



Performance Lighting



Introduction



Introduction to Ring

Ring Automotive is a leading European brand in vehicle lighting, auto electrics and car accessory products exporting to over 70 countries worldwide.

For over 40 years Ring has been developing and pushing the boundaries in vehicle lighting technology. Ring supply bulbs for all automotive vehicles including motorcycles, agricultural and plant equipment. We offer the most comprehensive range of bulbs from the smallest panel bulb through to industry leading performance headlamps.

From the first twin blister packs to award winning Performance Halogens which includes leading the market with the Xenon150, the brightest and longest lasting +150% bulb available, we have constantly innovated to ensure our customers are first to market.

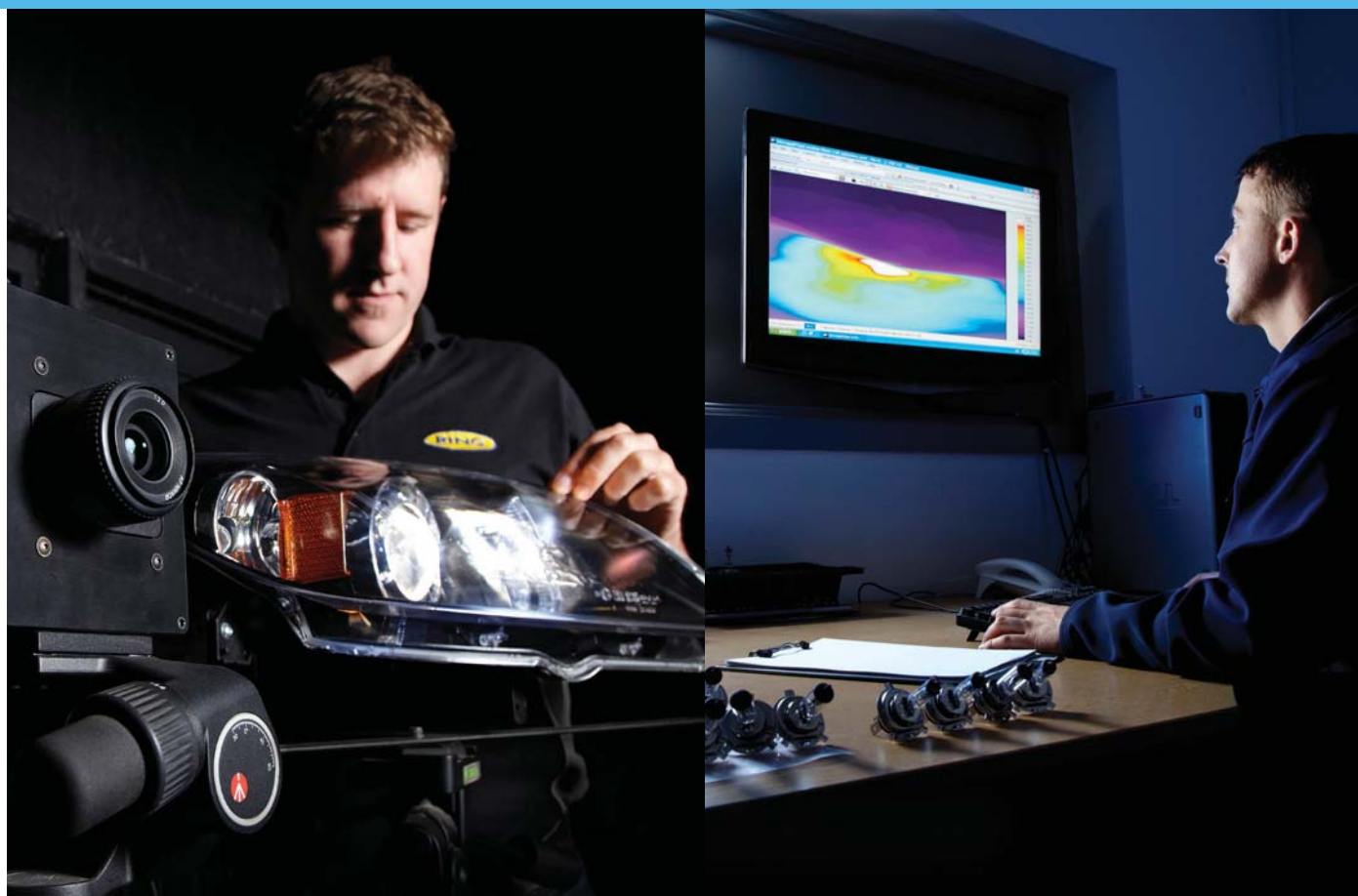
Our range of 24V products for commercial vehicles includes the leading OE quality TruckMaster bulbs.

Today Ring is investing in LED technology to provide the next generation of lighting products for cars, motorcycles and commercial vehicles.

Please take a moment to visit our website, www.ringautomotive.com, where you will find details of our latest product developments and other lighting and auto-electrical products.

www.ringautomotive.com





Quality Assurance

Commitment to Quality

With over forty years experience in the manufacture and distribution of automotive lighting, Ring's commitment to quality is second to none.

Through major investments in test equipment and fully qualified staff, Ring has created a Quality Assurance Department that is at the forefront of Automotive Lighting. Ring recognises quality is of the utmost importance in helping to ensure customer satisfaction and with this in mind Ring's Quality Assurance Department carries out stringent quality control procedures on a continuous basis.

It has achieved the highest standards in Quality Assurance and has been independently assessed by BSI. The department has been awarded ISO9001 for the manufacture and assembly of automotive lighting. This is regularly and independently verified by BSI and the standard has now been achieved over a period of many years. This independent Quality Assessment is vital when it comes to Ring's original equipment programme where the best in the world OEM's continue to place business with Ring Automotive.



The Quality Assurance Department monitors and assesses all the bulbs in the Ring Auto Bulb range. Using the sampling techniques laid down by BS6001 bulbs are checked to the relevant ECE and BS standards.

The Quality Assurance Department carries out a much bigger role than simply testing our existing products.

The department's extensive facilities are used in the continuous process of product development, comparing the performance of existing products to those utilising the very latest technologies. It works closely with our manufacturing partners in developing those new technologies.

It is also able to monitor and assess the general quality of the marketplace issuing regular updates on other bulbs available. Working in close cooperation with our customers it can issue technical reports on request.

