



# Commercial Vehicle Catalogue

2020/21

**LCV/HGV/PSV  
Fleet Operator Solutions**



# Supporting Your Business

HGVs and LCVs are the backbone of industry, delivering vital goods and services to all aspects of the economy.

For fleet managers it is essential to ensure all their vehicles are serviced and maintained to operate safely on the road.

To support the transport industries, Ring has a dedicated range of components and equipment to keep the wheels moving and business thriving over all transport sectors.

## Contents

<b>Introduction</b>	<b>3</b>
- About Ring Automotive	3
- Quality Assurance	5
<b>Bulbs and Lighting</b>	<b>8</b>
<b>Ancillary Lighting</b>	<b>20</b>
<b>Powering and Charging Systems</b>	<b>44</b>
<b>Vehicle Safety</b>	<b>60</b>
<b>Battery Care</b>	<b>72</b>
<b>Workshop Equipment</b>	<b>86</b>
<b>Electrical</b>	<b>98</b>
<b>Guide to Legislation</b>	<b>104</b>



### Fleet Operator Solutions

We all know the importance of keeping commercial transport and working vehicles in a safe and roadworthy condition. Equally important is the welfare of the driver, passengers and other road users.

Whether it's ensuring safety of the driver whilst in the sleeper cab of a truck, or powering cooking equipment in a Welfare vehicle, here at Ring we've got all aspects of fleet operator solutions covered.

All Ring supplied parts and equipment meet UK industry regulations and are rigorously tested, both within our partner factories and our in-house QA laboratory, to ensure they are efficient and therefore reducing downtime and operating costs.

### Lighting

Ensure you're using the right bulb for the job. All Ring bulbs are OE quality, rigorously tested and conform to the Road Standard Agency (RSA) and Freight Transport Association (FSA).

### In-Vehicle Power

All elements of our in-vehicle powering products adhere to strict conformity of regulations, ensuring there are no risks and to keep your workforce safe and comfortable and prepared for the job in hand.

### Vehicle Safety

Safety is always of the essence and that includes the vehicle as well as the workforce. Ring camera systems and Hazard Lighting products provide all round protection for all scenarios.

### Vehicle/Ancillary Battery Care

Keeping batteries healthy whilst powering equipment efficiently is even more important with developing technology such as Stop Start functionality. Our battery care range has developed with the market to ensure maximum efficiency from these crucial components when there is have increased load imposed on the vehicle battery.

### Workshop Equipment

It's all about making life easier for technicians and mechanics in busy workshops and roadside situations.







# Welcome to Ring

**Ring is a leading European supplier to the automotive aftermarket, providing exceptional quality bulbs, tyre care products, battery care products, dash cameras, garage and workshop equipment and vehicle conversion components. Ring has over 40 years' experience in the automotive sector, pushing the boundaries in automotive lighting, auto electrics and professional equipment.**

Quality and service are at the centre of everything Ring does. We work with businesses to help them reach their goals, and ensure that our products perform exceptionally for the motorists, technicians, fleet managers and professionals using them on a daily basis. Our success has been shown in the 200+ product awards we've won throughout Europe, for products including our high performance halogen bulbs, tyre care, professional battery analysis tools and inspection lighting.

Headquartered in Leeds, UK and with our European office in Paris, we are ideally placed to help meet the needs of our customers. Ring's specialist team of over 165 people across Europe, ensures we are at the forefront of product development, quality assurance and customer support services. From our purpose-built 6000m<sup>2</sup> distribution facility, Ring fulfils 64,000 orders to over 60 countries annually.

UK customers benefit from a next day delivery service and with 6500 pallet locations in the warehouse holding 6000 different product lines, Ring is proud of its 97% availability rate, meaning customers get the products they need in a timescale that works for their business.

[www.ringautomotive.com](http://www.ringautomotive.com)







# Commitment to Quality

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

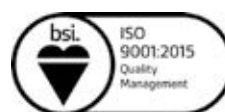
Through major investments in test equipment and fully qualified staff, Ring has created a Quality Assurance Department that is at the forefront of Automotive Lighting. Ring recognises quality is of the utmost importance in helping to ensure customer satisfaction and with this in mind Ring's Quality Assurance 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 ISO:9001 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.

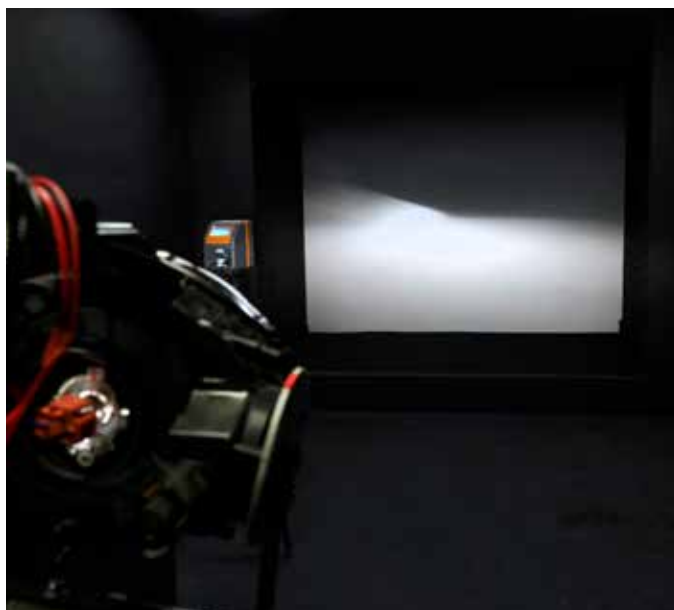
The department's extensive facilities are used in the continuous process of product development, comparing the performance of existing products to those utilising the very latest technologies. It works closely with our manufacturing partners in developing those new technologies.

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



BS EN ISO 9001:2015  
FM 504682





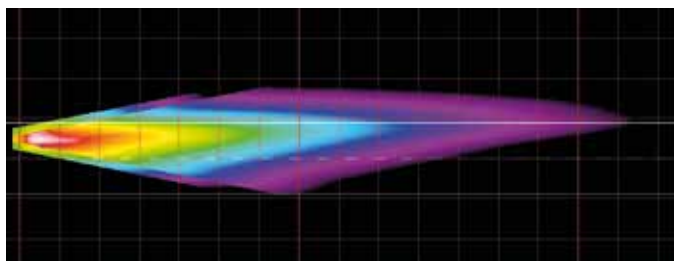
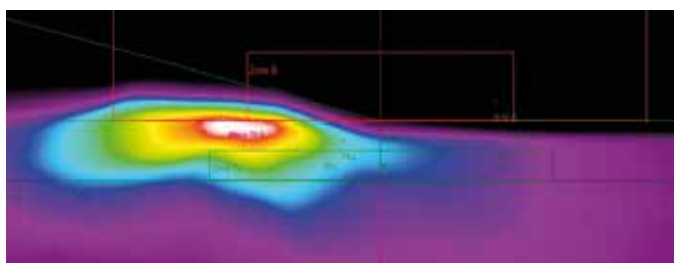
# Light Tunnel Laboratory

**Designed and developed by Ring, the lighting laboratory is a unique installation that allows product testing and performance verification beyond that laid down by international standards.**

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 8 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 from the National Physics laboratory. 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 its 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 market place.

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 condition 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.

# 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.





# Replacement Vehicle Bulbs

Ring has the most comprehensive range of 12V and 24V bulbs on the market, supplying top quality halogen, HID, long life and LED bulb programs tailored to fleet solutions. All bulbs and lighting products are tested vigorously in the UK to meet all regulations and ensure resistance to heavy vibration to guarantee maximum life output.



# Contents

<b>Did you know?</b>	<b>10</b>
<b>Improve running costs with Truckmaster Heavy Duty Bulbs</b>	<b>11</b>
<b>Truck Bulbs</b>	<b>12</b>
<b>Mini Bus &amp; Coach Bulbs</b>	<b>13</b>
<b>Van Bulbs</b>	<b>15</b>
<b>Front Lighting - Left Hand Traffic</b>	<b>16</b>
<b>Signal Lighting - 95mm Modular</b>	<b>18</b>



# Did you know?

Problems with headlamps (poor fitment, dim or blown bulbs) account for

# 3.8%

of HGV MOT failures (2018)

Headlamp Aim accounts for

# 4.8%

of HGV MOT failures (2018)

## Top Tips to avoid MOT bulb failure

- After changing the bulb re-align to ensure the beam pattern is accurate.
- Replace headlight bulbs in pairs to ensure consistent light output and reduce the need for a further change later on.
- Ensure tyre pressures and suspension settings are correct and that headlamps are aligned to vehicle condition, ie: laden or unladen.



### Ring bulbs are:



#### ECE Reg 37 - E marking

ECE Reg 37 is the European Standard for automotive bulbs implemented to guarantee the performance standards of bulbs. It applies to most exterior lighting and has been adopted throughout Europe. Only bulbs carrying an appropriate E mark can be used on the road. "Off-road vehicles" are exempt. Gas discharge lamps have their own standard which is ECE Reg 99.



#### Lead Free

Environmental legislation introduced in July 2006 prohibits the use of lead in bulbs. Ring bulbs are now manufactured using lead free solder and lead free glass.

### All Ring headlamp bulbs are:



#### UV Cut

Ultra Violet light can damage headlamps manufactured with plastic components making lenses brittle and cloudy. Ring headlamp bulbs are UV cut to protect the vehicles lighting systems.

## Ring Bulb Guides

For further reference see our separate publications:



Technical Bulb Guide (Part no CAT1341)



Bulb Application Guide (Part no CAT1366)

**ORDER  
YOURS  
NOW**



# Improve running costs with Truckmaster Heavy Duty Long Life Bulbs



**Fleet Managers and Drivers require a source of lighting they can depend on to deliver long life and durability.**

Ring's OEM TruckMaster Heavy Duty Long Life (HDLL) 24V bulbs have been specifically designed to withstand excessive vibrations which vehicles are subjected to. Long life is achieved through a combination of filament technology and the gas mixture inserted within the glass envelope to a high pressure.

This improved performance provides substantial cost savings against vehicle downtime and maintenance costs. Overall running costs are improved by simply fitting Ring Automotive TruckMaster HDLL bulbs.

- Analysing the performance using life v's cost highlights the importance of specifying the correct bulb
- The correct bulb can save a vehicle downtime & costly servicing

## Life vs Cost



\* Based on static life test results. Graph to be used as a guide only. Bulb life may vary dependent on environmental factors.

## Main Benefits:

**Heavy Duty** – Increased resistance to excessive vibration reducing maintenance downtime

**Long Life** – Allows for higher mileage before regular replacement is required.

**Compliance with legal requirements** – Reduced rates of bulb failure, improves driver's Operator Compliance Risk Score.

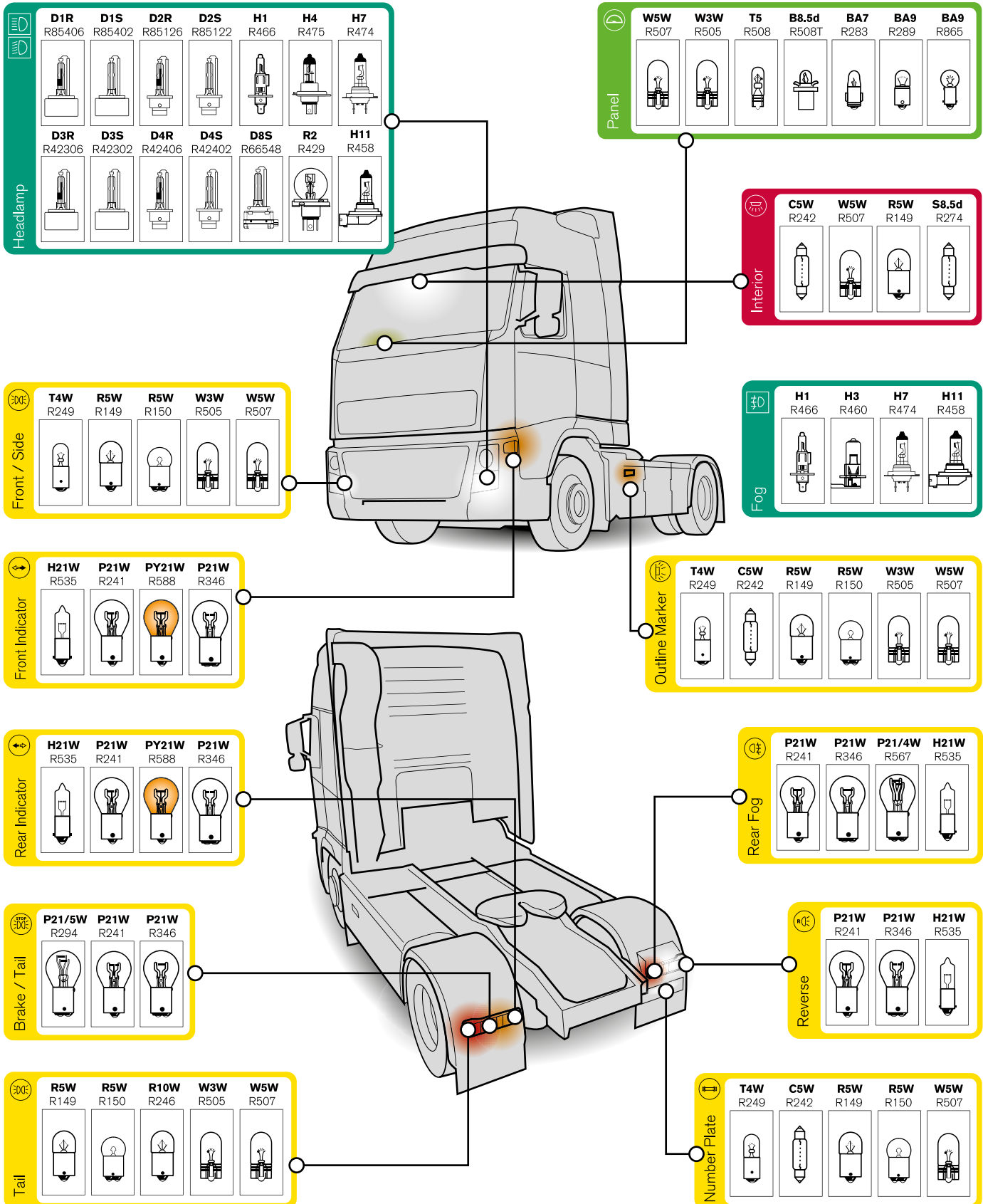
## Technology:

Reinforced filament providing extra strength and robustness against vibrations.

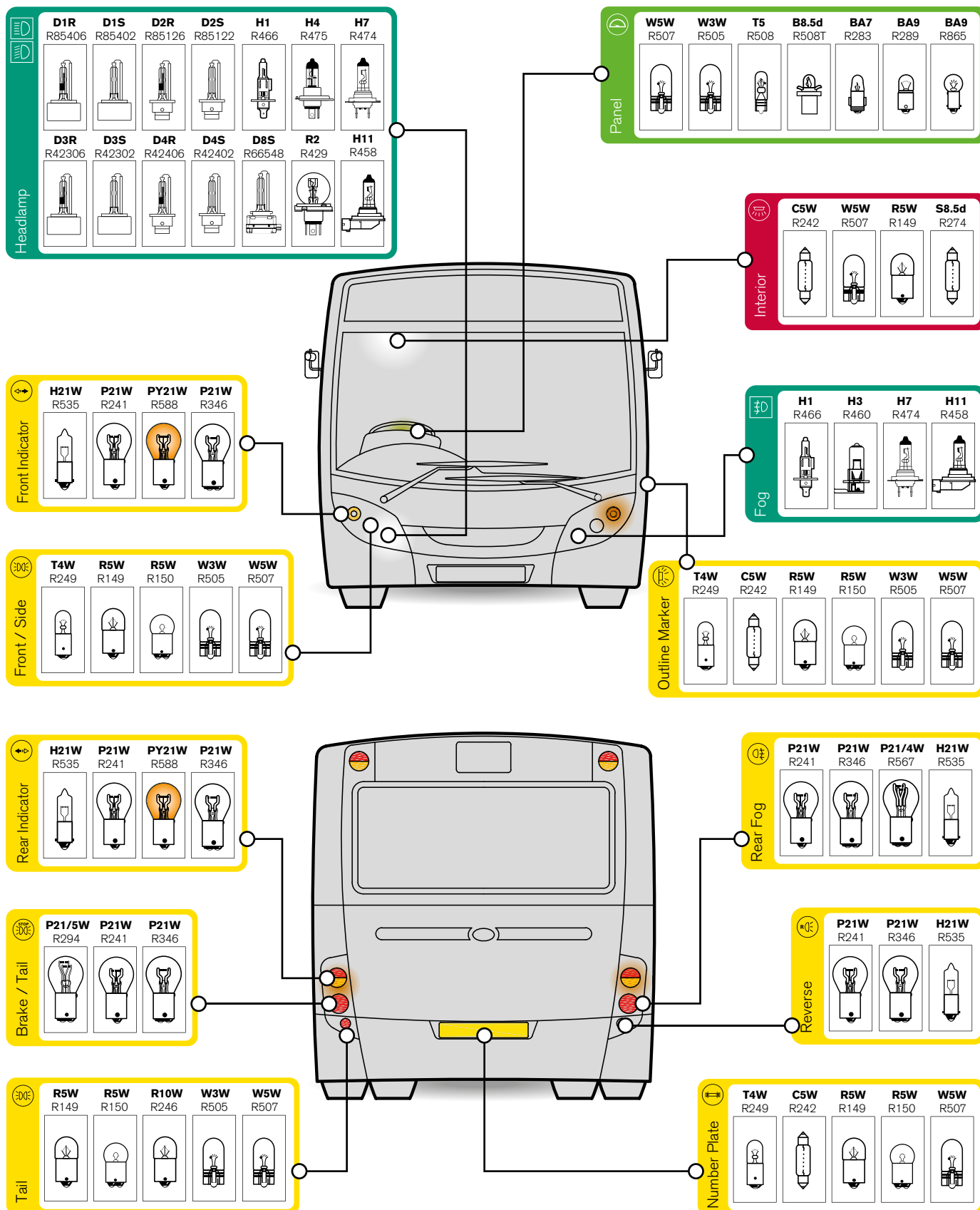
Manufactured in Europe to OE (Original Equipment) specification and subjected to further vibration testing and conforms to IEC60810 European Vibration Standard.

