gloves and goggles to avoid injury.

### Symptoms of fault

Poor visibility through the rear view mirror, bubble in the centre of the mirror, auto dimming function has stopped working, liquid appearing behind mirror glass, a wave / fluid visible in the glass, mirror permanently dimmed, interior trim damaged / melted beneath the rear view mirror typically around the gear lever trim. These are all common symptoms of a failed rear view mirror glass cell.

### The cause

The glass cell within the rear view mirror fails, leading to a distorted view, a bubble in the centre of the mirror or the cell can even leak damaging the interior of the vehicle.

The OEM Magna Donnelly glass mirror cells fitted within the rear view mirror housing of the BMW E46 M3 and E39 M5 commonly fail; leading to the glass distorting or bubbling. These OEM mirror cells feature a sandwich design with a fluid in the middle which enacts the dimming function. Around the outside edge is a seal keeping the fluid contained. Over time this seal breaks down and the highly corrosive fluid escapes the housing which can damage the interior trim /leather within the vehicle. This is a common fault which has affected 1,000's of M vehicles worldwide.

### The solution

Install our replacement glass cell and restore function for the lifetime of the vehicle

Our brand new improved design glass cell can be installed simply following our instructions and video, replacing the original faulty cell. No need to send your mirror away, you can carry out this repair at home. Save the cost (£350+) of a complete new rear view mirror which would contain the OEM glass cell (as do second hand units) and would only fail again. Using our improved design glass cell you can replace just the rear view mirror component that fails.

Our glass cell is manufactured to far higher standards than the OEM part and is designed to never leak. Our cell allows you to retain the same auto dimming function; our replacement operates, dims, and fits in exactly the same way as the OEM part. It has even been commented that the dimming function works better than the OE part; dimming / undimming faster.

If your rear view mirror has not yet failed or is showing symptoms of deterioration; installing this cell is a good preventative measure, it seems all OE mirror cells fail sooner or later and if not caught early enough can damaged interior trim.

### Vehicles affected

BMW E46 M3 2000–2006  
BMW E39 M5 1998–2003

Associated part numbers: 51167892261, 51167892264, 51167892263, Vehicles with auto-dim oval rear view mirror.

Available from X8R Ltd

[www.x8r.co.uk](http://www.x8r.co.uk)





### Step 1: Remove the rear view mirror unit from the vehicle

- Remove the plastic shroud around the mirror where it touches the windscreen. The shroud is in two halves and can be separated using a plastic pry tool.
- Do not pull on the mirror this can cause damage, the mirror should be twisted gently anti-clockwise to allow removal from the screen.
- Pull the mirror away gently from the screen to gain access to the wiring plug, press the tab on the plug to separate the wiring to allow complete removal of the rear view mirror assembly.

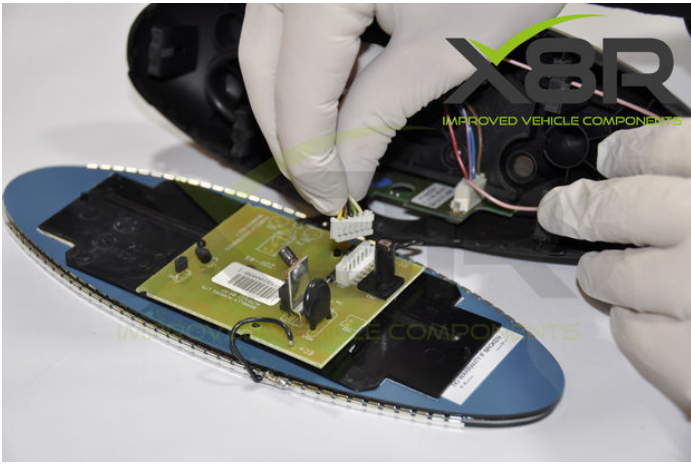
### Step 2: Split the mirror housing

- Using a small blunt pry tool start separating the plastic housing
- Located along the inside of the mirror are small tabs which can break if too much pressure is applied, therefore remember to be gentle when separating the housing from the mirror. Don't panic if a couple snap this is quite normal.



### Step 3: Un-plug the mirror from the housing wiring

- With the mirror out of the housing, locate the white plug on the back of the mirror glass, unplug this.



### Step 4: Un-solder the wiring on the mirror glass cell

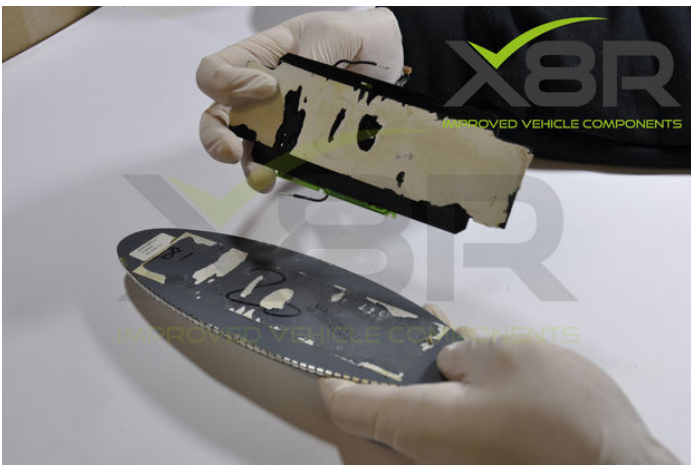
- Using a soldering iron, free the wiring on the mirror glass on both sides. Heat up the solder to enable release.