Introduction



Light Tunnel Laboratory

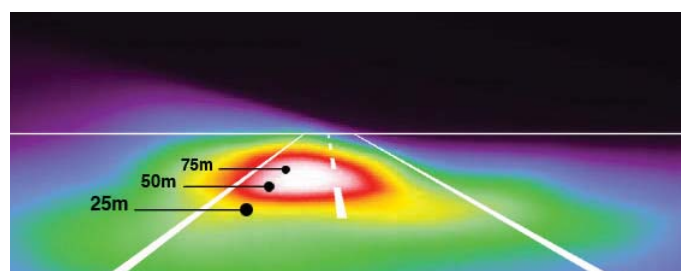
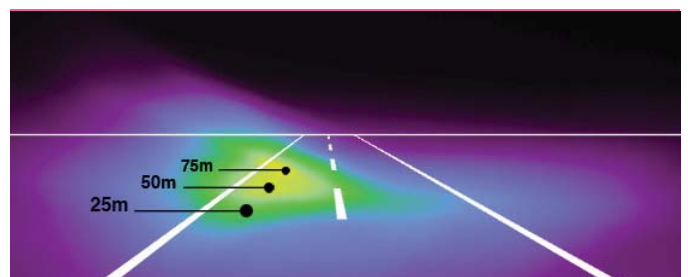
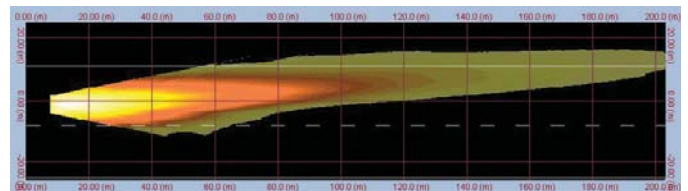
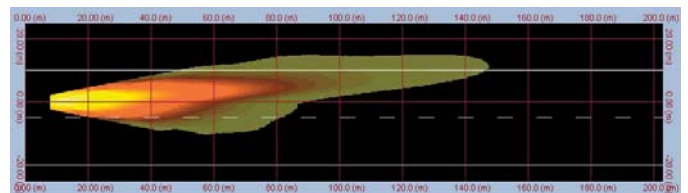
Designed and developed by experts, Ring's lighting laboratory is a 'state-of-the-art' testing centre which enables product testing and performance verification, which is laid down by international standards.

The Technology

The state-of-the-art laboratory is equipped with the latest ProMetric CCD light imaging photometer. Where a traditional goniophotometer can only measure the light intensity and colour from the lamp at one point at a time, the new ProMetric photometer can measure 1.5 million points simultaneously. Localised light and colour difference can easily be detected by looking at the individual measurements taken from any point. These measurements can then be displayed as a conventional image or via a colour isolux image.

These images clearly illustrate the performance of both the light unit and the light source and can be used to access the relative performance of products. Our extensive database now contains many thousands of results which can be used to improve both our understanding of our products performance but also other products sold in the market.

The data is used to further enhance and improve our products. The specially designed software allows data to be shown as overhead images to produce a bird's eye view of the product's enhanced performance on the road ahead. The performance of products can be checked against the international standards using the reference data points from European headlamp standards.





Quality Control

Luminosity and Colour

Using an Integrated Photometer, luminosity or the light output, is measured. This calibrated sphere compares the light output of the sample against a calibrated bulb. The light output is then checked and verified against the relevant standard. Bulbs are checked for colour compliance by comparing the output to chromaticity values defined in the standards.

Life Testing

Bulbs are tested for their static life using a computer controlled life test rack.

This accelerates the life of a bulb using increased voltage between 110.0-116.6% as specified by BSI or I.E.C standards.

This life test is not a continuous test but a cycle test that switches the bulbs off and on to put the maximum load on the bulbs. In the case of twin filament headlamp bulbs the test alternates between the main and dipped beam filaments.



Lamp Dimensions and Filament Positions

Lamp dimensions and filament positions are verified on a shadowgraph magnification projector.

With the increasing use of complex surface reflectors on both front and rear lighting it is becoming more important that the filament is located at the correct position. Failure to do this will result in a very poor beam pattern as the source of light is not at the focal point of the lamp.

Vibration Testing

Whilst there is no international requirement for vibration testing within ECE specifications, Ring carries out vibration testing in their laboratories.

The amplitude and the frequency of the vibration can be adjusted to create a variety of adverse conditions. This test is the nearest we can get to simulating what happens on the road and is particularly relevant to the arduous conditions found in the commercial vehicle market. Ring is able to benchmark its products and those available in the marketplace.

Ring TruckMaster Heavy Duty Long Life range is tested in accordance with IEC60810-2003 (Lamps for road vehicles – Performance requirements). Bulbs are tested for performance in controlled conditions of high vibration and shock over a period of 20 hours.

Other procedures carried out:

- Envelope to lamp holder test – the bulb is torque tested against calibrated weights to ensure the cap is secure.
- Cap dimensional test – the bulb cap is checked against calibrated gauges to ensure the correct fit to a lamp holder.
- Envelope test – the glass envelope is checked against calibrated gauges to ensure the correct size.

Introduction



Product Development and Testing

Ring's Quality Assurance Department carries out a much bigger role than simply testing auto bulbs.

The department's extensive facilities are used in the continuous process of product development, comparing the performance of existing products to those utilising the very latest technologies. It works closely with our engineers in developing those new technologies.

The facilities to capture data and log actual performance together with extensive test equipment provides valuable assistance in creating new products in the auto electrical and power management product categories.

As new vehicles embrace new technologies such as "Stop Start" battery systems Ring already has in place a range of battery chargers to meet the market demand.

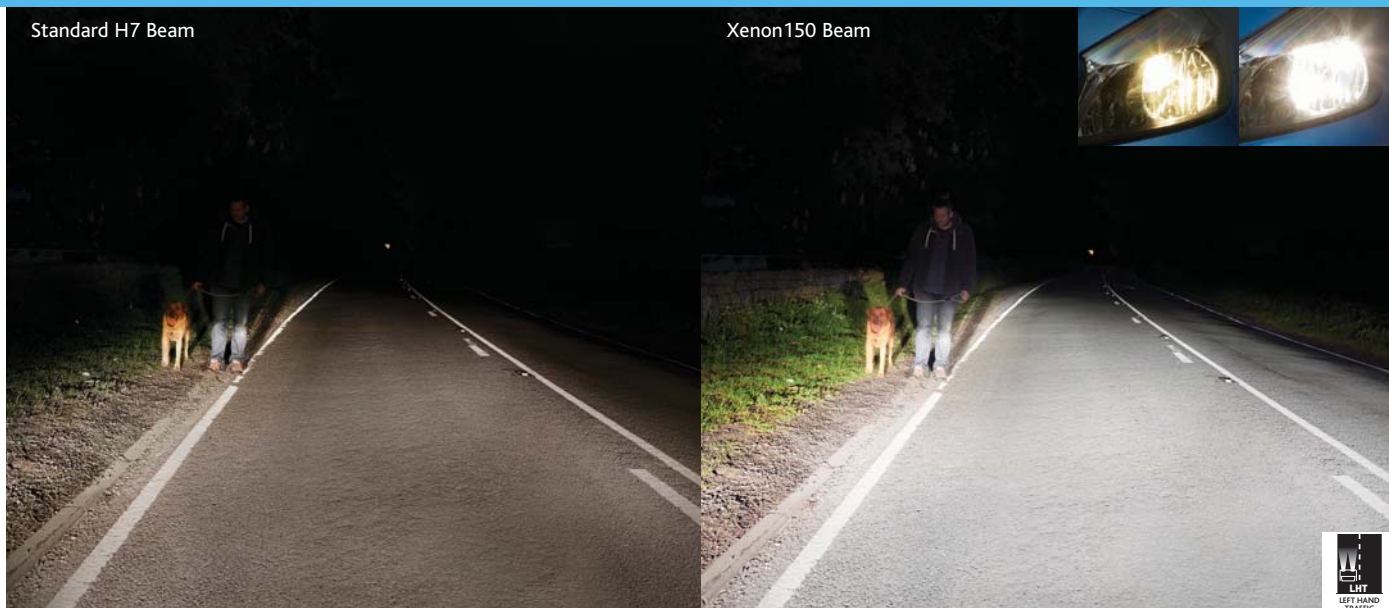


Retail Lighting

Performance Halogens	8	Rapid Response Bulbs	25
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Performance Halogens