# Bulbs & Vehicle Lighting

## Truck Bulbs



## Mini Bus, Bus & Coach Bulbs

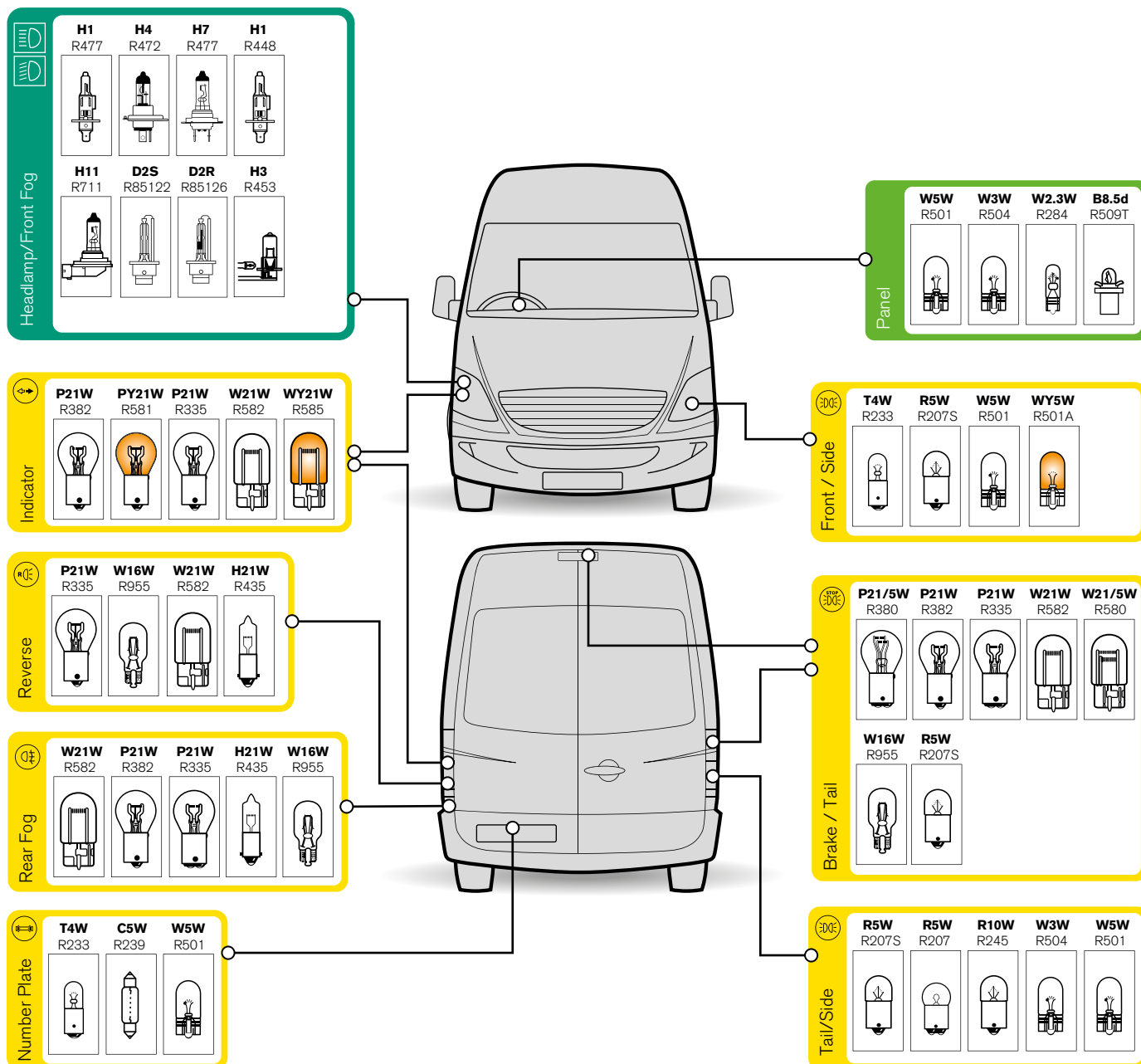




# Bulbs

Ring Automotive Limited

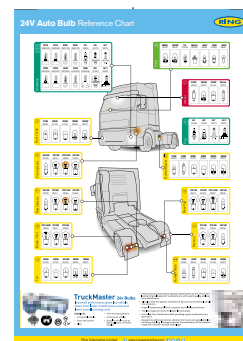
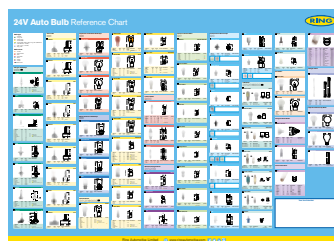
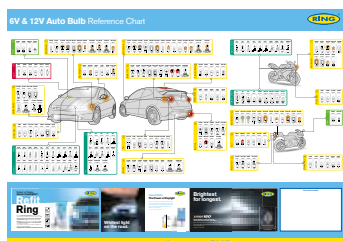
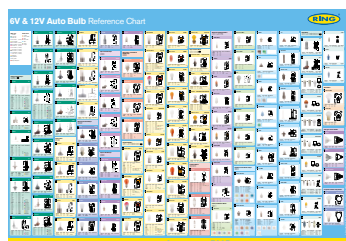
## Van Bulbs



# Ring Bulb Wallcharts

Double sided A1 reference charts available in 12V (order part no CAT1248) and 24V (order part no CAT1353).

**ORDER  
YOUR  
NOW**



# Bulbs & Vehicle Lighting

## Front Lighting – Left Hand Traffic/Right Hand Traffic



### Low Beam

- 90mm halogen headlamp unit
- Dual voltage - suitable for 12V or 24V vehicles
- Suitable for left hand traffic
- Aluminium housing
- Requires H7 bulb
- Rated IP66
- E approved
- Three year warranty

#### Specification

<b>Product Code:</b>	RHL90
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	55 or 70W
<b>Weight:</b>	0.658kg
<b>Product Dimensions:</b>	H110 x W110 x D161mm



### High Beam

- 90mm halogen headlamp unit
- Dual voltage - suitable for 12V or 24V vehicles
- Suitable for left and right hand traffic
- Aluminium housing
- Requires H7 bulb
- Rated IP66
- E approved
- Three year warranty

#### Specification

<b>Product Code:</b>	RHL91
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	55 or 70W
<b>Weight:</b>	0.41kg
<b>Product Dimensions:</b>	H110 x W110 x D121mm



### 7" Low/High Beam

- 7" / 180mm high and/or low beam halogen headlamp
- Left hand traffic
- Suitable for 12V and 24V vehicles
- Aluminium housing with glass lens
- IP67 - dust and waterproof
- E approved
- Three year warranty

#### Specification

<b>Product Code:</b>	R8014
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	60/55W or 75/70W
<b>Weight:</b>	0.42kg
<b>Product Dimensions:</b>	H103 x W171 x D173mm



### 7" Low/High Beam

- 7" / 180mm high and/or low beam LED headlamp
- Includes position light
- Left or Right hand traffic
- IP67 - dust and waterproof
- Long life and low power
- Includes H4 connector
- 100mm cable
- E approved
- Three year warranty

#### Specification

<b>Product Code:</b>	RTM8014 (LHT) RTM8015 (RHT)
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	60/55W or 75/70W
<b>Weight:</b>	0.42kg
<b>Product Dimensions:</b>	H103 x W171 x D173mm

## 7" Headlight Upgrade Kits

RTM81 & RTM82 Supplied with Xenon 130% H7 bulbs.



LHT - RTM81



RHT - RTM82





### 5 3/4 Low/High Beam

- 5 3/4" / 145mm high and/or low beam headlamp unit
- Left hand traffic
- Suitable for 12V and 24V vehicles
- Aluminium housing with glass lens
- IP66 - dust and water jet proof
- E approved



### 5 3/4 Low/High Beam

- 5 3/4" / 145mm high and/or low beam halogen headlamp
- Left hand traffic
- Suitable for 12V and 24V vehicles
- Aluminium housing with glass lens
- IP66 - dust and water jet proof
- E approved
- Three year warranty



### 5 3/4 High Beam

- 5 3/4" / 145mm high beam headlamp unit
- Left hand traffic
- Suitable for 12V and 24V vehicles
- Aluminium housing with glass lens
- IP66 - dust and water jet proof
- E approved

#### Specification

<b>Product Code:</b>	R8731
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	60/55W or 75/70W
<b>Weight:</b>	0.316kg
<b>Product Dimensions:</b>	H195 x W143 x D143mm

#### Specification

<b>Product Code:</b>	RTM8712
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	60/55W or 75/70W
<b>Weight:</b>	0.448kg
<b>Product Dimensions:</b>	H145 x W145 x D87mm

#### Specification

<b>Product Code:</b>	R8712
<b>Voltage:</b>	12/24V DC
<b>Wattage:</b>	55 or 70W
<b>Weight:</b>	0.27kg
<b>Product Dimensions:</b>	H144 x W144 x D9.5mm



See over for 95mm Modular Signal Lighting

# Bulbs & Vehicle Lighting

## Signal Lighting – 95mm Modular



### Stop & Tail

- 95mm LED stop and tail light
- Red lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and water proof
- E approved



### Front/Rear Indicator

- 95mm LED front or rear indicator
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved



### Stop, Tail & Indicator

- 95mm LED stop and tail lamp
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved



### Rear Fog

- 95mm LED rear fog light
- Red lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved

#### Specification

<b>Product Code:</b>	RCV4500
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2/0.5W
<b>Weight:</b>	0.106kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4501
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2W
<b>Weight:</b>	0.108kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4502
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2/0.5W
<b>Weight:</b>	0.11kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4503
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2W
<b>Weight:</b>	0.108kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm



### Front Position & Indicator

- 95mm LED front position and indicator lamp
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved



### Reverse

- 95mm LED reversing lamp
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved



### Front/Rear Indicator

- 95mm LED front or rear indicator
- Amber lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved



### Stop & Tail

- 95mm LED stop and tail light
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and water proof
- E approved

#### Specification

<b>Product Code:</b>	RCV4504
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	0.5-1.5W
<b>Weight:</b>	0.104kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4505
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	1.5W
<b>Weight:</b>	0.098kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4506
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2W
<b>Weight:</b>	0.102kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4507
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2/0.5W
<b>Weight:</b>	0.108kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm



### Rear Fog

- 95mm LED rear fog light
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and waterproof
- E approved



### Reverse/Rear Fog

- 95mm LED reverse and fog light
- Clear lens
- Suitable for vehicles between 10V and 33V
- Long life and low power
- IP67 - dust and water proof
- E approved



### 95mm surface Mount Base

- 95mm lamp base for surface mounting
- ABS construction

#### Specification

<b>Product Code:</b>	RCV4508
<b>Voltage:</b>	10-33V DC
<b>Wattage:</b>	2W
<b>Weight:</b>	0.108kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4509
<b>Voltage:</b>	10-30V DC
<b>Wattage:</b>	Various
<b>Weight:</b>	0.108kg
<b>Product Dimensions:</b>	H95 x W95 x D36mm

#### Specification

<b>Product Code:</b>	RCV4510
<b>Voltage:</b>	-
<b>Wattage:</b>	-
<b>Weight:</b>	0.06kg
<b>Product Dimensions:</b>	H100 x W100 x D46mm

## Ring Bulb Guides

For further reference see our separate publications available, Technical Bulb Guide (order part no CAT1341) and Bulb Application Guide (order part no CAT1366).

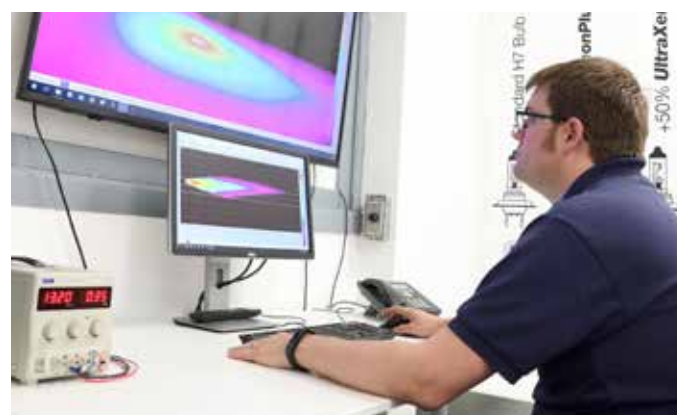
ORDER  
YOURS  
NOW



Technical Bulb Guide  
(Part no CAT1341)



Bulb Application Guide  
(Part no CAT1366)



# Ancillary Lighting

Safety at work is paramount to us all, even more so when your workspace is mobile. At the kerbside or on work sites, dangerous operating situations may be unavoidable, especially as third parties might also be involved. Work lighting will help you and your team be seen and be safe.

**Be Safe - Be Seen.**





# Contents

<b>Introduction to Ancillary Lighting</b>	<b>22</b>
<b>Hazard Lighting</b>	<b>23</b>
<b>Scene Lighting</b>	<b>35</b>
<b>Interior Lighting</b>	<b>40</b>



# Technical understanding of LEDs

## What is an LED?

LED stands for light emitting diode. They are semiconductors that emit light when an electric current is passed through them. Light is produced when the current combines with the semiconductor material.

LEDs are increasingly being used as alternatives to other traditional forms of lighting such as halogen, fluorescent and incandescent lights.

### Benefits of LEDs

The benefits of upgrading to LED are universal and relevant to all LED products. These range from safety improvements, improved light output and light up times, to long-term financial benefits as a result of longer life, low power consumption and reduced vehicle down time.

**Long Life** – LED products are designed to offer optimum life with low maintenance. With LEDs having up to 50,000 hours life they are designed into the units as a non-replaceable light source making bulb changes a thing of the past.

**Low Power** – Reduced power consumption enables the user to benefit from a longer light up time without running a vehicle engine to preserve battery life. Alternatively, more lamps can be installed for an increased light output without exceeding previous power requirements from halogen lamps.

### What is a Lumen?

A lumen is the International System of Units for measuring the total amount of visible light.

The intensity of light or illuminance is measured in Lux. Lux = 1 lumen per square metre. All lumen values quoted are actual measurements taken in our laboratory and adhere to recommended industry best practice.

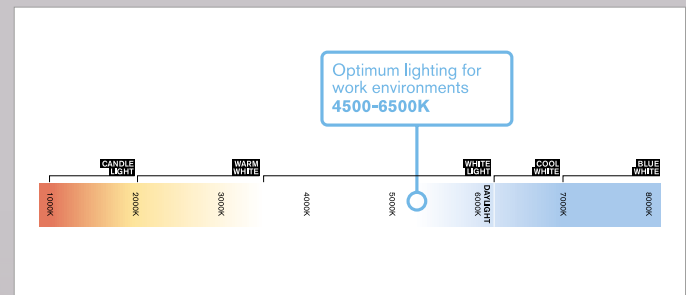
### Colour Temperature of LEDs

The colour temperature of a light source relates to the colour of light emitted. It is measured in degrees Kelvin.

White daylight has a range between 5000K and 6000K.

Traditional incandescent lights has a range between 2,500K and 3000K, producing an orange/red light.

LEDs can have a source of light ranging from 2,000K to 10,000K.



## LED Lightbars

Super bright, high quality light bars to meet road traffic regulations.





# Ancillary Lighting

## PLX Series – Ring’s Range of Professional Amber Light Bars

LED amber light bar with bolt mount, mounting kit included. Suitable for 12V and 24V vehicles.

- Mounting kit included

Reg 10

Approved

Reg 65

Approved

10-30V

Voltage

IP67

IP Rating

x10

Flash patterns



Bolt mounted




Mounting kit incl.