### Step 5: Remove the circuit board from the mirror glass

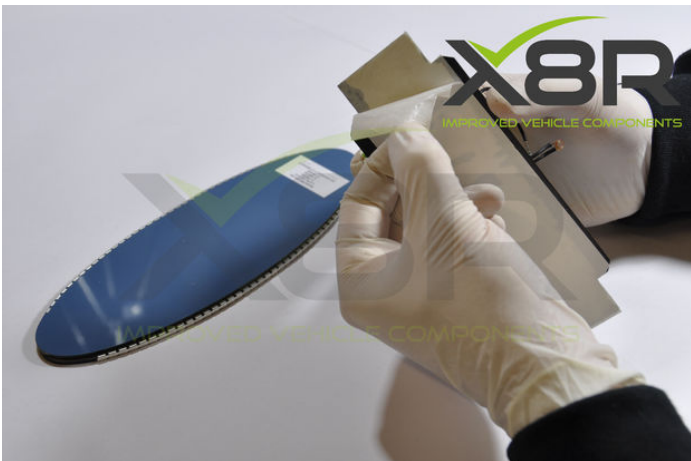
- Using a long blade, separate the circuit board including plastic back panel from the back of the mirror glass

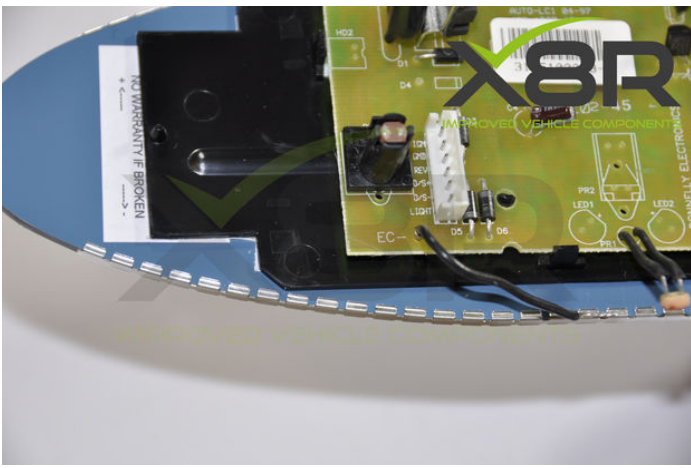




### Step 6: Attach the circuit board to the new mirror glass

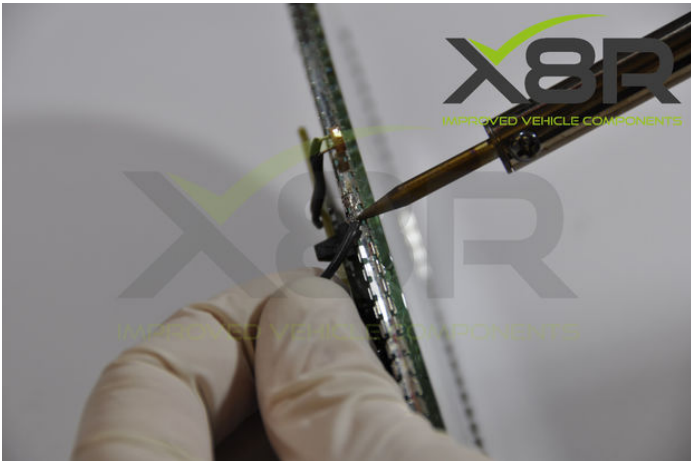
- Using a heavy duty (thin) double sided sticky tape, tape to the plastic part of the board.
- Offer up the circuit board to the new glass, take note that you have the correct way around.
- On the new mirror there is a small sticker, it will tell you which way around the mirror needs to go. It illustrates, a - for negative and a + for positive. You can also see this marked up on the circuit board on both sides.
- Once you have the board offered up the correct way, remove the protective layer on the double sided tape and stick the board to the glass making sure it fits centrally.





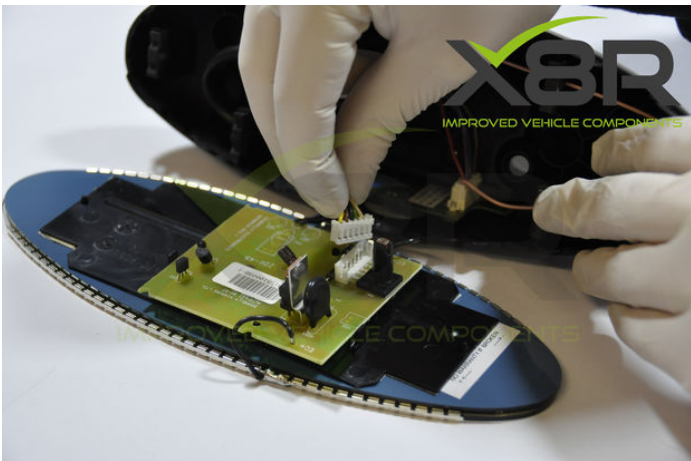
**Step 7: Solder the wires on to the mirror cell**

- Using the soldering iron again, re-heat the solder on the wire and connect the ends onto the new glass cell.



**Step 8: Connect the electrical plug**

- Reconnect the white plug back into the circuit board making sure its clipped in securely.



### Step 9: Refit glass cell into the housing

- Offer up the mirror cell back into the housing, making sure its sitting central.
- Make sure all wiring is kept within the housing, slot the mirror into it's original position.
- Clip the front part of the mirror housing into place, being careful not to apply excessive pressure when clipping back as you don't want to break the fragile tabs inside the housing.



### Step 10: Testing the mirror cell

During daylight you can test the cell function as below:

Switch the ignition on to position 2. Put your finger over the light sensor hole (facing forwards) and you will see the mirror dim. Release your finger and the mirror will return to normal.

If you need any further guidance on this install or would like to purchase the parts shown please call us on +44 01843 446643 or email us at sales@x8r.co.uk.

Please also check out our instruction guide on YouTube.

[www.x8r.co.uk](http://www.x8r.co.uk)

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