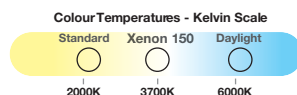
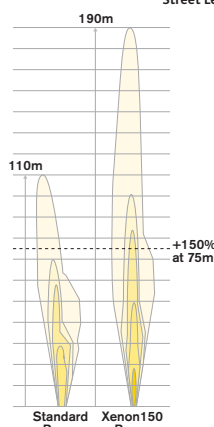
xenon150®



+150%

Puts up to 150%* more light on the road

- Up to 150% more light on the road ahead allows the driver to see more at a distance of 75m
- See and be seen with a beam pattern up to 80m longer than a standard bulb
- Better visibility of road markings and signs
- A whiter look in the headlamp compared to a standard bulb
- No changes to vehicle wiring required



Twin

Ref	Voltage	Wattage	ECE	Cap	Kelvin	Upgrades	Barcode
RW1572	12V	60/55w	H4	P43t	3700K	R472	5055175240800
RW1577	12V	55w	H7	Px26d	3700K	R477	5055175240479

Retail Solutions

Ref	Description	Barcode
BU150	Xenon 150 counter top display unit c/w 8 x H7, 4 x H4	5055175241326



BU150



Scan to watch the video



xenon130

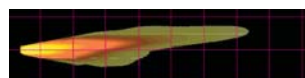


+130%

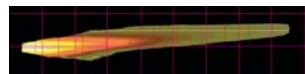
Puts up to 130%* more light on the road

- Improve night vision with up to 130% more light on the road for a safer and more comfortable journey
- Maximum performance is achieved through micro filament technology and 100% Xenon gas.
- See and be seen more clearly with up to a 60m longer beam than a standard bulb
- Better visibility of road markings and signs is produced through a whiter light that is closer to daylight
- A stylish finish is achieved through the silver tip
- Plug and Go - no changes to vehicle wiring required

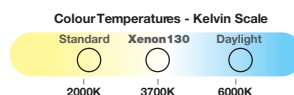
Standard Beam



Xenon 130 Beam



+60m



Twin

Ref	Voltage	Wattage	ECE	Cap	Kelvin	Upgrades	Barcode
RW3372	12V	60/55w	H4	P43t	3700K	R472	5055175236957
RW3377	12V	55w	H7	Px26d	3700K	R477	5055175236964

Retail Solutions

Ref	Description	Barcode
BU5900	Xenon 130 counter top display unit c/w 8 x H7, 4 x H4	5055175237312



BU5900



Watch the video for more details

Performance Halogens



RING
Automotive
xenonmax

Puts up to 100%* more light on the road

- Xenon gas technology and precise filament for improved performance
- Increased light output allows other road users to be seen more clearly at a distance of 75m on dipped beam
- Provides better reflections from road markings and signs
- H4, H7, H11 and HB4 have silver caps to blend in with reflector when unlit
- No changes to wiring required

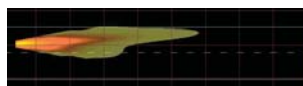


E Street Legal

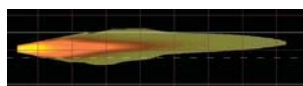


+100%

Standard Beam



Xenon Max Beam



Single

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RU1048	12V	55w	H1	P14.5s	R448	5055175214924
RU1072	12V	60/55w	H4	P43t	R472	5055175214368
RU1077	12V	55w	H7	Px26d	R477	5055175214375

Twin

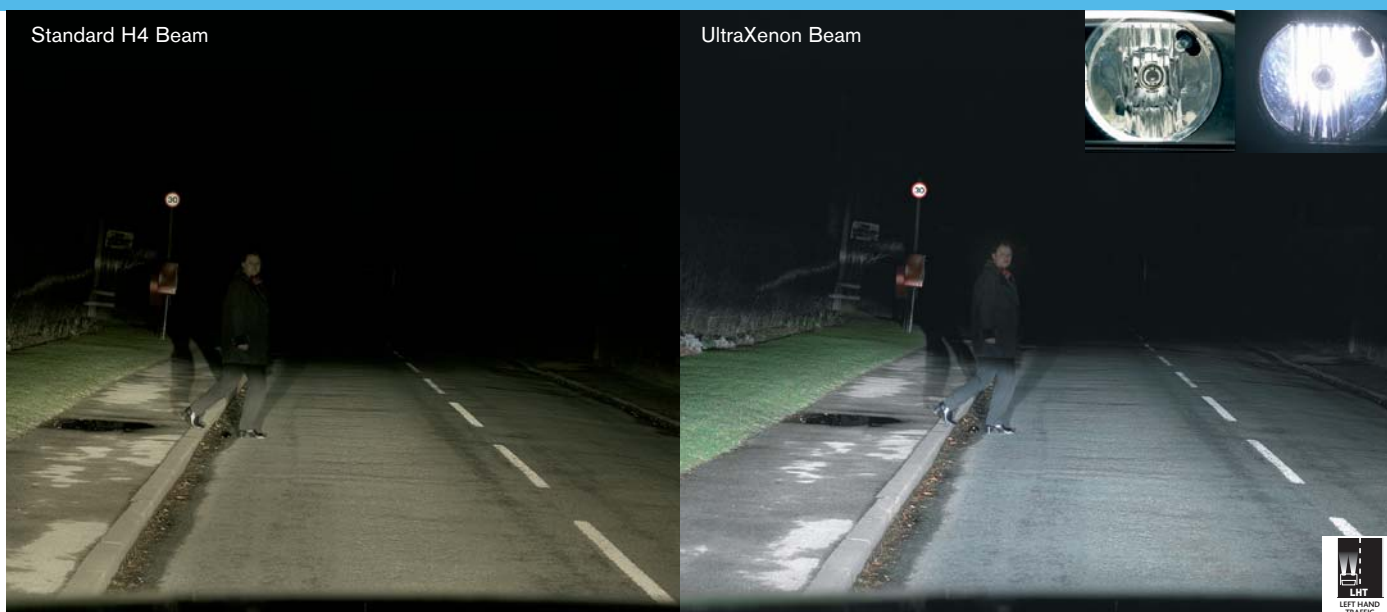
Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW1005	12V	60w	HB3	P20d	R9005	5055175217154
RW1006	12V	51w	HB4	P22d	R9006	5055175217161
RW1011	12V	55w	H11	PGJ19-2	R711	5055175217178
RW1048	12V	55w	H1	P14.5s	R448	5055175214917
RW1053	12V	55w	H3	PK22s	R453	5055175221946
RW1072	12V	60/55w	H4	P43t	R472	5055175214344
RW1077	12V	55w	H7	Px26d	R477	5055175214351

Retail Solutions

Ref	Description	Barcode
BU3100	Counter top display unit complete with 3 units of RW1048, RW1072, RW1077	5055175217369
Size: (W)285mm x (H)420mm x (D)285mm		
BU3300	Xenonmax mini display stand c/w 2 bulbs	5055175219660
BU3500	Clipstrip c/w 1x H1, 2x H4, 5055175222189 3x H7 bulbs	