### Key Features

694mm

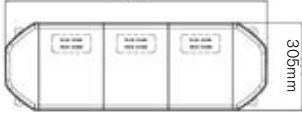


305mm

116mm

RCV9819

921mm

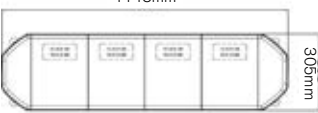


305mm

116mm

RCV9820

1148mm

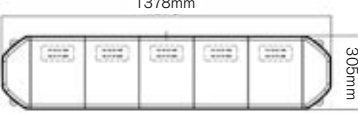


305mm

116mm

RCV9821

1378mm



305mm

116mm

RCV9824


### Specification

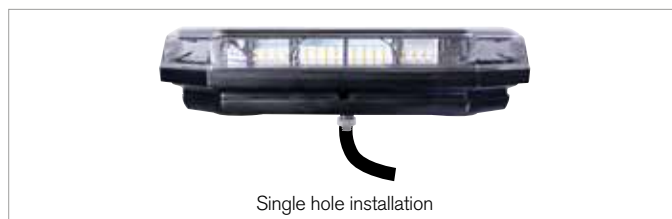
Function:	Amber Light Bar	Amber Light Bar	Amber Light Bar	Amber Light Bar
Product Code:	RCV9819	RCV9820	RCV9821	RCV9824
Wattage:	79W	109W	127W	140W
Current Draw:	6.6A	9.1A	10.6A	11.7A
Light Source:	100 x 0.5W LED	132 x 0.5W LED	164 x 0.5W LED	196 x 0.5W LED
Housing Material:	ABS	ABS	ABS	ABS
Lens Material:	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Cable Length:	500mm	500mm	500mm	500mm

## LED Light Bars

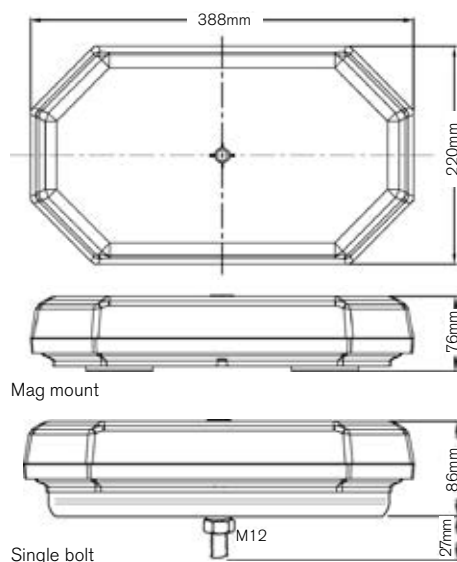
LED amber light bar. Efficient, long life warning light. Choose from 10 different flash patterns, including rotation, pulse or flash, to best suit your vehicle and application. Rated IP67 - dust and waterproof. Made from resilient ABS and polycarbonate. Features 56x 0.2W LEDs for bright amber light. Reg 65 and Reg 10 approved. Ideal for commercial use.

- Amber LED light bar

Reg 10	Reg 65	10-30V
Approved	Approved	Voltage
IP67		
IP Rating	x10 Flash patterns	



### Key Features



### Specification

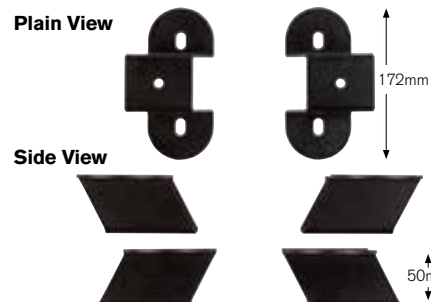
<b>Function:</b>	Magnetic Mount	Single & 4 Bolt Mount
<b>Product Code:</b>	RCV9812	RCV9813
<b>Wattage:</b>	39W	39W
<b>Current Draw:</b>	3.3A	3.3A
<b>Light Source:</b>	56 x 0.5W LED	56 x 0.5W LED
<b>Housing Material:</b>	ABS	ABS
<b>Lens Material:</b>	Polycarbonate	Polycarbonate
<b>Cable Length:</b>	2500mm	250mm
<b>Optional Bracket 50mm:</b>	-	RCV9813RBR

### Light Bar 50mm Riser Brackets

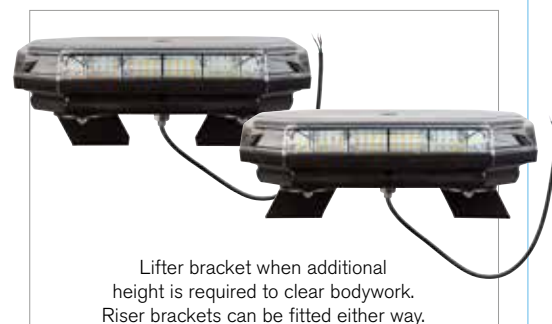
#### RCV9813RBR

Riser brackets when additional height is required for RCV9813.  
Dimensions: L172mm (Plan view) x H50mm (Side view)

#### Plain View



#### Side View




# Ancillary Lighting

## Integrated Stop Tail Indicator LED Amber Light Bar

- Built in stop/tail indicator lights
- Approved to R6, R7, R10 and R65
- Fully integrated solution
- Brackets and mounting kit included

10-30V

Voltage

IP67

Weatherproof

Reg 65

Approved

Reg 10

Approved

Reg 7

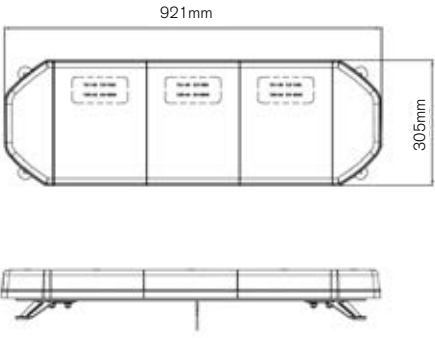
Approved

Reg 6

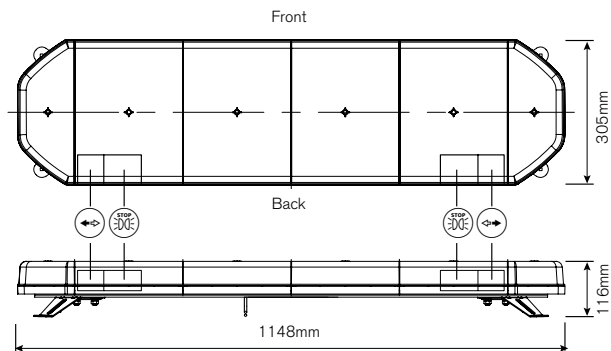
Approved



### Key Features



RCV9825



RCV9826

### Specification

Function:	Stop/Tail/Ind Light Bar	Stop/Tail/Ind Light Bar
Product Code:	RCV9825	RCV9826
Wattage:	96W	111W
Current Draw:	8.0A	9.25A
Light Source:	LED	LED
Housing Material:	ABS	ABS
Lens Material:	Polycarbonate	Polycarbonate
Cable Length:	500mm	500mm



## LED Mini Light Bars

Mini LED amber light bar, ideal for smaller vans and cars. Suitable for 12V and 24V vehicles. Efficient, long life warning light.

- Selection of 20 different flash patterns

Reg 10

Approved

Reg 65

Approved

10-30V

Voltage

IP67

IP Rating



### Key Features



### Specification

<b>Function:</b>	Magnetic Mount	Single Bolt Mount
<b>Product Code:</b>	RCV9822	RCV9823
<b>Wattage:</b>	20W	20W
<b>Current Draw:</b>	1.7A	1.7A
<b>Light Source:</b>	40 x 0.5W LED	40 x 0.5W LED
<b>Housing Material:</b>	ABS	ABS
<b>Lens Material:</b>	Polycarbonate	Polycarbonate
<b>Cable Length:</b>	2500mm	250mm

# Ancillary Lighting


## PLT Series – Ring’s Range of Trade Amber Light Bars



### Amber Mini Light Bar

10-30V

Voltage



IP67

Weatherproof

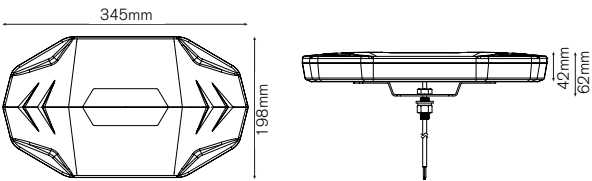
Reg 65

Approved

Reg 10

Approved

#### Key Features



#### Specification

Function:	Amber Mini Light Bar
Product Code:	RCV9761
Wattage:	20W
Current Draw:	1.7A @ 12V, 0.85A @ 24V
Light Source:	40 x 1W LED
Housing Material:	ABS
Lens Material:	Polycarbonate
Cable Length:	500mm

### Amber Light Bar

Reg 10

Approved

Reg 65

Approved

10-30V

Voltage

IP67

IP Rating



x18

Flash patterns

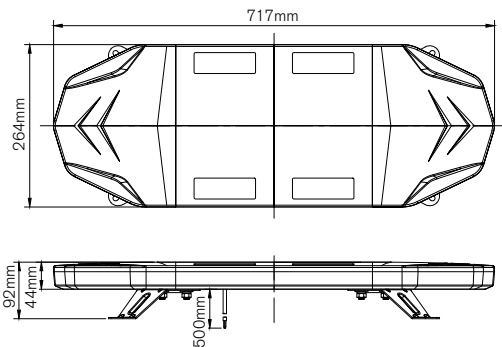


Bolt mounted



Mounting to rail

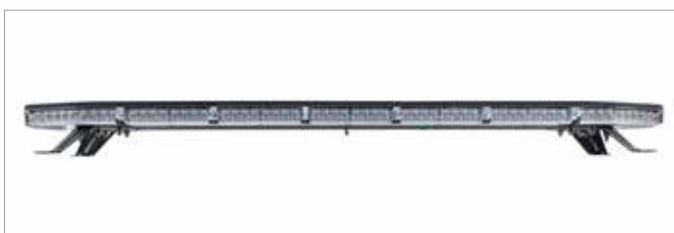
#### Key Features






#### Specification

Function:	Amber Light Bar
Product Code:	RCV9762
Wattage:	80W
Current Draw:	6.7A
Light Source:	80 x 1W LED
Housing Material:	ABS
Lens Material:	Polycarbonate
Cable Length:	500mm

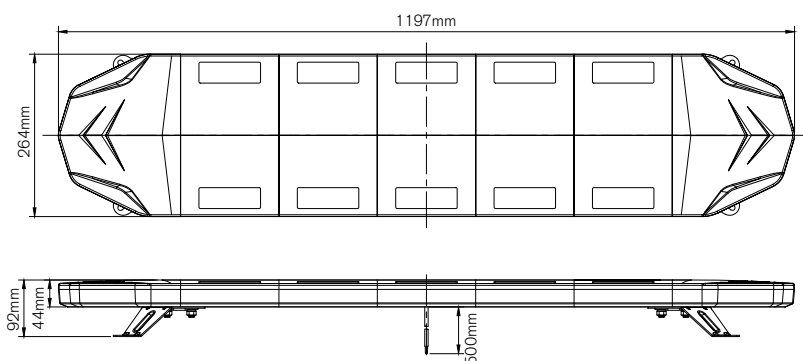
**NEW**



## Amber Light Bar

Reg 10	Reg 65	10-30V	IP67	 x18		
Approved	Approved	Voltage	IP Rating	Flash patterns	Built in control	Mounting kit included

### Key Features



### Specification

<b>Function:</b>	Amber Light Bar
<b>Product Code:</b>	RCV9764
<b>Wattage:</b>	128W
<b>Current Draw:</b>	10.7A
<b>Light Source:</b>	128 x 1W LED
<b>Housing Material:</b>	ABS
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	500mm

# Ancillary Lighting



## Amber Strobe Roof Mounted

Roof mounted strobes offer an easy fit alternative to full lightbars where 360° warning is required and vehicle roof racking or kit such as ladders may obscure warning lights from traditional lamps.

Being low profile they remain close to the vehicle. They are ECE Reg. 10 approved and fully comply with ECE Reg. 65.



IP67  
Weatherproof

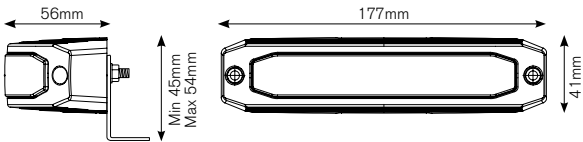


Reg 65  
Approved



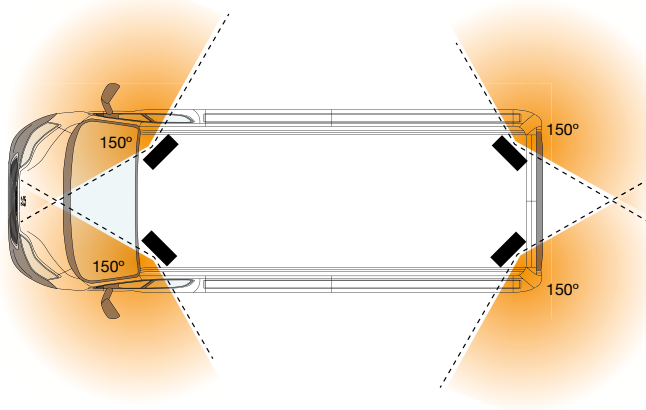
Reg 10  
Approved

### Key Features



**RING Automotive recommends that 4 units should be mounted to each vehicle and these should be synchronised as per fitting instructions.**

The warning lamps are to be positioned on each corner of the vehicle using the bracket included or other appropriate fixings.



**ECE Reg. 65** For vehicle compliance needs to be visible from 25m

### Specification

Function:	Amber Strobe
Product Code:	RCV2217
Wattage:	18W
Current Draw:	1.5A @ 12V, 0.75A @ 24V
Light Source:	6 x 3W LED
Housing Material:	ABS
Lens Material:	Polycarbonate
Cable Length:	500mm



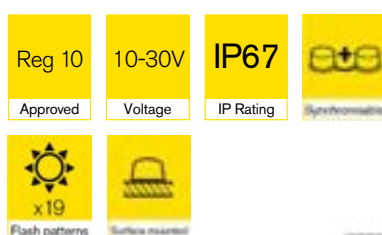
## Slimline Strobes

Ideal to fit inside rear door shuts for additional safety.

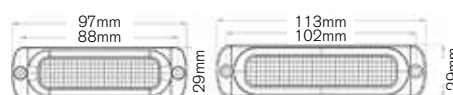
Lighting bracket to allow adjustability



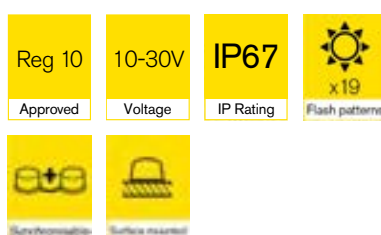
## LED Strobe



### Key Features



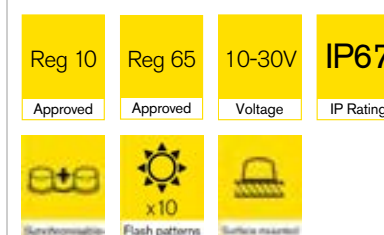
## LED Strobe



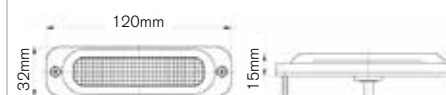
### Key Features



## LED Strobe



### Key Features



### Specification

<b>Function:</b>	4 LED Slimline Amber Strobe
<b>Product Code:</b>	RCV2214
<b>Wattage:</b>	2W
<b>Current Draw:</b>	0.17A
<b>Light Source:</b>	4 x 0.5W LED
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Flash Patterns:</b>	19
<b>Cable Length:</b>	200mm
<b>Optional Bracket:</b>	RCV2214BR

### Specification

<b>Function:</b>	6 LED Slimline Amber Strobe
<b>Product Code:</b>	RCV2215
<b>Wattage:</b>	3W
<b>Current Draw:</b>	0.25A
<b>Light Source:</b>	6 x 0.5W LED
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Flash Patterns:</b>	19
<b>Cable Length:</b>	200mm
<b>Optional Bracket:</b>	RCV2215BR

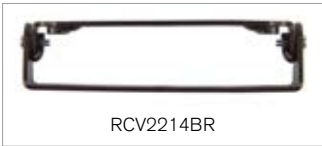
### Specification

<b>Function:</b>	6 LED Slimline Amber Strobe R65
<b>Product Code:</b>	RCV2216
<b>Wattage:</b>	18W
<b>Current Draw:</b>	1.5A
<b>Light Source:</b>	6 x 3W LED
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Flash Patterns:</b>	10
<b>Cable Length:</b>	200mm
<b>Optional Bracket:</b>	RCV2216BR

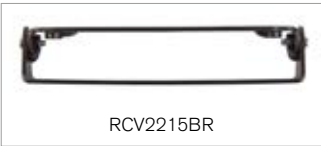
# Ancillary Lighting

## Optional Strobe Brackets

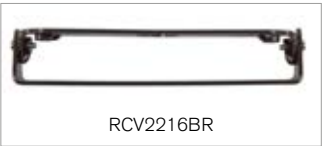
Optional easy-to-fit brackets are available for each of the opposite units, which allow adjustable angling of light.