*Compared to a standard halogen bulb



ultraxenon

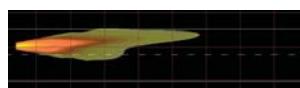
Puts up to 60%* more light on the road

- Improved light output provides better reflections from road markings and signs
- Other road users can be seen more clearly at a distance of 75m on dipped beam
- No changes to wiring required

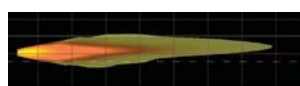


+60%

Standard Beam



Ultra Xenon Beam



Single

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RU948	12V	55w	H1	P14.5s	R448	5011274194819
RU972	12V	60/55w	H4	P43t	R472	5011274197216
RU977	12V	55w	H7	Px26d	R477	5011274197711
RU9905	12V	60w	HB3	P20d	R9005	5055175200606
RU9906	12V	51w	HB4	P22d	R9006	5055175200613

Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW948	12V	55w	H1	P14.5s	R448	5011274194826
RW972	12V	60/55w	H4	P43t	R472	5011274197223
RW977	12V	55w	H7	Px26d	R477	5011274197728
RW9905	12V	60w	HB3	P20d	R9005	5055175200583
RW9906	12V	51w	HB4	P22d	R9006	5055175200590

*H4 up to 60% brighter, H1 and H7 up to 50% brighter than a conventional headlamp bulb.

Performance Halogens



xenonstar+

+30%

Street
Legal

HID
Look

Up to 4400K cool white light for a Xenon HID Look

- Produces a light that is closer to daylight reducing eye strain and fatigue
- Puts up to 30% more light on the road for safer and more comfortable night driving
- H7 and H4 references have a stylish silver tip to blend in with reflector when unlit
- No changes to wiring required
- Sidelight bulbs available to complete the look



UK Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW4448	12V	55w	H1	P14.5s	R448	5055175235011
RW4472	12V	60/55w	H4	P43t	R472	5055175235028
RW4477	12V	55w	H7	Px26d	R477	5055175235035
RW1401	12V	5w	W5W	W2.1x9.5d	R501	5055175231952

UK Twin with Sidelights

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW4448V	12V	55w	H1	P14.5s	R448	5055175235042
		5w	W5W	W2.1x9.5d	R501	
RW4472V	12V	60/55w	H4	P43t	R472	5055175235059
		5w	W5W	W2.1x9.5d	R501	
RW4477V	12V	55w	H7	Px26d	R477	5055175235066
		5w	W5W	W2.1x9.5d	R501	

Retail Solutions

Ref	Description	Barcode
BU5600	Counter top Display Unit c/w 1xH1, 3xH4, 5xH7 product with sidelights	5055175232935

Watch the comparison
video for more details.



Street
Legal





RING
Automotive
xenonlook



Up to 4000K Xenon HID Look

- Crisp white light and high power beam produces a HID Xenon Look
- H4 and H7 have a silver cap to blend in with reflector when unlit
- Hi tech coating provides a mirror type reflection when unlit
- Ideal for off-roaders, sports and rally drivers
- Changes to wiring or fuses may be required
- Off road use only

Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW1348	12V	80w	H1	P14.5s	R448	5055175229492
RW1372	12V	100/80w	H4	P43t	R472	5055175229508
RW1377	12V	80w	H7	Px26d	R477	5055175229515

Twin with LED Sidelights

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW1348V	12V	80w 1w	H1 W5W	P14.5s W2.1x9.5d	R448 R501	5055175229591
RW1372V	12V	100/80w 1w	H4 W5W	P43t W2.1x9.5d	R472 R501	5055175229607
RW1377V	12V	80w 1w	H7 W5W	Px26d W2.1x9.5d	R477 R501	5055175229614



Performance Halogens



RING
Automotive
xtremeblue

White light with a blue hue and
up to 50% more light on the
road for a HID look

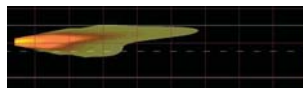
- Produces a crisp light up to 3700K which is closer to daylight aiding eye strain and fatigue
- Other road users can be seen more clearly at a distance of 75m on dipped beam
- No changes to wiring required



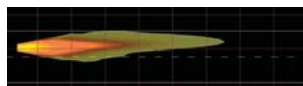
Street
Legal



Standard Beam



Xtreme Blue Beam



Single

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RU748	12V	55w	H1	P14.5s	R448	5055175213293
RU772	12V	60/55w	H4	P43t	R472	5055175212586
RU777	12V	55w	H7	Px26d	R477	5055175212593

Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW748	12V	55w	H1	P14.5s	R448	5055175213309
RW772	12V	60/55w	H4	P43t	R472	5055175212456
RW777	12V	55w	H7	Px26d	R477	5055175212463
RW7005	12V	60w	HB3	P20d	R9005	5055175217499
RW7006	12V	51w	HB4	P22d	R9006	5055175217505



RING
Automotive
iceblue
Street legal blue

- Cool white styling light with a hint of blue
- Produces a crisp light up to 3400k which is closer to daylight
- H4 and H7 have a silver cap to blend in with reflector when unlit
- No additional wiring required



Single

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RU348	12V	55w	H1	P14.5s	R448	5011274134815
RU353	12V	55w	H3	PK22s	R453	5011274135317
RU372	12V	60/55w	H4	P43t	R472	5011274137212
RU377	12V	55w	H7	Px26d	R477	5011274137717
RU3005	12V	60w	HB3	P20d	R9005	5011274130053
RU3006	12V	51w	HB4	P22d	R9006	5011274130060

Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW348	12V	55w	H1	P14.5s	R448	5011274134822
RW353	12V	55w	H3	PK22s	R453	5011274135324
RW372	12V	60/55w	H4	P43t	R472	5011274137229
RW377	12V	55w	H7	Px26d	R477	5011274137724
RW3005	12V	60w	HB3	P20d	R9005	5011274130527
RW3006	12V	51w	HB4	P22d	R9006	5011274130626

Bulb Packs with Sidelights

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW348V	12V	55w	H1	P14.5s	R448/501	5011274134853
RW372V	12V	60/55w	H4	P43t	R472/501	5011274137274
RW377V	12V	55w	H7	Px26d	R477/501	5011274137755

Sidelights

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
R801	12V	5w	W5W	W2.1x9.5d	R501	5011274080105
R833	12V	4w	T4W	BA9s	R233	5011274083304
RW801	12V	5w	W5W	W2.1x9.5d	R501	5011274180126
RW833	12V	4w	T4W	BA9s	R233	5011274183325

Performance Halogens



Off road intense blue/white light and high power beam

- Up to 3900k white light with a darker blue hint
- 80 to 100w produces a high power beam pattern
- H4 and H7 have a silver cap to blend in with reflector when unlit
- Ideal for off-landers, sports and rally drivers
- Changes to wiring or fuses may be required
- Off road use only



Single

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RU684	12V	100/80w	H4	P43t	R472	5011274168414
RU664	12V	80w	H7	Px26d	R477	5011274166410
RU668	12V	80w	H1	P14.5s	R448	5011274166816

Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW684	12V	100/80w	H4	P43t	R472	5011274168421
RW664	12V	80w	H7	Px26d	R477	5011274166427
RW668	12V	80w	H1	P14.5s	R448	5011274166823