RCV2214BR



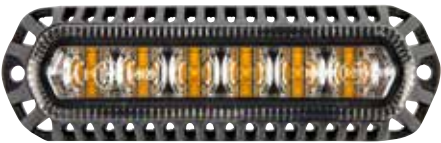
RCV2215BR



RCV2216BR

## LED Strobes

Be seen and stay safe with a warning strobe featuring high light output and low current draw. All models are synchronisable and have multiple flash patterns.

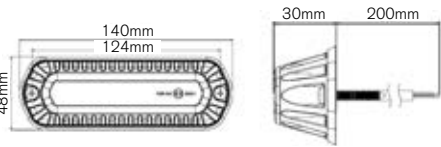


### LED Strobe

Reg 10	Reg 65	10-30V	IP67
Approved	Approved	Voltage	IP Rating

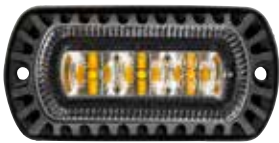


#### Key Features



#### Specification

Function:	6 LED Amber Strobe
Product Code:	RCV2210
Wattage:	18W
Current Draw:	1.5A
Light Source:	6 x 3W LED
Housing Material:	Diecast Aluminium
Lens Material:	Polycarbonate
Cable Length:	200mm

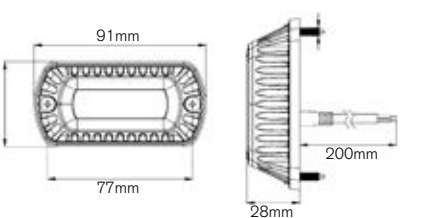


### LED Strobe

Reg 10	Reg 65	10-30V	IP67
Approved	Approved	Voltage	IP Rating

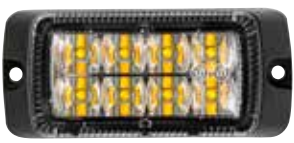


#### Key Features



#### Specification

Function:	3 LED Amber Strobe
Product Code:	RCV2212
Wattage:	9W
Current Draw:	0.75A
Light Source:	3 x 3W LED
Housing Material:	Diecast Aluminium
Lens Material:	Polycarbonate
Cable Length:	200mm

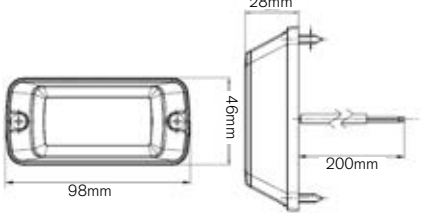


### LED Strobe

Reg 10	Reg 65	10-30V	IP67
Approved	Approved	Voltage	IP Rating



#### Key Features



#### Specification

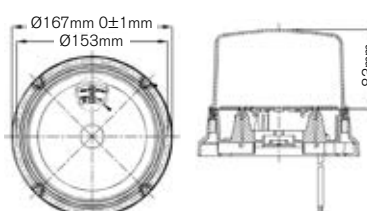
Function:	8 LED Amber Strobe
Product Code:	RCV2213
Wattage:	24W
Current Draw:	2.0A
Light Source:	8 x 3W LED
Housing Material:	Diecast Aluminium
Lens Material:	Polycarbonate
Cable Length:	200mm

## LED Beacons

Roof mounted beacons should be illuminated when entering, leaving or moving within the site, when travelling in traffic at less than the general traffic speed and when stationary on the hard shoulder. Vehicles engaged in snow clearing, gritting operations or similar work should also display a flashing amber warning at all times when operating.



### Key Features



Reg 10

Approved

Reg 65

Approved

10-30V

Voltage

IP67

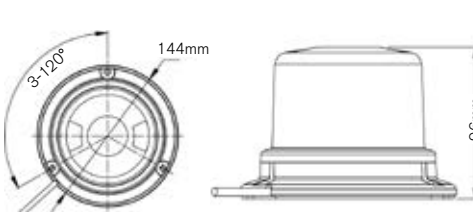
IP Rating

### Specification

<b>Function:</b>	Amber Beacon Magnetic Mounting	Amber Beacon 4 Bolt Fixing
<b>Product Code:</b>	RCV9815	RCV9816
<b>Lens:</b>	Clear	Clear
<b>Wattage:</b>	18W	18W
<b>Current Draw:</b>	1.5A	1.5A
<b>Light Source:</b>	36 x 0.5W LED	36 x 0.5W LED
<b>Housing Material:</b>	ABS	ABS
<b>Lens Material:</b>	Polycarbonate	Polycarbonate
<b>Cable Length:</b>	2400mm	400mm



### Key Features



Reg 10

Approved

10-30V

Voltage

IP67

IP Rating

### Specification

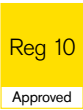
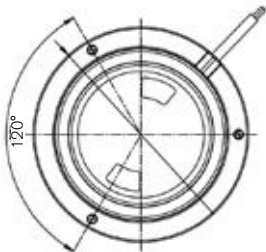
<b>Function:</b>	Single Bolt Mount	Din Pole Fixing	Magnetic Mount	Three Bolt Fixing
<b>Product Code:</b>	RCV9807	RCV9808	RCV9809	RCV9810
<b>Lens:</b>	Amber	Amber	Amber	Amber
<b>Wattage:</b>	4.8W	4.8W	4.8W	4.8W
<b>Current Draw:</b>	0.4A	0.4A	0.4A	0.4A
<b>Light Source:</b>	24 x 0.2W LED	24 x 0.2W LED	24 x 0.2W LED	24 x 0.2W LED
<b>Housing Material:</b>	ABS	ABS	ABS	ABS
<b>Lens Material:</b>	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
<b>Cable Length:</b>	200mm	-	2300mm	200mm

# Ancillary Lighting

## LED Beacons



### Key Features



### Specification

Function:	Slimline Amber Beacon
Product Code:	RCV9811
Lens:	Amber
Wattage:	4W
Current Draw:	0.33A
Light Source:	20 x 0.2W LED
Housing Material:	ABS
Lens Material:	Polycarbonate
Cable Length:	200mm



Be Safe, Be Seen



## LED Work Lamps

A range of durable LED work lights to provide bright, clear and crisp illumination over large areas – essential for safety at work.



### 5 LED Work Lamp

10-30V

Voltage

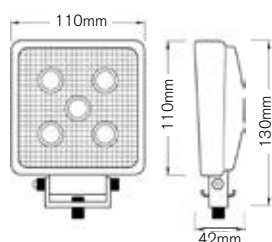
IP67

IP Rating



Wide Flood

#### Key Features



#### Specification

<b>Function:</b>	Flood
<b>Product Code:</b>	RCV9596
<b>Lens:</b>	Clear
<b>Wattage:</b>	15W
<b>Current Draw:</b>	1.3A
<b>Light Source:</b>	5 x 3W LED
<b>Light Output:</b>	700 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	500mm



### 6 LED Work Lamp

10-30V

Voltage

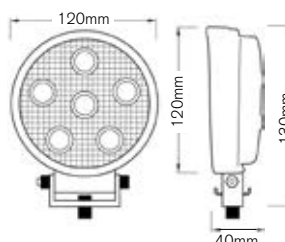
IP67

IP Rating



Wide Flood

#### Key Features



#### Specification

<b>Function:</b>	Flood
<b>Product Code:</b>	RCV9595
<b>Lens:</b>	Clear
<b>Wattage:</b>	18W
<b>Current Draw:</b>	1.5A
<b>Light Source:</b>	6 x 3W LED
<b>Light Output:</b>	900 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	500mm



### 4 LED Work Lamp

Reg 10

Approved

10-30V

Voltage

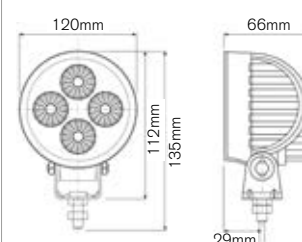
IP67

IP Rating



Medium Flood

#### Key Features



#### Specification

<b>Function:</b>	Medium Flood
<b>Product Code:</b>	RCV9594
<b>Lens:</b>	Clear
<b>Wattage:</b>	12W
<b>Current Draw:</b>	1A
<b>Light Source:</b>	4 x 3W LED
<b>Light Output:</b>	700 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	500mm

# Ancillary Lighting

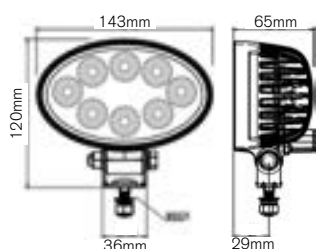
## LED Work Lamps



### 8 LED Oval Work Lamp

Reg 10	10-30V	IP67	
Approved	Voltage	IP Rating	Medium Flood

#### Key Features



#### Specification

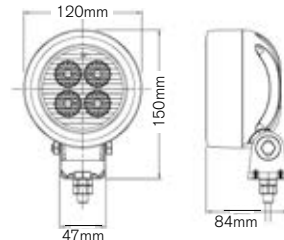
<b>Function:</b>	Medium Flood
<b>Product Code:</b>	RCV9603
<b>Lens:</b>	Clear
<b>Wattage:</b>	24W
<b>Current Draw:</b>	2A
<b>Light Source:</b>	8 x 3W LED
<b>Light Output:</b>	2000 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	500mm



### 4 LED Work Lamp

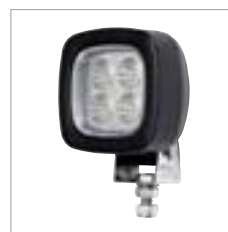
ECE	12/48V	IP66	
Approved	Voltage	IP Rating	Medium Flood

#### Key Features



#### Specification

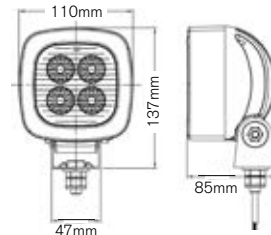
<b>Function:</b>	Flood
<b>Product Code:</b>	RCV9590
<b>Lens:</b>	Clear
<b>Wattage:</b>	12W
<b>Current Draw:</b>	1A
<b>Light Source:</b>	4 x 3W LED
<b>Light Output:</b>	800 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	2000mm



### 4 LED Work Lamp

ECE	12/48V	IP66	
Approved	Voltage	IP Rating	Medium Flood

#### Key Features

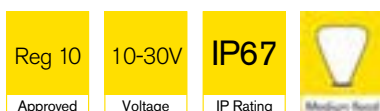


#### Specification

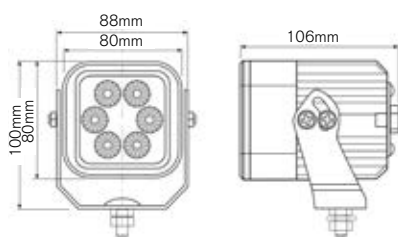
<b>Function:</b>	Flood
<b>Product Code:</b>	RCV9591
<b>Lens:</b>	Clear
<b>Wattage:</b>	12W
<b>Current Draw:</b>	1A
<b>Light Source:</b>	4 x 3W LED
<b>Light Output:</b>	800 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	2000mm



## 6 LED Cube Work Lamp



### Key Features

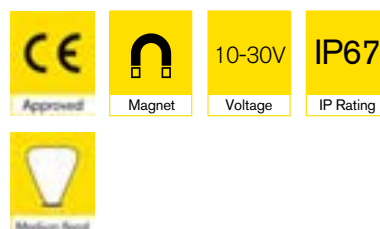


### Specification

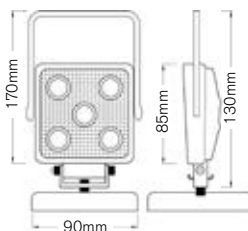
<b>Function:</b>	Medium Flood
<b>Product Code:</b>	RCV9600
<b>Lens:</b>	Clear
<b>Wattage:</b>	18W
<b>Current Draw:</b>	1.5A
<b>Light Source:</b>	6 x 3W LED
<b>Light Output:</b>	1500 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	480mm



## 5 LED Mag-mount Work Lamp



### Key Features



### Specification

<b>Function:</b>	LED Mag-mount Work Lamp
<b>Product Code:</b>	RCV9597
<b>Lens:</b>	Clear
<b>Wattage:</b>	10W
<b>Current Draw:</b>	0.8A
<b>Light Source:</b>	5 x 2W LED
<b>Light Output:</b>	700 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	3000mm



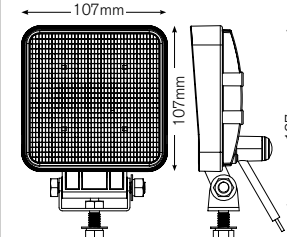
INTEGRATED SWITCH

## LED Work Lamp



Suitable for in-vehicle applications where separate switching is required

### Key Features



### Specification

<b>Function:</b>	LED Work Lamp
<b>Product Code:</b>	RCV9607
<b>Lens:</b>	Clear
<b>Wattage:</b>	15W
<b>Current Draw:</b>	1.3A @12V
<b>Light Source:</b>	5 x 3W LED
<b>Light Output:</b>	750 Lumens
<b>Housing Material:</b>	Diecast Aluminium
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	300mm

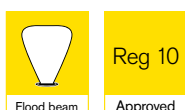
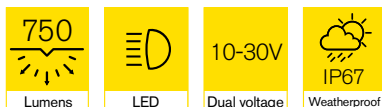
# Ancillary Lighting

## LED Work Lamps

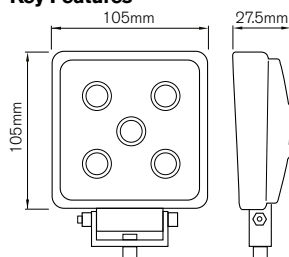


THERMAL  
PLASTIC  
HOUSING

### 5 LED Lightweight Work Lamp

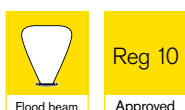
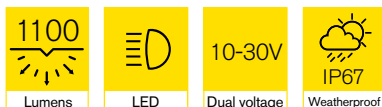


#### Key Features

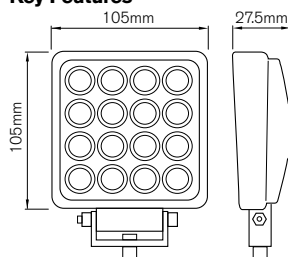


THERMAL  
PLASTIC  
HOUSING

### 16 LED Lightweight Work Lamp



#### Key Features



The new thermal plastic housing on these work lamps reduces overall lamp weight, and the polycarbonate lens provides excellent strength

#### Specification

Function:	LED Work Lamp
Product Code:	RCV9608
Lens:	Clear
Wattage:	15W
Current Draw:	1.25A
Light Source:	5 x 3W LED
Light Output:	750 Lumens
Weight:	0.41kg
Cable Length:	300mm

#### Specification

Function:	LED Work Lamp
Product Code:	RCV9609
Lens:	Clear
Wattage:	48W
Current Draw:	4A
Light Source:	16 x 3W LED
Light Output:	1,100 Lumens
Weight:	0.41kg
Cable Length:	300mm



## Halogen Work Lamps

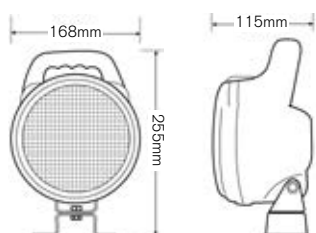
A range of robust and weatherproof work lights that will stand up to knocks and heavy use indoors or outside. Ideal for contractors, tradesmen, and DIY enthusiasts.



### Halogen Work Lamp



#### Key Features



#### Specification

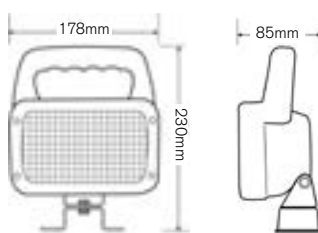
<b>Function:</b>	Wide Flood
<b>Product Code:</b>	RCV9540
<b>Lens:</b>	Clear
<b>Wattage:</b>	55W @ 12V 70W @ 24V
<b>Current Draw:</b>	4.6A @ 12V 2.9A @ 24V
<b>Light Source:</b>	R453 R460
<b>Light Output:</b>	680 Lumens
<b>Housing Material:</b>	Polypropylene
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	290mm



### Halogen Work Lamp



#### Key Features



#### Specification

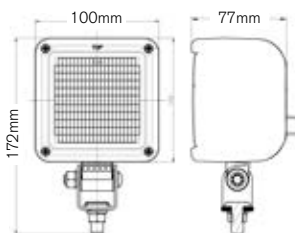
<b>Function:</b>	Wide Flood
<b>Product Code:</b>	RCV9550
<b>Lens:</b>	Clear
<b>Wattage:</b>	55W @ 12V 70W @ 24V
<b>Current Draw:</b>	4.6A @ 12V 2.9A @ 24V
<b>Light Source:</b>	R453 R460
<b>Light Output:</b>	620 Lumens
<b>Housing Material:</b>	Polypropylene
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	-



### Halogen Work Lamp



#### Key Features

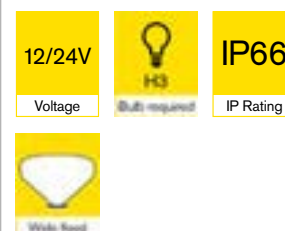


#### Specification

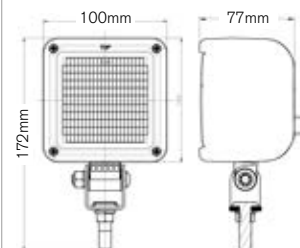
<b>Function:</b>	Wide Flood
<b>Product Code:</b>	RCV9586
<b>Lens:</b>	Clear
<b>Wattage:</b>	55W @ 12V 70W @ 24V
<b>Current Draw:</b>	4.6A @ 12V 2.9A @ 24V
<b>Light Source:</b>	R453 R460
<b>Light Output:</b>	860 Lumens
<b>Housing Material:</b>	Polypropylene
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	-



### Halogen Work Lamp



#### Key Features



#### Specification

<b>Function:</b>	Wide Flood
<b>Product Code:</b>	RCV9598
<b>Lens:</b>	Clear
<b>Wattage:</b>	55W @ 12V 70W @ 24V
<b>Current Draw:</b>	4.6A @ 12V 2.9A @ 24V
<b>Light Source:</b>	R453 R460
<b>Light Output:</b>	780 Lumens
<b>Housing Material:</b>	Polypropylene
<b>Lens Material:</b>	Polycarbonate
<b>Cable Length:</b>	-

# Ancillary Lighting

## Fluorescent LEDs – Low Profile, No Dot Interior Lights

The human eye works best in sunlight which has a colour temperature around 6000K.

Interior lighting that emits around 4500K to 6500K is ideal for the eye, making objects easier to see and reducing strain.

### Why is good lighting at work important?

Lighting at work is very important to the health and safety of everyone using the workplace. The quicker and easier it is to see a hazard, the more easily it is avoided. The types of hazard present at work therefore determine the lighting requirements for safe operation.

Poor lighting can not only affect the health of people at work causing symptoms like eyestrain, migraine and headaches, but it is also linked to Sick Building Syndrome in new and refurbished buildings. Symptoms of this include headaches, lethargy, irritability and poor concentration.

### Assessing lighting in the workplace

It is important that lighting in the workplace:

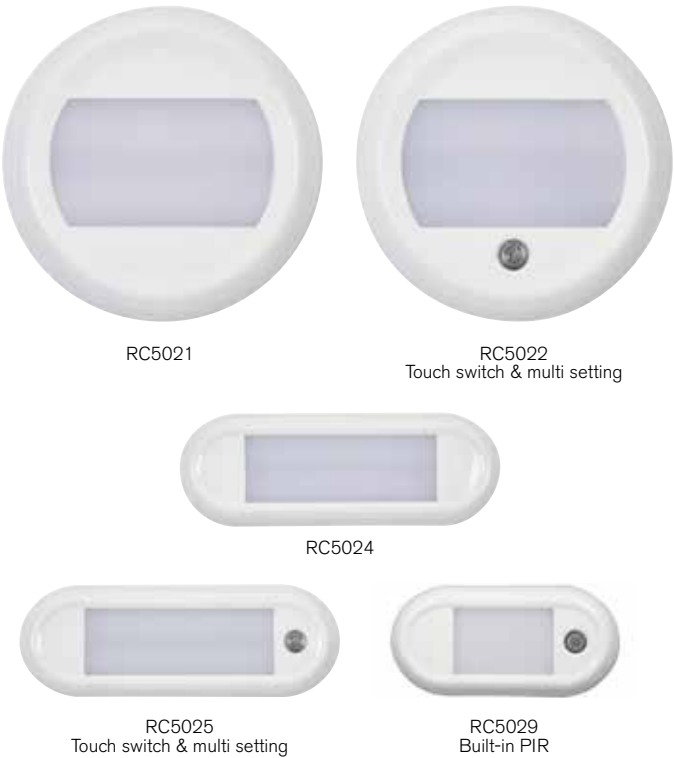
- allows people to notice hazards and assess risks;
- is suitable for the environment and the type of work (for example, it is not located against surfaces or materials that may be flammable);
- provides sufficient light (illuminance on the task);
- allows people to see properly and discriminate between colours, to promote safety;
- does not cause glare, flicker or stroboscopic effects;
- avoids the effects of veiling reflections;
- does not result in excessive differences in illuminance within an area or between adjacent areas;
- is suitable to meet the special needs of individuals;
- does not pose a health and safety risk itself;
- is suitably positioned so that it may be properly maintained or replaced, and disposed of to ensure safety;
- includes, when necessary, suitable and safe emergency lighting.

Reg 10  
Approved

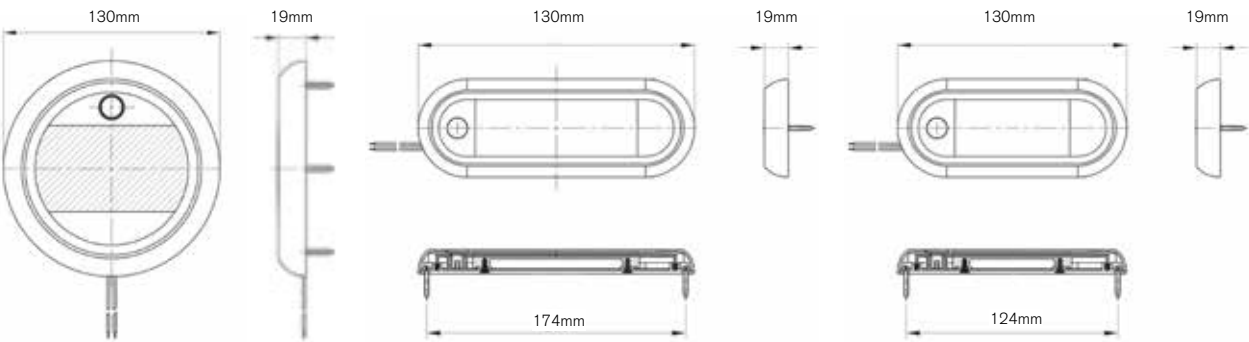
10-30V  
Voltage

IP67  
IP Rating

150°  
Light spread



### Key Features



### Specification

Specification	Circular		Oval		
	No Switch	Touch Switch	No Switch	Touch Switch	PIR
<b>Function:</b>	No Switch	Touch Switch	No Switch	Touch Switch	PIR
<b>Product Code:</b>	RC5021	RC5022	RC5024	RC5025	RC5029
<b>Wattage:</b>	10W	10W	7.2W	7.2W	5W
<b>Current Draw:</b>	0.8A	0.8A	0.6A	0.6A	0.42A
<b>Light Source:</b>	24 x LED	24 x LED	18 x LED	18 x LED	12 x LED
<b>Lumens:</b>	600	600	425	425	300
<b>Colour Temperature:</b>	4500K	4500K	4500K	4500K	4500K
<b>Cable Length:</b>	200mm	200mm	200mm	200mm	200mm

## LED Slimline Lights

As the name suggests this range of light units are perfect for where space is at a premium. Their compact design allows them to be fitted in low level roof linings or discreetly within the cab of a vehicle for additional light.

12V

Voltage

Reg 10

Approved



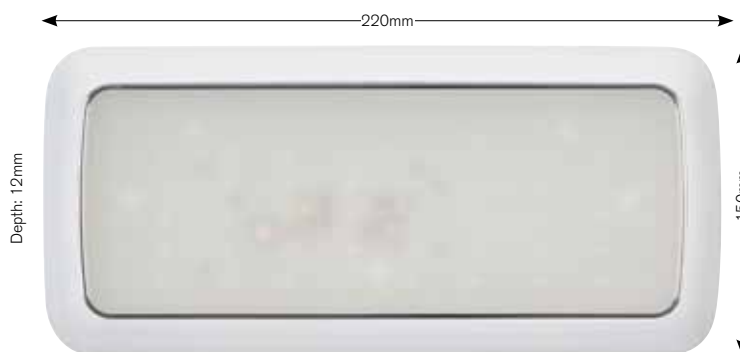
RC5008B



RC5009B



RC5010B



RC5011B

### Specification

#### Round

#### Rectangular

Specification	Round		Rectangular	
<b>Function:</b>	No Switch	No Switch	No Switch	No Switch
<b>Product Code:</b>	RC5008B	RC5009B	RC5010B	RC5011B
<b>Wattage:</b>	1W	3W	3.6W	3.2W
<b>Current Draw:</b>	0.1A	0.3A	0.3A	0.3A
<b>Light Source:</b>	16 x LED	42 x LED	63 x LED	60 x LED
<b>Lumens:</b>	70	180	200	200
<b>Colour Temperature:</b>	5300K	5300K	5300K	5300K
<b>Cable Length:</b>	125mm	125mm	125mm	125mm

# Ancillary Lighting

## LED Baton Lights

LED baton lights are ideal for illuminating a large interior area. Equivalent to fluorescent tubes in an office, but with LED which will draw a much lower wattage. Positioned centrally, these will provide a wide spread of light. Ideal for van rear load areas, welfare vehicles, cabins, trailers, fridges, etc.

- Aluminium housing and polycarbonate lens
- Cable length 200mm

Reg 10

Approved

10-30V

Voltage

180°

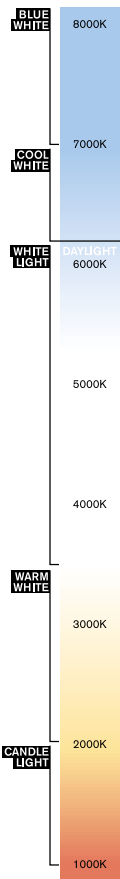
Light spread

PIR

In-built PIR motion detectors ensure lights don't get left on accidentally.

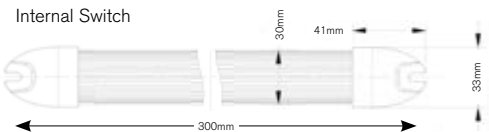


Optimum lighting for work environments 4500-6500K

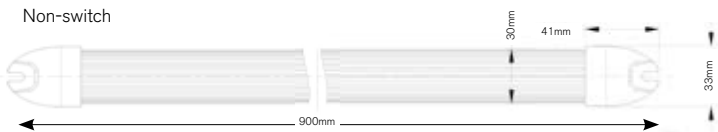


### Key Features

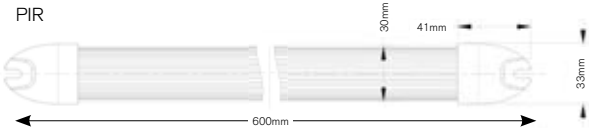
Internal Switch



Non-switch



PIR



Profile



Specification	Non-switched			PIR			Internal Switch		
Function:	300mm	600mm	900mm	300mm	600mm	900mm	300mm	600mm	900mm
Product Code:	RCV5012	RCV5013	RCV5014	RCV5015	RCV5016	RCV5017	RCV5018	RCV5019	RCV5020
Wattage:	6W	12W	18W	6W	12W	18W	6W	12W	18W
Current Draw:	0.5A	1A	1.5A	0.5A	1A	1.5A	0.5A	1A	1.5A
Light Source:	12 x LED	24 x LED	36 x LED	12 x LED	24 x LED	36 x LED	12 x LED	24 x LED	36 x LED
Lumens:	400	800	1250	400	800	1250	400	800	1250
Colour Temperature:	5300K	5300K	5300K	5300K	5300K	5300K	5300K	5300K	5300K





Original fitment rear load area lightsway



Fitted with 3 x 300mm PIR baton lights (RCV5015)

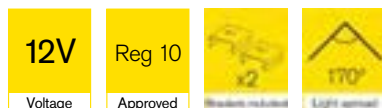
## INCREASED OPERATOR SAFETY

- ensures optimal level of lighting within work/loading areas



## LED Strip Light

- Link up to 6 units together
- Aluminium housing and Polycarbonate lens
- Cable length 200mm



### Specification

<b>Function:</b>	500mm Interior Lighting
<b>Product Code:</b>	RC3010
<b>Wattage:</b>	4.8W
<b>Current Draw:</b>	0.4A
<b>Light Source:</b>	21 x LED
<b>Lumens:</b>	470
<b>Light Spread:</b>	170°
<b>Colour Temperature:</b>	6200K



## IDEAL FOR STEPS/ LOCKERS/ RACKING

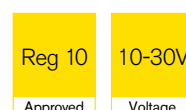
## Slim Line LED Lamp

Emits 100 lumens of bright light. The high colour temperature of 6000K gives a very white light. Long life and low power. Reg 10 approved. Ideal for lockers, racking systems and steps.

- Slim line LED lamp
- Emits 100 lumens
- 6000K colour temperature
- Long life and low power
- Reg 10 approved

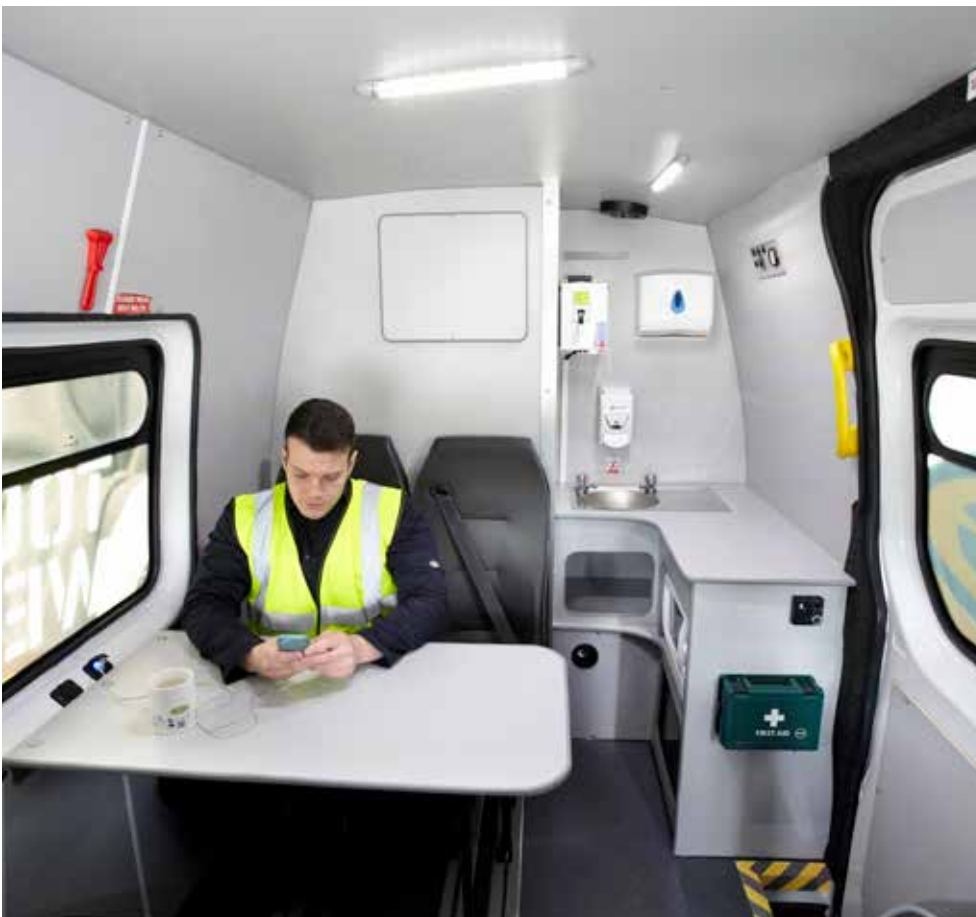
### Specification

<b>Product Code:</b>	RCV5101
<b>Product Dimensions:</b>	H17 x W52 x D32mm
<b>Weight:</b>	0.0210kg
<b>Voltage:</b>	10-30V DC
<b>Wattage:</b>	1W



# In-vehicle/cab Powering. Power on the go

Providing mains power from your vehicle is essential for your teams to operate the tools and equipment they need. It is imperative to select the correct power source for the work required.