Twin with Sidelights

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW664V	12V	80w+5w	H7	Px26d	R477	5011274166458
		5w		W5W	R501	
RW684V	12V	100/80w	H4	P43t	R472	5011274168452
		5w		W5W	R501	
RW668V	12V	80w	H1	P14.5s	R448	5055175201412
		5w		W5W	R501	

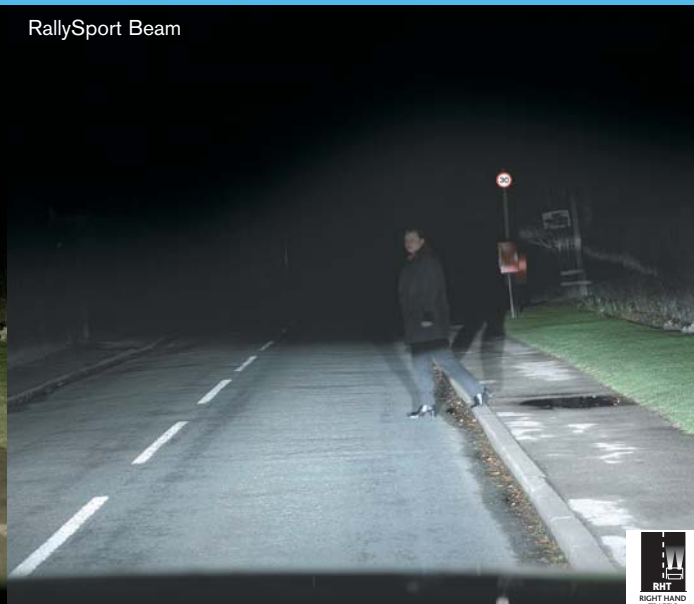
Sidelights

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW601	12V	5w	W5W	W2.1x9.5d	R501	5055175217512

Standard H4 Beam



RallySport Beam

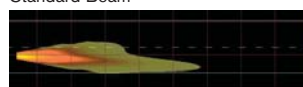


Off-road intense white light and high power beam

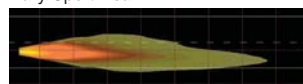
- 80-160w produces a high power beam pattern
- Off road use only
- Ideal for sport or rally drivers
- Changes to wiring or fuses may be required



Standard Beam



Rally Sport Beam



Single

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RU481	12V	100w	H1	P14.5s	R448	5011274148119
RU499	12V	130w	H1	P14.5s	R448	5011274149918
RU483	12V	100w	H3	PK22s	R453	5011274148317
RU492	12V	130w	H3	PK22s	R453	5011274049256
RU473	12V	100/55w	H4	P43t	R472	5011274147310
RU484	12V	100/80w	H4	P43t	R472	5011274148416
RU490	12V	130/90w	H4	P43t	R472	5011274149017
RU590	12V	160/90w	H4	P43t	R472	5011274159016
RU464	12V	100w	H7	Px26d	R477	5011274146429

Twin

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW481	12V	100w	H1	P14.5s	R448	5011274094973
RW499	12V	130w	H1	P14.5s	R448	5011274095000
RW483	12V	100w	H3	PK22s	R453	5011274094980
RW492	12V	130w	H3	PK22s	R453	5011274095017
RW473	12V	100/55w	H4	P43t	R472	5011274094966
RW484	12V	100/80w	H4	P43t	R472	5011274148423
RW490	12V	130/90w	H4	P43t	R472	5011274095000
RW590	12V	160/90w	H4	P43t	R472	5011274159030
RW464	12V	100w	H7	Px26d	R477	5055175201306

Performance Halogens



PERFORMANCE/SAFETY

Which bulb should I choose?

STYLING

Do I want an improved light output on the road ahead?

Do I want to give a distinctive look to my vehicle?

Do I want a street legal or an off-road bulb?

Do I want a street legal or an off-road bulb?

STREET LEGAL

OFF-ROAD

STREET LEGAL

OFF-ROAD



RING
Automotive
xenon150

Up to 150% brighter than standard headlamps for a safer and more comfortable journey.

+150% more light



RING
Automotive
rallysport

Off-road – intense white light and high power beam (80 – 160w).

OFF-ROAD



RING
Automotive
xenonstar+

Up to 4400K Xenon HID Look.

+30% more light



RING
Automotive
xenonlook

Up to 4000K Xenon HID Look and high power beam (80-100w).



RING
Automotive
xenon130

Up to 130% brighter than standard headlamps for a safer and more comfortable journey.

+130% more light



RING
Automotive
xtremeblue

Intense blue-white light with up to 50% more light on the road.

+50% more light



RING
Automotive
sportzblue

Intense blue-white light and high power beam (80 – 100w).



RING
Automotive
xenonmax

Up to 100% brighter than standard headlamps. Bright white light with enhanced performance for greater light output.

+100% more light



RING
Automotive
ultraxenon

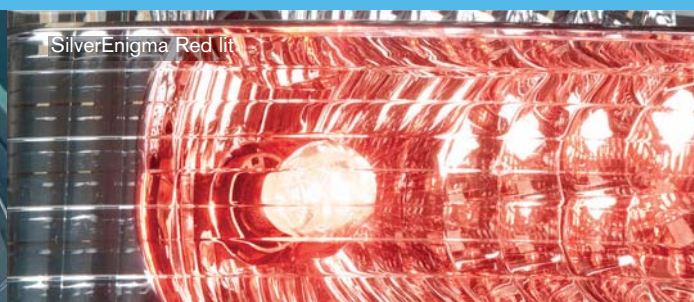
Up to 60%* brighter than standard headlamps. Enhanced performance for greater light output.

+60% more light

*H4 only



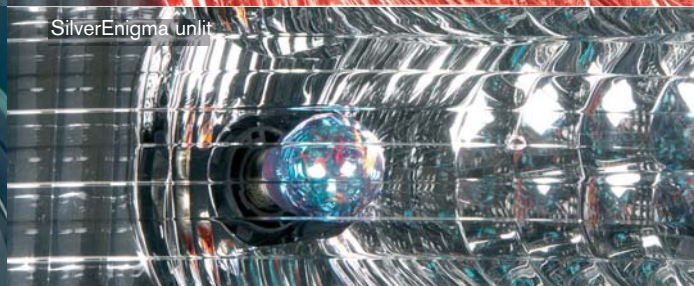
Standard Indicator Bulb



SilverEnigma Red lit



SilverEnigma Indicator Bulb



SilverEnigma unlit

SilverEnigma

Flashes amber, looks clear when unlit

- Flashes amber and provides a clear integrated look when unlit
- Ring SilverEnigma is interchangeable with conventional bulbs
- Upgrades R581 amber indicator bulb

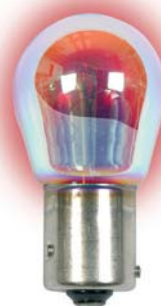
 Street Legal



Illuminates red, looks clear when unlit

- Illuminates red and provides a clear integrated look when unlit
- Vehicle Specific OE replacement bulb
- Upgrades R382R stop light bulb
- Upgrades R380R stop and tail bulb

 Street Legal



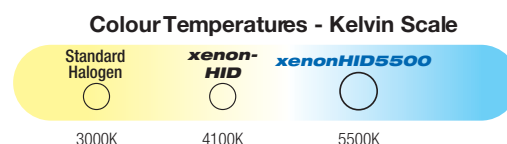
Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW3581	12V	21w	PY21W	BAU 15s	R581	5011274135812
R3782	12V	21w	PR21W	BAW 15s	R782	5055175215013
R3780	12V	21/5w	PR21/5W	BAW 15d	R780	5055175215020

Other indicator upgrades are available within the Prism range.