# Contents

<b>Selecting the right Inverter</b>	<b>46</b>
<b>Pure Sine Wave Inverters</b>	<b>48</b>
<b>Modified Sine Wave Inverters</b>	<b>55</b>

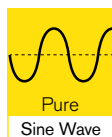


# Power on the Move 12V DC to 230V AC



### Key features

- 1 Integrated multi-function LCD display
- 2 Compact heavy duty casing
- 3 Optional display mounting
- 4 2.1A USB
- 5 Pure Sinewave



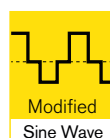
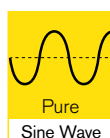
5



**For your free guide to selecting the right inverter for your needs order part number CAT1354**

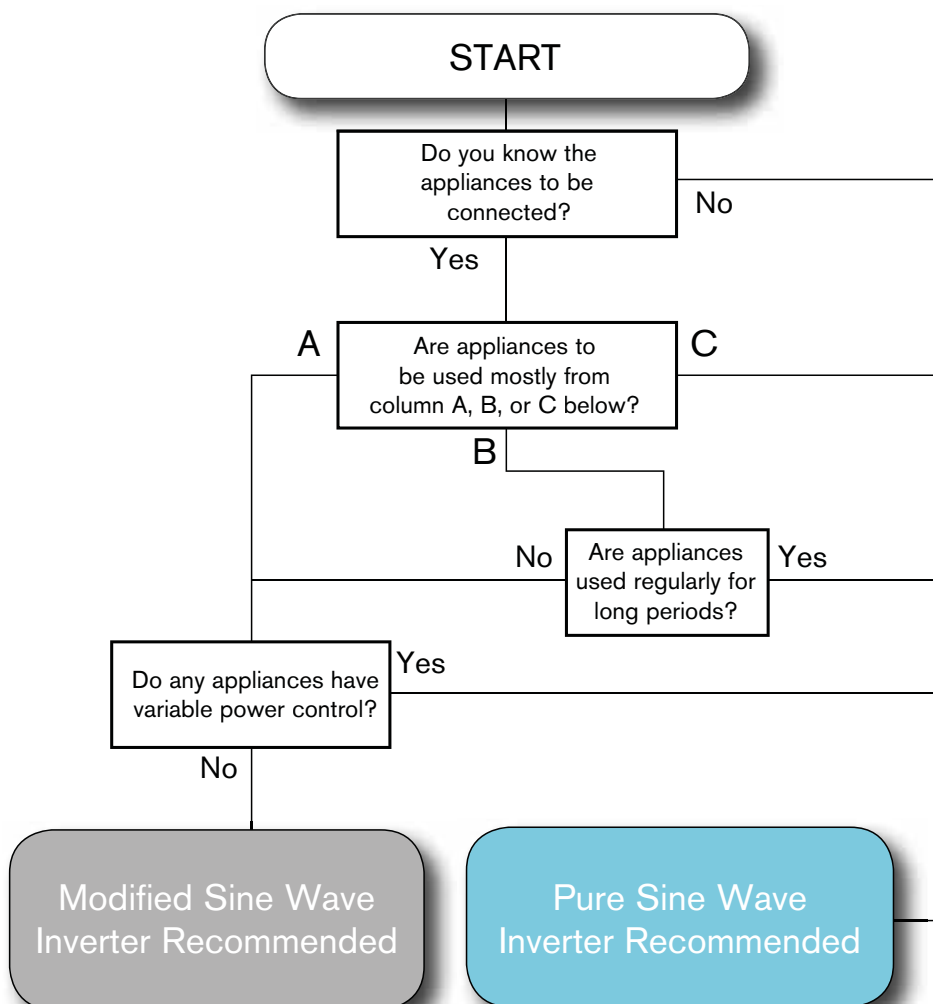
Ring's latest range of inverters are compact, efficient and give better power management information for operators. For installers, they allow easier, quicker installation and have a smaller footprint. The new inverters, available in both Pure Sine Wave and Modified Sine Wave, now include a power saving mode to ensure battery power lasts for as long as possible. The new models are reduced in weight and have up to 40% smaller footprints than previous models, helping save valuable space in commercial vehicles.

Selected new models now include a multi-function LCD display, which is also an optional fit across the rest of the range. This can also be remotely mounted, making it easy for users to check power output. The inverters will display a warning once the battery is running low - essential to help monitor power usage via additional battery current sensor and ensure batteries do not become fully depleted. The inverters also have a series of simple error codes - displayed on the LCD - that make it quicker and simpler to diagnose power issues, such as low battery voltage shutdown and high voltage shutdown. The inverters also feature overload and over-temperature control, protecting both the vehicle and users.





## Selecting the right inverter



### Selecting Inverter Size

#### Rated Power

Find the power rating for all appliances that could be used at the same time. If only the operating current is shown then use the following formula to calculate the power:

$$\text{Power (Watts)} = \text{Current} \times 240$$

#### Examples

Laptop	150W
Angle grinder	500W
Work light	300W
<b>TOTAL</b>	<b>950W</b>

In this instance, a Ring inverter with at least 1000W Output would be recommended.

#### Surge Power

Check the inverter can handle the startup or surge power required by the equipment. For example, a microwave with a cooking power of 800W can require up to 2400W surge power during startup, therefore an inverter with this surge capability will be needed.

User must ensure the rated power of the inverter is not exceeded. Note: devices such as microwaves, compressors etc. can have instantaneous power surges at start-up, that can be two or three times their rated output.



## Compatibility Chart

The following chart shows which appliances are recommended for each type of inverter, including those which are only suitable for pure sine wave inverters.

Continuous Rating	A Products which are generally compatible with all inverter types	B Products which may be incompatible or not run effectively with modified sine (MSW) inverters	C Products which may cause damage to modified sine (MSW) inverters
10W - 50W	Phone charger / Desk fan	Digital clock / Rechargeable shaver(C)	HID worklights(C) / Night lights(C)
50W - 100W	Portable stereo / DVD player	Fluorescent lamps(C)	Transformerless power tool chargers (C)
100W - 150W	Small LCD TV	Laptop computer	Instant start fluorescent lights
150W - 200W	Inkjet printer		
200W - 300W	Desktop PC	Large Stereo	
300W - 500W	Small electric drill(I) / Small fridge	Variable speed drill(I) / Oxygen concentrator	Laser printers
500W - 750W	Small angle grinder(I)	Microwave oven(I) / Bread maker	
750W - 1000W	Industrial water pump(I)	Coffee machine	
1000W - 1500W	Large angle grinder(I)		
1500W - 2000W	Circular saw(I) / Hot air gun / Vacuum cleaner(I)		
2000W +	Electric chainsaw(I) / Fan heater		

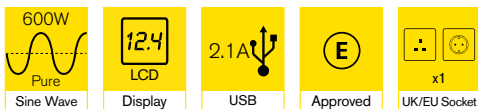
(I) - Inductive loads which may require startup power 2-5 times the continuous power (C) - Capacitive loads which may create high current spikes on MSW inverters

# Powering and Charging Systems



## 600W Pure Sine Wave Inverter

- 600 watt pure sine wave output
- Operating mode & fault indicators
- Power saving mode
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional multi-function LCD display (RINVLCD)
- Optional battery sensor module (RINVCBM)
- Optional bluetooth module (RINVBIM)



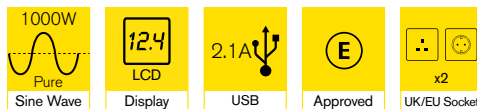
### Specification

<b>Product Code:</b>	UK: RINVPA6 Euro: REINVPA6
<b>Cont Power Rating (up to 12 hrs):</b>	600W
<b>Peak Power Rating (up to 200ms):</b>	1200W
<b>Output Voltage:</b>	200/220/230/240V AC $\pm 3\%$
<b>Output Frequency:</b>	50/60Hz $\pm 0.05\%$
<b>Output Waveform:</b>	Pure Sine Wave
<b>Input Voltage Range:</b>	9.5V-16.5V (12V nom)
<b>Input Current:</b>	59A (max)
<b>Efficiency @ 75% Load:</b>	90%
<b>No Load Current:</b>	< 1.50A
<b>Power Saving Mode:</b>	Yes
<b>Power Saving Mode Current:</b>	< 0.2A
<b>Low Battery Alarm:</b>	10.0V-11.5V $\pm 0.5V$
<b>Low Battery Shutdown:</b>	9.5V-11.0V $\pm 0.5V$
<b>Thermal Protection:</b>	60 $\pm 10^{\circ}C$
<b>AC Mains Outlets:</b>	UK: 1 x 13A 3-pin UK Euro: 1 x 10A 2-pin Shuko
<b>USB Port:</b>	2.1A
<b>LCD Display Panel:</b>	No
<b>Display Panel Port:</b>	Yes
<b>Current Sensor Port:</b>	Yes
<b>Comms Port:</b>	Yes
<b>Input Cable Gauge / Length:</b>	14mm <sup>2</sup> / 950mm
<b>Dimensions:</b>	L340 x W170 x H81.5mm
<b>Weight:</b>	2.8kg
<b>Approvals:</b>	CE-LVD / RoHS / WEEE / E-Mark
<b>Case Quantity:</b>	4 x 1



## 1000W Pure Sine Wave Inverter

- 1000 watt pure sine wave output
- Integrated multi-function LCD display
- Operating mode & fault indicators
- Power saving mode
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional battery current sensor
- Optional bluetooth module



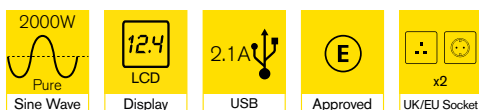
### 1000W UK/Euro 12V/24V

UK: RINVPA10 Euro: REINVPA10	UK: RINVPB10 Euro: REINVPB10
1000W	1000W
2000W	2000W
200/220/230/240V AC $\pm 3\%$	200/220/230/240V AC $\pm 3\%$
50/60Hz $\pm 0.05\%$	50/60Hz $\pm 0.05\%$
Pure Sine Wave	Pure Sine Wave
9.5V-16.5V (12V nom)	19V-33V (24V nom)
98A (max)	49A (max)
90%	90%
< 1.6A	< 1.1A
Yes	Yes
< 0.2A	< 0.2A
10.0V-11.5V $\pm 0.5$ volt	20.0V-23.0V $\pm 0.5$ volt
9.5V-11.0V $\pm 0.5$ volt	19.0V-22.0V $\pm 0.5$ volt
60 $\pm 10^{\circ}C$	60 $\pm 10^{\circ}C$
UK: 2 x 13A 3-pin UK Euro: 2 x 10A 2-pin Shuko	UK: 2 x 13A 3-pin UK Euro: 2 x 10A 2-pin Shuko
2.1A	2.1A
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
22mm <sup>2</sup> / 950mm	14mm <sup>2</sup> / 950mm
L320 x W247 x H118.5mm	L320 x W247 x H118.5mm
4.3kg	4.3kg
CE-LVD / RoHS / WEEE / E-Mark	CE-LVD / RoHS / WEEE / E-Mark
2 x 1	2 x 1



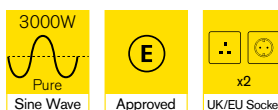
## 2000W Pure Sine Wave Inverter

- 2000 watt pure sine wave output
- Integrated multi-function LCD display
- Operating mode & fault indicators
- Power saving mode
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional battery current sensor
- Optional bluetooth module



## 3000W Pure Sine Wave Inverter

- 3000 watt pure sine wave output
- Operating mode & fault indicators
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional wired remote control (RINVWRC)



### Specification

#### Product Code:

#### Cont Power Rating (up to 12 hrs):

#### Peak Power Rating (up to 200ms):

#### Output Voltage:

#### Output Frequency:

#### Output Waveform:

#### Input Voltage Range:

#### Input Current:

#### Efficiency @ 75% Load:

#### No Load Current:

#### Power Saving Mode:

#### Power Saving Mode Current:

#### Low Battery Alarm:

#### Low Battery Shutdown:

#### Thermal Protection:

#### AC Mains Outlets:

#### USB Port:

#### LCD Display Panel:

#### Display Panel Port:

#### Current Sensor Port:

#### Comms Port:

#### Input Cable Gauge / Length:

#### Dimensions:

#### Weight:

#### Approvals:

#### Case Quantity:

### 2000W UK/Euro 12V/24V

UK: RINVPA20  
Euro: REINVPA20

2000W

4000W

200/220/230/240V AC  $\pm 3\%$

50/60Hz  $\pm 0.05\%$

Pure Sine Wave

9.5V-16.5V (12V nom)

196A (max)

90%

< 2.0A

Yes

< 0.2A

10.0V-11.5V  $\pm 0.5$  volt

9.5V-11.0V  $\pm 0.5$  volt

60  $\pm 10^\circ\text{C}$

UK: 2 x 13A 3-pin UK  
Euro: 2 x 10A 2-pin Shuko

2.1A

Yes

Yes

Yes

Yes

38mm<sup>2</sup> / 950mm

L420 x W247 x H118.5mm

5.9kg

CE-LVD / RoHS / WEEE / E-Mark

2 x 1

UK: RINVPB20  
Euro: REINVPB20

2000W

4000W

200/220/230/240V AC  $\pm 3\%$

50/60Hz  $\pm 0.05\%$

Pure Sine Wave

19V-33V (24V nom)

98A (max)

90%

< 1.5A

Yes

< 0.2A

20.0V-23.0V  $\pm 0.5$  volt

19.0V-22.0V  $\pm 0.5$  volt

60  $\pm 10^\circ\text{C}$

UK: 2 x 13A 3-pin UK  
Euro: 2 x 10A 2-pin Shuko

2.1A

Yes

Yes

Yes

Yes

22mm<sup>2</sup> / 950mm

L420 x W247 x H118.5mm

5.9kg

CE-LVD / RoHS / WEEE / E-Mark

2 x 1

### UK/Euro 12V

UK: RINVP3000  
Euro: REINVP3000

3000W

6000W

230V AC  $\pm 10\%$

50Hz

Pure Sine Wave

10V-16V (12V nom)

294A (max)

> 85%

< 1.5A

No

-

10.5V  $\pm 1$  volt

10.0V  $\pm 1$  volt

60  $\pm 10^\circ\text{C}$

UK: 2 x 13A 3-pin UK  
Euro: 2 x 10A 2-pin Shuko

No

Yes

Yes

No

No

60mm<sup>2</sup> / 950mm

L520 x W286 x H96mm

10.8kg

CE-LVD / RoHS / WEEE

2 x 1

## Pure Sine Range RCD Features

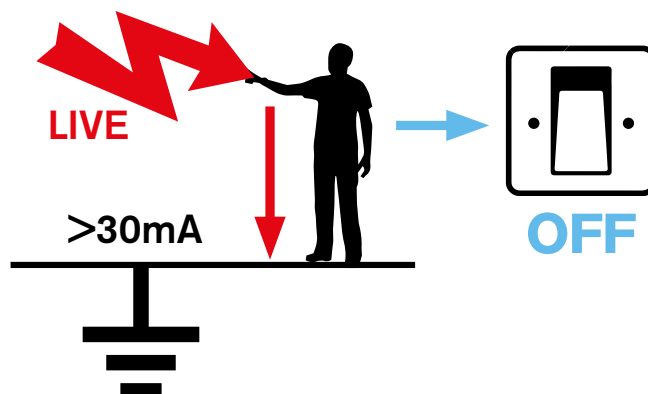
# RCD Protection

### What is an RCD?

An RCD, or residual current device, is a life-saving device which is designed to prevent you from getting a fatal electric shock if you touch something live, such as a bare wire. It can also provide some protection against electrical fires. RCDs offer a level of personal protection that ordinary fuses and circuit-breakers cannot provide.

### What does an RCD do?

An RCD is a sensitive safety device that switches off electricity automatically if there is a fault.

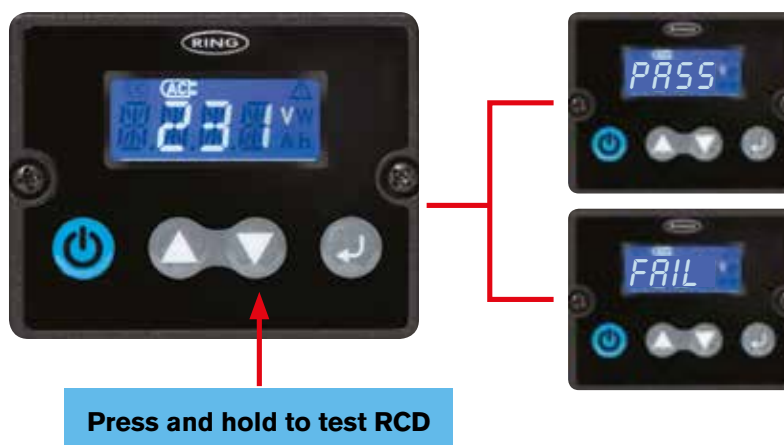


### How does it work?

An RCD constantly monitors the electric current flowing through one or more circuits it is used to protect. If it detects electricity flowing down an unintended path, such as through a person who has touched a live part, the RCD will switch the circuit off very quickly, significantly reducing the risk of death or serious injury.

#### Features

- Increased safety
- Reduced installation time and cost
- A more compact solution



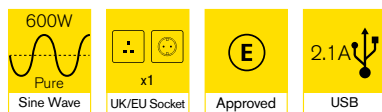


# Pure Sine Range RCD Features



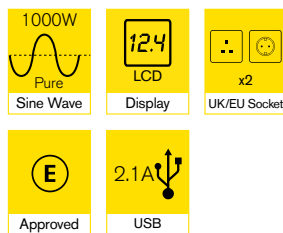
## 600W Pure Sine Wave Inverter

- Operating mode and fault indicators
- Power saving mode reduces standby power
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- USB charging socket for mobile devices
- Optional multi-function LCD display (RINVLCDD)
- Optional battery sensor module (RINVCMS)
- Fully protected against overload, over temperature and low/high voltage
- Suitable for 12V vehicles



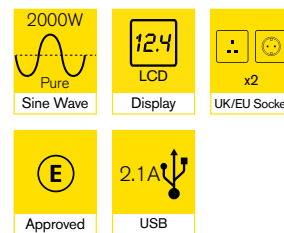
## 1000W Pure Sine Wave Inverter

- Operating mode and fault indicators
- Power saving mode reduces standby power
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- USB charging socket for mobile devices
- Optional multi-function LCD frame (RINVFRM)
- Optional battery sensor module (RINVCMS)
- Fully protected against overload, over temperature and low/high voltage
- Suitable for 12V vehicles



## 2000W Pure Sine Wave Inverter

- Operating mode and fault indicators
- Power saving mode reduces standby power
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- USB charging socket for mobile devices
- Optional multi-function LCD frame (RINVFRM)
- Optional battery sensor module (RINVCMS)
- Fully protected against overload, over temperature and low/high voltage
- Suitable for 12V vehicles



230V Pure Sine Wave Inverters with RCD

Specification	UK/Euro	UK/Euro	UK/Euro
<b>Product Code:</b>	UK: RINVPAR6 Euro: REINVPAR6	UK: RINVPAR10 Euro: REINVPAR10	UK: RINVPAR20 Euro: REINVPAR20
<b>Cont Power Rating (up to 12 hrs):</b>	600W	1000W	2000W
<b>Peak Power Rating (up to 200ms):</b>	1200W	2000W	4000W
<b>Output Voltage:</b>	200/220/230/240V AC $\pm 10\%$	200/220/230/240V AC $\pm 10\%$	200/220/230/240V AC $\pm 10\%$
<b>Output Frequency:</b>	50/60Hz	50/60Hz	50/60Hz
<b>Output Waveform:</b>	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
<b>Input Voltage Range:</b>	9.5V-16.5V (12V nom)	9.5V-16.5V (12V nom)	9.5V-16.5V (12V nom)
<b>Input Current:</b>	59A (max)	98A (max)	196A (max)
<b>Efficiency @ 75% load:</b>	90%	90%	90%
<b>No Load Current:</b>	< 1.50A	< 1.6A	< 2.0A
<b>Power Saving Mode:</b>	Yes	Yes	Yes
<b>Power Saving Mode Current:</b>	< 0.2A	< 0.2A	< 0.2A
<b>Low Battery Alarm:</b>	10.0V-11.5V $\pm 0.5V$	10.0V-11.5V $\pm 0.5V$	10.0V-11.5V $\pm 0.5V$
<b>Low Battery Shutdown:</b>	9.5V-11.0V $\pm 0.5V$	9.5V-11.0V $\pm 0.5V$	9.5V-11.0V $\pm 0.5V$
<b>Thermal Protection:</b>	60 $\pm 10^\circ\text{C}$	60 $\pm 10^\circ\text{C}$	60 $\pm 10^\circ\text{C}$
<b>USB Port:</b>	2.1A	2.1A	2.1A
<b>Display Panel Port:</b>	Yes	Yes	Yes
<b>Current Sensor Port:</b>	Yes	Yes	Yes
<b>Comms Port:</b>	Yes	Yes	Yes
<b>Input Cable Gauge / Length:</b>	14mm <sup>2</sup> / 950mm	22mm <sup>2</sup> / 950mm	38mm <sup>2</sup> / 950mm
<b>Dimensions:</b>	L340 x W170 x H81.5mm	L320 x W247 x H118.5mm	L420 x W247 x H118.5mm
<b>Weight:</b>	2.8kg	4.3kg	5.9kg
<b>Approvals:</b>	CE-LVD / RoHS / WEEE / E-Mark	CE-LVD / RoHS / WEEE / E-Mark	CE-LVD / RoHS / WEEE / E-Mark
<b>Case Quantity:</b>	4 x 1	2 x 1	2 x 1

# Powering and Charging Systems

110V Pure Sine Wave Inverters

110V



## 1700W Pure Sine Wave Inverter

The Ring Pure Sine Wave (PSW) inverter provides a 110V supply which closely replicates the domestic mains supply. This makes it ideal for powering more sensitive equipment which may not be compatible with traditional Modified Sine Wave (MSW) inverters.

1700W  
Pure  
Sine Wave

12.4  
LCD  
Display

E  
Approved

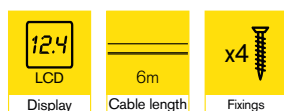
2.1A  
USB

Specification	UK 12V
Product Code:	RINVPC20
Cont Power Rating (up to 12 hrs):	1700W
Peak Power Rating (up to 200ms):	3400W
Output Voltage:	100/110/115/120V AC $\pm 5\%$
Output Frequency:	50/60Hz $\pm 0.05\%$
Output Waveform:	Pure Sine Wave (3% THD)
Input Voltage Range:	9.5V-16.5V (12V nom)
Input Current:	160A (max)
Efficiency @ 75% Load:	90%
No Load Current:	< 2.0A
Power Saving Mode:	Yes
Power Saving Mode Current:	< 0.2A
Low Battery Alarm:	10.0V-11.5V $\pm 0.5V$
Low Battery Shutdown:	9.5V-11.0V $\pm 0.5V$
Thermal Protection:	60 $\pm$ 10°C
USB Port:	2.1A
Display Panel Port:	Yes
Current Sensor Port:	Yes
Comms Port:	Yes
Dimensions:	L420 x W247 x H118.5mm
Weight:	5.9kg



## Multi-function LCD Display

- Multi-function LCD display for inverters with no screen
- Mount inverter display in a more convenient location
- Complete with fixing screws and endcaps
- Compatible with RINVPA, RINVBP and RINVMA models of inverters as applicable



### Specification

### UK/Euro

<b>Product Code:</b>	RINVLCD
<b>Data Cable Length:</b>	6m
<b>Dimensions:</b>	H37 x W100 x D70mm
<b>Weight:</b>	0.23kg
<b>Approvals:</b>	CE-EMC / RoHS / WEEE / E-Mark
<b>Case Quantity:</b>	50 x 1

**RINVLCD – Multi-funtion LCD Display Screen**  
Compatible with

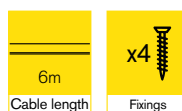
Part Code	Voltage	Socket	Type
<b>RINVPA6</b>	12V	UK	Pure Sine
<b>REINVPA6</b>	12V	Euro	Pure Sine
<b>RINVPA6</b>	12V	UK	Pure Sine RCD
<b>RINVMA10</b>	12V	UK	Modified
<b>RINVMB10</b>	24V	UK	Modified
<b>REINVMA10</b>	12V	Euro	Modified
<b>REINVMB10</b>	24V	Euro	Modified
<b>RINVMA20</b>	12V	Euro	Modified
<b>REINVMA20</b>	24V	Euro	Modified



## Mounting Frame

For remote mounting of LCD display.

- Mount inverter display in a more convenient location
- Complete with fixing screws and endcaps
- Compatible with RINVPA, RINVBP and RINVMA models of inverters as applicable



### Specification

### UK/Euro

<b>Product Code:</b>	RINVFRM
<b>Data Cable Length:</b>	6m
<b>Dimensions:</b>	H29 x W100 x D70mm
<b>Weight:</b>	0.19kg
<b>Approvals:</b>	RoHS / WEEE
<b>Case Quantity:</b>	50 x 1

**RINVFRM – Multi-function LCD Display - Remote Mounting Frame**  
Compatible with

Part Code	Voltage	Socket	Type
<b>RINVPA10</b>	12V	UK	Pure Sine
<b>RINVPA10</b>	12V	UK	Pure Sine RCD
<b>RINVPA10</b>	24V	UK	Pure Sine
<b>REINVPA10</b>	12V	Euro	Pure Sine
<b>REINVPA10</b>	24V	Euro	Pure Sine
<b>RINVPA20</b>	12V	UK	Pure Sine
<b>RINVPA20</b>	12V	UK	Pure Sine RCD
<b>RINVPA20</b>	24V	UK	Pure Sine
<b>REINVPA20</b>	12V	Euro	Pure Sine
<b>REINVPA20</b>	24V	Euro	Pure Sine
<b>RINVMA30</b>	12V	UK	Modified
<b>REINVMA30</b>	12V	Euro	Modified
<b>RINVMA40</b>	12V	UK	Modified

# Powering and Charging Systems

## Battery Current Sensor

Provides the operator with indication of remaining operating time before the power will be depleted or vehicle needs starting.

- Allows indication of time remaining before battery is flat
- Provides monitoring of inverter battery current
- Improves power management
- Temperature compensation sensor
- Compatible with RINVPA, RINVBP and RINVMA models of inverters

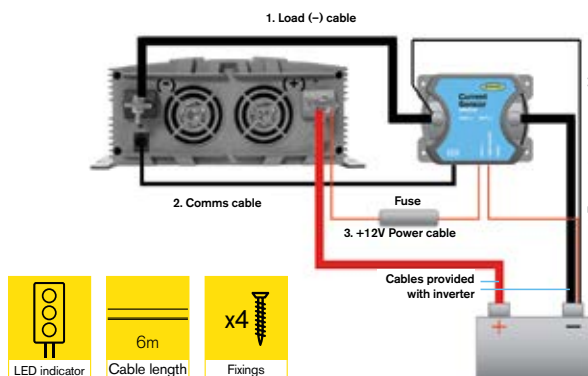


### Specification

### UK/Euro

<b>Product Code:</b>	RINVCN
<b>Input Voltage:</b>	12V DC (nominal)
<b>Input/Output Current:</b>	500A (max)
<b>Battery Cables Gauge / Length:</b>	2 x 38mm <sup>2</sup> / 30cm, 1 x 22mm <sup>2</sup> / 30cm
<b>Data Cable Length:</b>	1m / 3m / 1.75m
<b>Temp Sensor Cable Length:</b>	3m
<b>+12V Power Cable Length:</b>	1.75m
<b>Dimensions:</b>	H40 x W120 x D91mm
<b>Weight:</b>	1.0kg
<b>Approvals:</b>	CE-EMC / RoHS / WEEE / E-Mark
<b>Case Quantity:</b>	20 x 1

### Current Sensor Installation

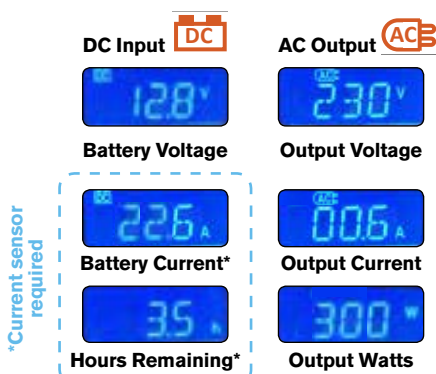


## Inverter LCD Screen Information

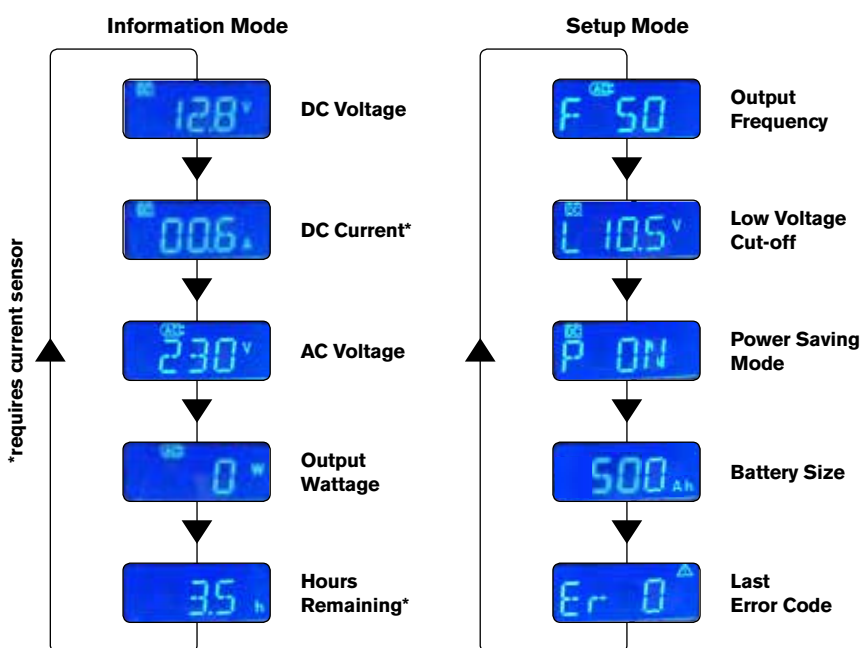


### Features

- Input Volts provides warning when battery is becoming low
- Output Watts indicated when power is approaching maximum
- Hours remaining function allows power management



### Set up and fault codes



Pressing ▲▼ buttons moves forward or backwards through screens  
To enter **Setup Mode** press & hold ◀ key

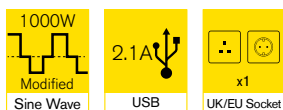
Press ▲▼ keys to select item then press ◀  
Chosen setting will then flash  
Adjust setting using ▲▼ then press ◀ to set  
Press and hold ◀ key to exit back to **Information Mode**





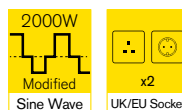
## 1000W Modified Sine Wave Inverter

- 1000 watt modified sine wave output
- Operating mode & fault indicators
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional multi-function LCD display
- Optional current sensor module



## 2000W Modified Sine Wave Inverter

- 2000 watt modified sine wave output
- Operating mode & fault indicators
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional multi-function LCD display
- Optional current sensor module



### Specification

### 1000W UK/Euro 12V/24V

### 2000W UK/Euro 12V/24V

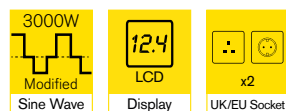
Product Code:	UK: RINVMA10 Euro: REINVMA10	UK: RINVB10 Euro: REINVB10	UK: RINVMA20 Euro: REINVMA20	UK: RINVB20 Euro: REINVB20
Cont Power Rating (up to 12 hrs):	1000W	1000W	2000W	2000W
Peak Power Rating (up to 200ms):	2000W	2000W	4000W	4000W
Output Voltage:	230 AC $\pm 3\%$	230 AC $\pm 3\%$	230 AC $\pm 10\%$	230 AC $\pm 3\%$
Output Frequency:	50Hz $\pm 0.05\%$	50Hz $\pm 0.05\%$	50Hz $\pm 0.05\%$	50Hz $\pm 0.05\%$
Output Waveform:	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave
Input Voltage Range:	10.0V-16V (12V nom)	20V-32V (24V nom)	10.0V-16V (12V nom)	20V-32V (24V nom)
Input Current:	98A (max)	49A (max)	196A (max)	98A (max)
Efficiency @ 75% Load:	89%	89%	89%	89%
No Load Current:	< 0.70A	< 0.45A	< 0.80A	< 0.55A
Power Saving Mode:	No	No	No	No
Power Saving Mode Current:	-	-	-	-
Low Battery Alarm:	10.5V $\pm 0.5V$	21.0V $\pm 0.5V$	10.5V $\pm 0.5V$	21.0V $\pm 0.5V$
Low Battery Shutdown:	10.0V $\pm 0.5V$	20.0V $\pm 0.5V$	10.0V $\pm 0.5V$	20.0V $\pm 0.5V$
Thermal Protection:	60 $\pm 10^\circ\text{C}$	60 $\pm 10^\circ\text{C}$	60 $\pm 10^\circ\text{C}$	60 $\pm 10^\circ\text{C}$
AC Mains Outlets:	UK: 1 x 13A 3-pin UK Euro: 1 x 10A 2-pin Shuko	UK: 1 x 13A 3-pin UK Euro: 1 x 10A 2-pin Shuko	UK: 2 x 13A 3-pin UK Euro: 2 x 10A 2-pin Shuko	UK: 2 x 13A 3-pin UK Euro: 2 x 10A 2-pin Shuko
USB Port:	2.1amp	2.1amp	No	No
LCD Display Panel:	No	No	No	No
Display Panel Port:	Yes	Yes	Yes	Yes
Current Sensor Port:	Yes	Yes	Yes	Yes
Comms Port:	No	No	No	No
Input Cable Gauge / Length:	14mm <sup>2</sup> / 95cm	14mm <sup>2</sup> / 95cm	38mm <sup>2</sup> / 95cm	22mm <sup>2</sup> / 95cm
Dimensions:	L340 x W170 x H81.5mm	L340 x W170 x H81.5mm	L340 x W170 x H162mm	L340 x W170 x H162mm
Weight:	2.7kg	2.7kg	4.6kg	4.6kg
Approvals:	CE-LVD/CE-EMC/RoHS/WEEE	CE-LVD/CE-EMC/RoHS/WEEE	CE-LVD/CE-EMC/RoHS/WEEE	CE-LVD/CE-EMC/RoHS/WEEE
Case Quantity:	4 x 1	4 x 1	2 x 1	2 x 1

# Powering and Charging Systems



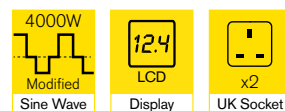
## 3000W Modified Sine Wave Inverter

- 3000 watt modified sine wave output
- Integrated multi-function LCD display
- Operating mode & fault indicators
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional battery current sensor



## 4000W Modified Sine Wave Inverter

- 4000 watt modified sine wave output
- Integrated multi-function LCD display
- Operating mode & fault indicators
- Up to 12 hours continuous use
- Compact heavy duty extruded casing
- Optional battery current sensor