OE Xenon HID



- Replacement OE gas discharge bulbs
- Direct replacement for existing bulbs
- Long life - 3000 hours
- High luminance. nom 3200lm
- Colour temperature 4100K
- E Approved



Specification

Ref	Voltage	Wattage	Cap	ECE	Barcode
BLISTER PACK					
RU85406	85V	35	PK32d-3	D1R	5055175220239
RU85402	85V	35	PK32d-2	D1S	5055175220222
RU85126	85V	35	P32d-3	D2R	5055175220215
RU85122	85V	35	P32d-2	D2S	5055175220208
BOXED PACK					
R85406	85V	35	PK32d-3	D1R	5055175215129
R85402	85V	35	PK32d-2	D1S	5055175215112
R85126	85V	35	P32d-3	D2R	5055175211480
R85122	85V	35	P32d-2	D2S	5055175211473
R42306	42V	35	PK32d-6	D3R	5055175235882
R42302	42V	35	PK32d-5	D3S	5055175230610
R42406	42V	35	P32d-6	D4R	5055175235899
R42402	42V	35	P32d-5	D4S	5055175230627
R12410	12V	25	PK32d-7	D5S	5055175239903

The following cards can be used for merchandising purposes to indicate that HID bulbs are available should you not wish to put stock on display:

BBC1331 – RU85122
 BBC1332 – RU85126
 BBC1333 – RU85402
 BBC1334 – RU85406

Fitting

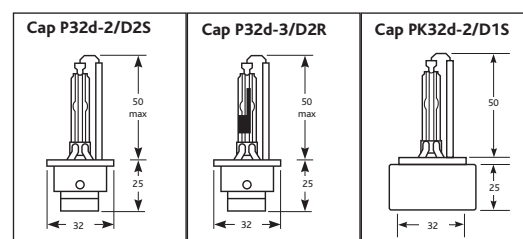
The high starting current required to ignite gas discharge bulbs can be hazardous. These bulbs can be safely replaced when the safety instructions provided are followed.

OE Xenon HID Upgrade

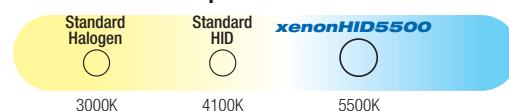
xenonHID5500

5500K +20%
performance upgrade bulb

- 20% more light than a standard HID bulb
- 5500K colour temperature for a whiter light
- Direct OE replacement for existing discharge bulb
- Typical life 3000 hours



Colour Temperatures - Kelvin Scale



Fitting

The high starting current required to ignite gas discharge bulbs can be hazardous. These bulbs can be safely replaced when the safety instructions provided are followed.

Projector and reflector headlight types

- D2S and D1S bulbs are suitable for projector type headlights.
- D2R and D1R bulbs are suitable for reflector type headlamps.

Specification

Ref	Voltage	Wattage	Cap	ECE	Barcode
BLISTER PACK					
RU851225K	85V	35	P32d-2	D2S	5055175237800
RU851265K	85V	35	P32d-3	D2R	5055175237817
RU854025K	85V	35	PK32d-2	D1S	5055175237824
BOXED PACK					
R851225K	85V	35	P32d-2	D2S	5055175237572
R851265K	85V	35	P32d-3	D2R	5055175237589
R854025K	85V	35	PK32d-2	D1S	5055175237619

Premium Headlamps



Designed for today's modern headlamp units

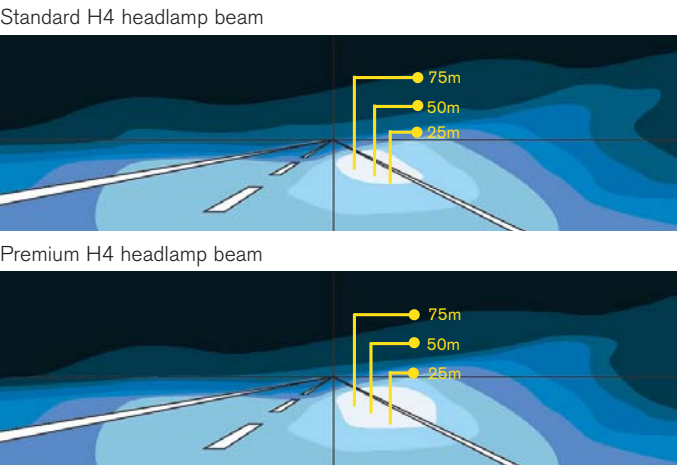
- Optimise the efficiency of lighting equipment with Ring Premium headlamp bulbs
- The output and efficiency of vehicle headlamps is not only determined by the shape, size and manufacturing quality of the reflector but also the quality of the bulb
- Smaller headlamp designs require a bulb with a more precise filament position



Case Qty Blister 10x1

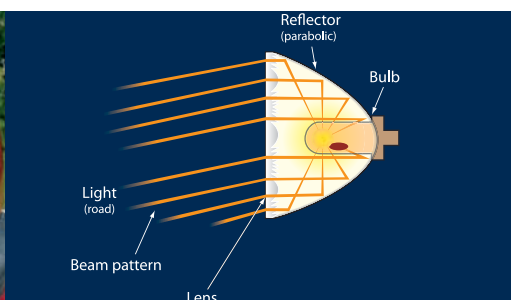
Features	Benefits
UV cut, reduces amount of UV light exposure	Prevents discolouration of plastic headlamp components, ensuring headlamps maintain original performance levels
Precision filament design	Produces superior beam pattern, improves light output and helps reduce stray light
Manufactured to OEM quality	Maintains the quality performance of original bulb in the vehicle
'E' approved	Ensures bulb is produced to correct high quality standard and is street legal

Beam Patterns*



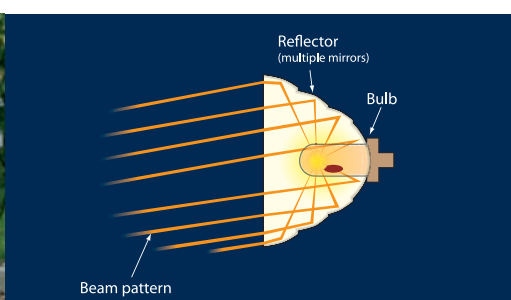
*Typical beam pattern

Standard Headlamp



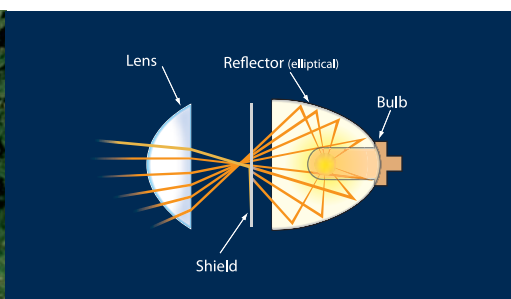
Generally round in shape but can be rectangular
Reflector has smooth finish
Patterned lens creates beam pattern
Premium bulb rating ★★★

Reflector/Complex Surface Headlamp






Designed in response to vehicle styling requirements and improved aerodynamics
Multiple shapes
Computer designed reflector has many stepped points which create the beam pattern
Clear glass or plastic lens
Premium bulb rating ★★★★★

Projector Headlamp






Ellipsoidal in shape
Reflector has a smooth finish
A shield positioned between the reflector and the lens creates the beam pattern
Glass projection lens directs the beam pattern
Premium bulb rating ★★★★★

Ring Premium Headlamp Bulb Range – Single Blister

Ref	Voltage	Wattage	ECE	Cap	Application	Barcode
RU448EQ	12V	55	H1	P14.5s		5011274184414
RU472EQ	12V	60/55	H4	P43t		5055175201016
RU477EQ	12V	55	H7	Px26d		5055175201030

Ring Premium Headlamp Bulb Range – Twin Blister

Ref	Voltage	Wattage	ECE	Cap	Application	Barcode
RW448EQ	12V	55	H1	P14.5s		5011274144845
RW472EQ	12V	60/55	H4	P43t		5055175201030
RW477EQ	12V	55	H7	Px26d		5055175201047

Long Life Bulbs



Lasts up to 3x longer than the standard equivalent bulb

- Ideal for day and night use and high mileage drivers
- Improved resistance to vehicle overvoltage
- Suitable for vehicles with optional 'lights on' function or daytime running systems

Coping with Overvoltage

On many of today's modern vehicles the measured voltage can be higher than 12V in order to cope with the additional electronic devices and electric motors.

Bulbs for cars are currently manufactured to operate at 12V and tested at 13.2v however, if the constant running voltage is higher than this it can result in a rapid decrease in the life expectancy of the bulb. Ring Automotive's Long Life bulbs provide a better resistance to vehicle overvoltage.



Case Qty Blister 5x1

Reference	Voltage	Wattage	ECE	Cap	E Approved	Application	Barcode
RU477LL	12V	55	H7	Px26d	E		5011274147747
RU472LL	12V	60/55	H4	P43t	E		5011274147242
RU448LL	12V	55	H1	P14.5s	E		5011274144852
RU453LL	12V	55	H3	PK22s	E		5011274045333
RW380LL	12V	21/5	P21/5W	BAY15d OSP	E		5011274138042
RW382LL	12V	21	P21W	BA15s SCC	E		5011274138240
RW207LL	12V	5	R5W	BA15s SBC	E		5011274120740
RW245LL	12V	10	R10W	BA15s SCC	E		5011274124540
RW501LL	12V	5	W5W	W2.1x9.5d	E		5011274250195
RW239LL	12V	5	C5W	S8.5d 11x38mm	E		5011274123949
RW581LL	12V	21	PY21W	BAU15s OSP	E		5011274158149
RW233LL	12V	4	T4W	BA9s MCC	E		5011274123345

Rapid Response Bulbs



Gain time, gain distance, avoid rear end collisions

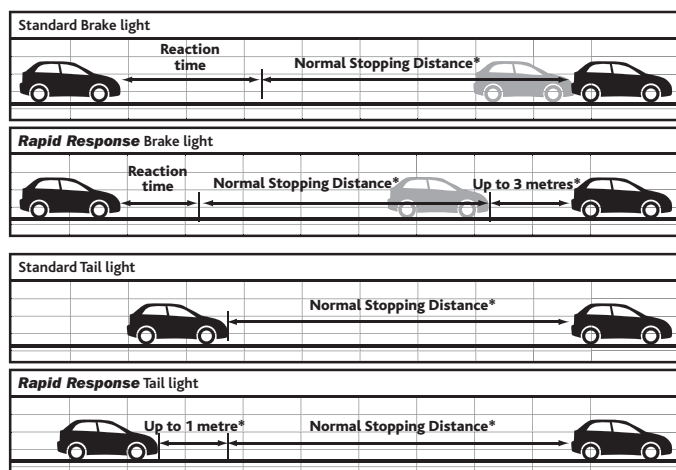
- Faster light-up* and greater light intensity provides earlier warning to following vehicles
- A shorter, more precise filament produces up to **20% more luminance** than a standard bulb
- Up to 3 metres** extra stopping distance



Case Qty Blister 10x1

Twin blister

Ref	Voltage	Wattage	ECE	Cap	Upgrades	Barcode
RW380RR	12V	21/5	P21/5W	BAY15d	R380	5055175215303
RW382RR	12V	21	P21W	BA15s	R382	5055175215310
RW207RR	12V	5	R5W	BA15s	R207	5055175215327
RW245RR	12V	10	R10W	BA15s	R245	5055175215334



*Faster light applies to brake and tail, and brake, tail and indicator bulbs only.
 **Up to 3 metres applies to brake and tail and brake bulbs only.

*Based on travelling speeds of 62mph

Filament Style LED Bulbs



Standard bulb

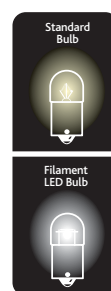


Filament Style LED bulb



Optimised light output

- Filament technology gives a uniform light output, just like a standard bulb
- Up to 6000K ice white bulbs
- Longer life
- Vibration resistant
- Designed to replace a standard bulb



12V Filament Style LEDs

Product Code	Bulb Ref	Bulb Type	Application	Colour Temp	Lumens	More info
RW2336FSLED	233	T4W	Side & Tail	6000K	40	Ice White
RW2396FSLED	239	C5W	Number Plate & Interior	6000K	45	CANbus Technology & Ice White
RW5016FSLED	501	W5W	Side & Interior	6000K	60	CANbus Technology & Ice White
RW2073FSLED	207	R5W	Side & Tail	3000K	60	White
RW2453FSLED	245	R10W	Side & Tail	3000K	125	White
RW3803FSLED	380	P21/5W	Brake/Tail	3000K	380/40	Nichia LED & White
RW3823FSLED	382	P21W	Brake & Indicator	3000K	390	Nichia LED & White
RW581AFSLED	581	PY21W	Indicator	2000K	280	Nichia LED & Amber
RW501AFSLED	501A	WY5W	Side Repeater	2000K	40	Amber
RW589AFSLED	589	RY10W	Indicator	2000K	75	Amber

24V Filament Style LEDs

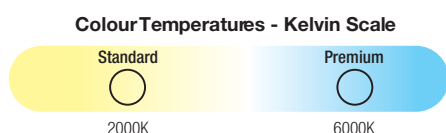
Product Code	Bulb Ref	Bulb Type	Application	Colour Temp	Lumens	More Info
RB1493FSLED	149	R5W	Side & Tail	3000K	55	White
RB2463FSLED	246	R10W	Side & Tail	3000K	110	White
RB5076FSLED	507	W5W	Side, Tail & Interior	6000K	65	Ice White
RB2496FSLED	249	T4W	Side & Tail	6000K	45	Ice White
RB2413FSLED	241	P21W	Brake & Indicator	3000K	395	Nichia LED & White
RB2943FSLED	294	P21/5W	Brake/Tail	3000K	410/55	Nichia LED & White
RB2426FSLED	242	C5W	Number Plate & Interior	6000K	50	Ice White
RB1506FSLED	150	R5W	Side & Tail	6000K	55	Ice White
RB3463FSLED	346	P21W	Brake & Indicator	3000K	395	Nichia LED & White

Premium LED Bulbs



LED bulbs for a whiter look

- Latest CANbus technology
- 6000K Ice white
- Longer life



12V Premium LEDs

Product Code	Bulb Ref	Bulb Type	Application	Colour Temp	Lumens	More Info
RW207LED	207/245	R5W/R10W	Signalling	6000K	400	Ice White
RW239CBLED	239	C5W	Number Plate & Interior	6000K	200	CANbus Technology & Ice White
RW380LED	380	P21/5W	Signalling	6000K	510/150	Ice White
RW382LED	382	P21W	Signalling	6000K	530	Ice White
RW501CBLED	501	W5W	Side & Interior	6000K	220	CANbus Technology & Ice White
RW477FLED	477	H7	Fog Lamp only	6000K	600	Ice White
RW711FLED	711	H11	Fog Lamp only	6000K	600	Ice White

24V Premium LEDs

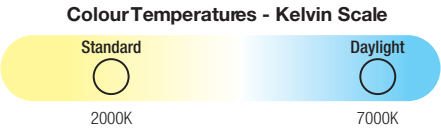
Product Code	Bulb Ref	Bulb Type	Application	Colour Temp	Lumens	More Info
RB1496LED	149	R5W	Signalling	6000K	400	Ice White
RB1506LED	150	R5W	Signalling	6000K	400	Ice White
RB2416LED	241	P21W	Signalling	6000K	530	Ice White
RB2426LED	242	C5W	Number Plate & Interior	6000K	200	CANbus Technology & Ice White
RB2496LED	249	T4W	Signalling	6000K	200	Ice White
RB5076LED	507	W5W	Side & Interior	6000K	220	CANbus Technology & Ice White

Performance LED Bulbs



LED bulbs for a whiter look

- 3D technology
- 7000K Ice white
- Longer life



270° Light distribution

3D Technology
Many LED designs are '2D'. 2D LEDs have a flat surface forcing the light to be emitted in one direction only. This can be a problem with LEDs, as no matter how many other LEDs are added to the lamp in any position,

the light distribution may be uneven. Our 3D LEDs are made with a flexible LED beading which can be used to simulate the shape of a standard bulb thus giving an even light distribution.

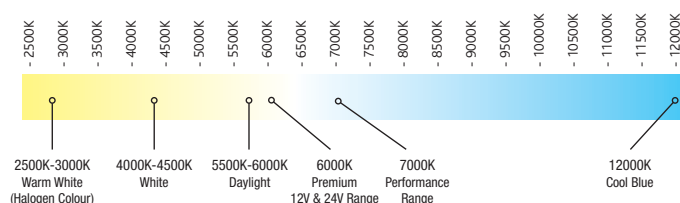
12V Performance LEDs

Product Code	Bulb Ref	Bulb Type	Application	Colour Temp	Lumens	More Info
RW380DLED	380	P21/5W	Signalling	7000K	300/100	3D Technology & Ice White
RW382DLED	382	P21W	Signalling	7000K	560	3D Technology & Ice White
RW501DLED	501	W5W	Side & Interior	7000K	200	3D Technology & Ice White

LED Bulbs

Upgrade to a stylish look

- Produces a cool white (4000K), Ice White (6000K) or Cool Blue (12000K) look to match HID appearance
- Direct replacement for existing bulbs
- Energy saving compared to standard bulbs
- Optional plug and play resistor kit for vehicles with bulb failure warning system (LED501RES)
- Off road or internal use only



Product Code	Bulb Ref	Bulb Type	Application	Colour Temp	Lumens	More Info
RW2394LED	239	C5W	Number Plate & Interior	4000K	30	39mm Cool White
RW2396LED	239	C5W	Number Plate & Interior	6000K	35	39mm Ice White
RW23912LED	239	C5W	Number Plate & Interior	12000K	35	39mm Cool Blue
RW2646LED	264	C5W	Number Plate & Interior	6000K	60	41mm Ice White
RW2696LED	269	C5W	Number Plate & Interior	6000K	60	30mm Ice White
RW2726LED	272	C5W	Number Plate & Interior	6000K	60	36mm Ice White
RW50112LED	501	W5W	Side & Interior	12000K	35	Cool Blue
RW5014LED	501	W5W	Side & Interior	4000K	25	Cool White
RW5016LED	501	W5W	Side & Interior	6000K	40	Ice White
LED239B	239	C5W	Number Plate & Interior	-	5	38mm Blue
LED239W	239	C5W	Number Plate & Interior	6000K	15	38mm Ice White
LED239HPB	239	C5W	Number Plate & Interior	-	5	38mm Blue
LED239HPW	239	C5W	Number Plate & Interior	6000K	80	38mm Ice White
LED286B	286	T5	Side & Interior	-	5	Blue
LED3809R	380	P21/5W	Signalling	-	15	Red
LED3829R	382	P21W	Signalling	-	15	Red
LED501B	501	W5W	Side & Interior	-	5	Blue
LED501W	501	W5W	Side & Interior	6000K	5	Ice White
LED5014B	501	W5W	Side & Interior	-	10	Blue
LED5014W	501	W5W	Side & Interior	6000K	25	Ice White
LED501HPB	501	W5W	Side & Interior	-	5	Blue
LED501HPW	501	W5W	Side & Interior	6000K	45	Ice White
LED509TB	509T	B8.5D	Panel Bulb	-	30	Blue
LED501RES	-	W5W/W3W	-	-	-	LED Resistor kit for W5W

Marketing Support

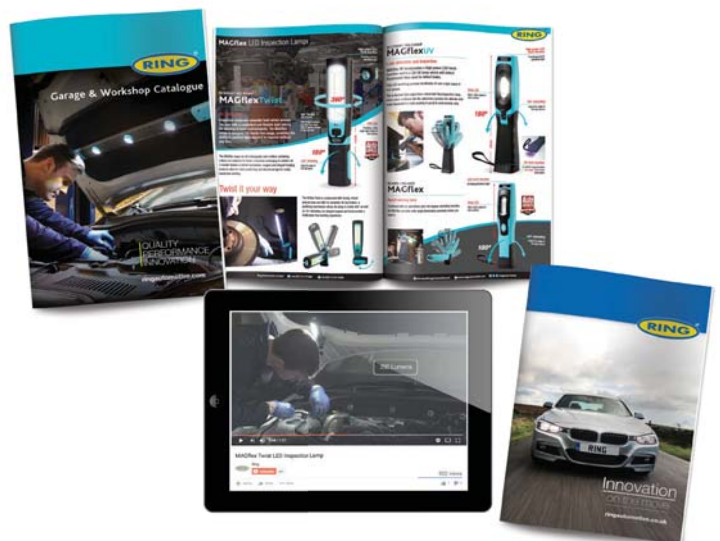


Marketing Support

For mechanics, knowledge equals confidence.

Therefore we set out to provide as much technical support as a mechanic will require.

Our comprehensive bulb literature is constantly updated to ensure mechanics have access to the latest information. We provide work outs and training events to ensure mechanics maximise their sales of bulbs.



Brightest for longest.



xenon150®

**The brightest, longest lasting
+150% performance halogen bulb.**

Up to 150% more light on the road, over 350 hours life
and an 80m longer beam pattern.*

Check online for your nearest stockist, ringautomotive.com

*compared to a standard bulb



Pack for illustration only.



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