### Specification

### UK/Euro 12V

### UK 12V

#### Product Code:

UK: RINVMA30  
Euro: REINVMA30

#### Product Code:

UK: RINVMA40

#### Cont Power Rating (up to 12 hrs):

3000W

4000W

#### Peak Power Rating (up to 200ms):

6000W

8000W

#### Output Voltage:

230 AC  $\pm 3\%$

230 AC  $\pm 3\%$

#### Output Frequency:

50Hz  $\pm 0.05\%$

50Hz  $\pm 0.05\%$

#### Output Waveform:

Modified Sine Wave

Modified Sine Wave

#### Input Voltage Range:

10.0V-16V (12V nom)

10.0V-16V (12V nom)

#### Input Current:

294A (max)

392A (max)

#### Efficiency @ 75% Load:

89%

89%

#### No Load Current:

< 0.90A

< 1.0A

#### Power Saving Mode:

No

No

#### Power Saving Mode Current:

-

-

#### Low Battery Alarm:

10.5V  $\pm 0.5V$

10.5V  $\pm 0.5V$

#### Low Battery Shutdown:

10.0V  $\pm 0.5V$

10.0V  $\pm 0.5V$

#### Thermal Protection:

60  $\pm 10^{\circ}C$

60  $\pm 10^{\circ}C$

#### AC Mains Outlets:

UK: 2 x 13A 3-pin UK  
Euro: 2 x 10A 2-pin Shuko

UK: 2 x 13A 3-pin UK  
Euro: 2 x 10A 2-pin Shuko

#### USB Port:

No

No

#### LCD Display Panel:

Yes

Yes

#### Display Panel Port:

Yes

Yes

#### Current Sensor Port:

Yes

Yes

#### Comms Port:

No

No

#### Input Cable Gauge / Length:

60mm<sup>2</sup> / 95cm

38mm<sup>2</sup> x 2 / 95cm

#### Dimensions:

L400 x W170 x H162mm

L460 x W170 x H162mm

#### Weight:

5.7kg

7.0kg

#### Approvals:

CE-LVD / CE-EMC / RoHS / WEEE

CE-LVD / CE-EMC / RoHS / WEEE

#### Case Quantity:

2 x 1

2 x 1



# DC-DC Smart Battery Charger

## Compatible with Smart alternators

A DC-DC Smart Charger is able to take energy from DC sources such as a vehicle alternator or solar panel then convert it to a multi-stage output for charging an auxiliary battery. The unit is particularly suited to utility vehicles, caravans, motorhomes and boats where power may be required away from a mains electrical supply. As an alternative to split charge relay systems, the unit can provide a faster, more intelligent charging solution to ensure batteries are kept in good condition with power always available. It also has a programmable input voltage range to allow compatibility with smart alternators.

- Converts power from a vehicle's main battery into multistage output for charging an aux battery
- Maximises charge into the auxiliary battery
- Programmable for most battery types
- Low battery shut off to protect main battery
- Sleep mode to reduce battery strain
- LCD screen for clear readings
- Temperature compensation for more accurate results



Fully automatic



Display



Solar (MPPT)



Input voltage



Output voltage

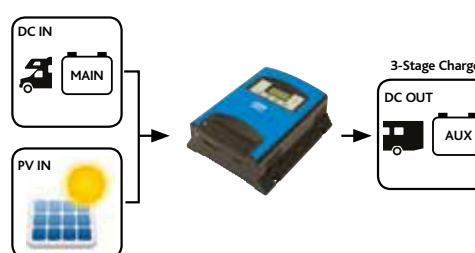


Sleep mode



Temperature Compensation

## Example Connection



## Specification

Product Code:

Input Voltage:

Max Output Voltage:

Max Output Current:

Sleep Mode Current:

MPPT:

Temperature Compensation:

Operating Temperature:

Dimension:

Weight:

Pack Quantity:

## UK

RSCDC30

PV: 10-50V DC: 12.6-50V

14.8v

30A

20mA

Yes

25°C ±20mV°C

-10°C to 45°C

L236 x W203 x H87mm

1.8kg

1 x 1

# Powering and Charging Systems

## Power Protection

Whether the vehicle is fitted solely with the chassis battery, or is fitted with a secondary auxiliary battery, the battery shield is a crucial piece of protective equipment that prevents flat batteries and engine start failure by interrupting power supply to ancillary equipment.



## Battery Shield

The Ring Battery Shield is the ideal solution to prevent flat batteries and battery failure by over discharging. Suitable for extra power for accessories up to 60A.

- 10 x Programmable settings
  - Ease of programme change
  - Auto mode selection (12V/24V)
  - Connection for remote alarm
  - Switch connection remote on/off
- IP65
  - Built in heat sink
  - Supplied with installation kit and instructions

60A

Current

12/24V

Voltage



## Battery Shield

The Ring Battery Shield is the ideal solution to prevent flat batteries and battery failure by over discharging. Suitable for extra power for accessories up to 100A.

- 10 x Programmable settings
  - Ease of programme change
  - Auto mode selection (12V/24V)
  - Connection for remote alarm
  - Switch connection remote on/off
- IP65
  - Built in heat sink
  - Supplied with installation kit and instructions

100A

Current

12/24V

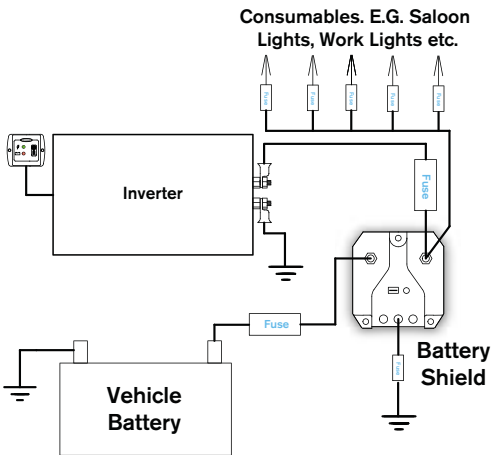
Voltage

Specification	UK
Product Code:	RTBS60
Case Quantity:	5 x 1
Pack Dimensions:	H37 x W100 x D80mm
Packaging:	Carton

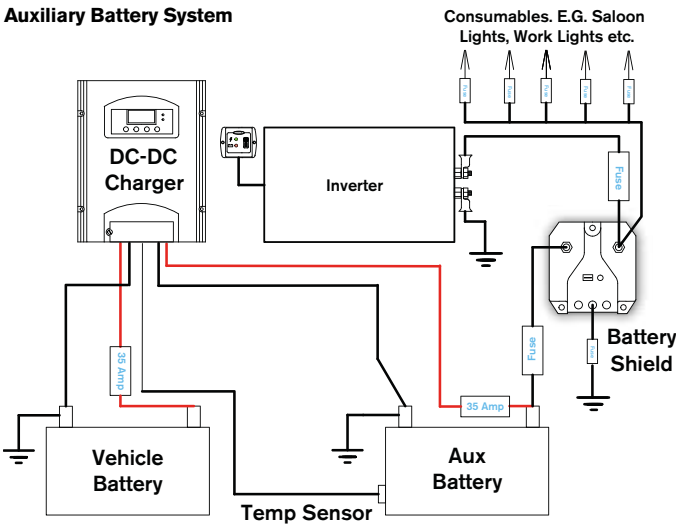
Specification	UK
Product Code:	RTBS100
Case Quantity:	5 x 1
Pack Dimensions:	H52 x W127 x D105mm
Packaging:	Carton

### Typical installation

#### Single Battery System



#### Auxiliary Battery System







Ring also has a range of support literature available:



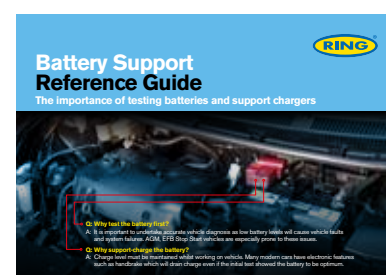
Technical Bulb Guide  
(Part no CAT1341)



Bulb Application Guide  
(Part no CAT1366)



Inverter Guide  
(Part no CAT1354)



Battery Support Guide  
(Part no CAT1407)

# Vehicle Safety

To ensure safe on-road operation and to meet on-site rules and regulations, camera safety systems are becoming increasingly necessary. They give the driver more control – particularly with larger vehicles – reduce the chance of damage, lower downtime and help cut costs. All Ring's safety systems are designed to withstand commercial conditions.





## Contents

<b>Camera Systems</b>	<b>62</b>
<b>Camera Accessories</b>	<b>68</b>
<b>Additional Cameras</b>	<b>69</b>
<b>Reversing Camera Systems</b>	<b>71</b>



# Safeguard Your Journey

## Dash Cameras for fleets



Record vital evidence in the event of an incident. Protect yourself from insurance fraud, and in some cases even lower your insurance costs.

- Exceptional low light performance means Trade Pro dash cameras can provide vital evidence even when driving at night.
- Hassle free to install and use, they automatically switch on when you start the engine – so you never miss a thing – and turn off once you park up – meaning no risk of draining your battery.
- Loop recording will automatically save over old footage you no longer need so you don't have to clear or buy new SD cards. Important files can be locked to save them for later viewing.



## Trade Pro1 Dash Cam

The Ring RVEP1 Trade Pro1 Dash Cam records vital evidence in the event of an incident. Protect yourself from insurance fraud, and in some cases even lower your insurance costs.

Exceptional low light performance means the Trade Pro1 dash camera can provide vital evidence even when driving at night.

Hassle free to install and use, they automatically switch on when you start the engine – so you never miss a thing – and turn off once you park up – meaning no risk of draining your battery.

Loop recording will automatically save over old footage you no longer need: you don't have to clear or buy new SD cards. Important files can be locked to save them for later viewing.

The lockable MicroSD slot is designed to prevent tampering.

32GB MicroSD card included.

- Trade dash cam to record vital evidence
- Adjustable 110° lens to capture a wide view of the road
- 720p HD resolution
- Lockable Micro SD slot to prevent tampering
- OEM design with a streamlined profile to match the vehicle
- 2.4" screen
- Audio and loop recording
- Shock sensor saves recordings when a collision is detected
- Includes 32GB MicroSD card

### Key features

- 1 **720p HD resolution**
- 2 **Hardwire kit included** – The device is hard wired in to the fuse box to prevent users from unplugging the camera whilst travelling
- 3 **Adjustable 110° lens** – Fits all windscreen types to capture a wide view of the road
- 4 **Lockable Micro SD slot** – The memory unit is sealed within the unit with a hex screw to prevent tampering

### Specification

Product Code:	RVEP1
Product Dimensions:	H190 x W85 x D145mm
Voltage:	5V DC
Wattage:	7.5W
AmpsOutput:	1.5A
Weight:	0.222kg

### Suitable for:







NEW

PASSWORD  
PROTECTED

Cabin camera  
included

64GB  
Included

Up to 10 hours  
recording time

## Trade Pro2 Dash Cam

The Ring RVEP2 Trade Pro2 Dash Cam records vital evidence in the event of an incident. Protect yourself from insurance fraud, and in some cases even lower your insurance costs.

Exceptional low light performance means the Trade Pro2 dash camera can provide vital evidence even when driving at night. Comes with a rear cabin view camera to provide an extra layer of security for passengers and goods.

Hassle free to install and use, they automatically switch on when you start the engine – so you never miss a thing – and turn off once you park up – meaning no risk of draining your battery.

Loop recording will automatically save over old footage you no longer need: you don't have to clear or buy new SD cards. Important files can be locked to save them for later viewing.

The lockable MicroSD slot is designed to prevent tampering and password protected software prevents alteration of captured footage.

64GB MicroSD card included.

- Trade dash cam with rear cabin camera to record vital evidence
- GPS function
- Adjustable 120° lens to capture a wide view of the road
- 1080p HD resolution
- Lockable Micro SD slot to prevent tampering
- OEM design with a streamlined profile to match the vehicle
- 2.4" screen
- Audio and loop recording
- Password protection to prevent alteration of the captured footage
- Shock sensor saves recordings when a collision is detected
- Includes 64GB MicroSD card

### Key features

- 1080p HD resolution** – For a sharper, clearer image
- Hardwire kit included** – The device is hard wired in to the fuse box to prevent users from unplugging the camera whilst travelling
- Password protected firmware** – For extra security the user must enter a password to prevent alteration of the captured footage
- GPS function** – Location stamped on to video recording to help log journeys being made
- Adjustable 120° lens** – Fits all windscreen types to capture a wide view of the road
- Lockable Micro SD slot** – The memory unit is sealed within the unit with a hex screw to prevent tampering

### Specification

<b>Product Code:</b>	RVEP2
<b>Product Dimensions:</b>	H190 x W85 x D145mm
<b>Voltage:</b>	5V DC
<b>Wattage:</b>	7.5W
<b>AmpsOutput:</b>	1.5A
<b>Weight:</b>	0.290kg

### Suitable for:



12/24V Voltage	HD 1080p Image quality	Fully adjustable lens	MicroSD card	Password Protected	GPS
-------------------	------------------------------	-----------------------	--------------	--------------------	-----



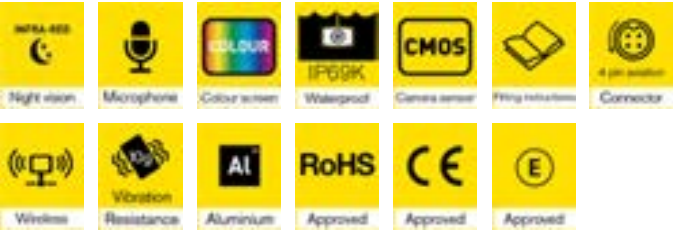
# 7" Wireless Quad Channel Reversing Camera System

- Quad channel wireless digital reversing camera system
- 7" TFT quad channel monitor
- Wireless camera system for faster installation
- 4 x high definition cameras, with 120° viewing angle to give complete view
- IP69 rated - dust, dirt and sand proof, plus resistant to high pressure water jets and steam
- Infra red night vision up to 10m
- Built-in speakers for audio
- Adjustable parking guidelines
- Power and video harness for installation
- E approved

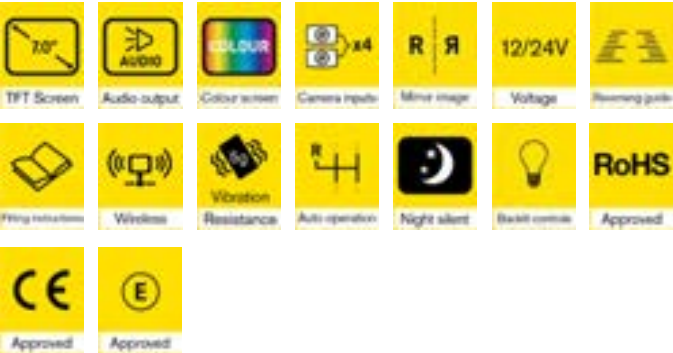
## Specification

Product Code:	RBGR4070
Product Dimensions:	H134 x W184 x D57mm
Voltage:	12-24V DC
Weight:	1.264kg
E Regulation:	10 - EMC

## Wireless Rear Camera (RBGWC1) Key Features



## 7" 4CH Wireless Monitor (RBGMW7) Key Features





## 7" Dual Channel Reversing Camera System

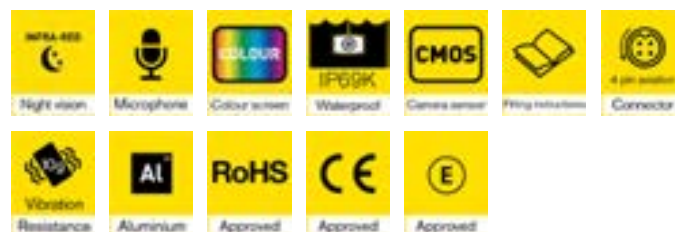
- Dual channel digital reversing camera system
- 1x high definition camera
- Additional camera can be added for dual channel. See page 59 for extra cameras
- 7" TFT dual channel monitor
- 120° viewing angle to give wide view of the road
- IP69 rated - dust, dirt and sand proof, plus resistant to high pressure water jets and steam
- Infra red night vision up to 10m
- Built-in speakers for audio
- Adjustable parking guidelines
- Includes 20m extension cable and power and video harness for installation
- E approved



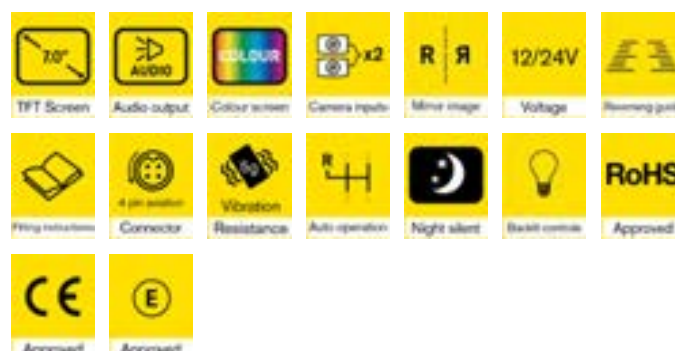
### Specification

<b>Product Code:</b>	RBG2070
<b>Product Dimensions:</b>	H133 x W189 x D57mm
<b>Voltage:</b>	12-24V DC
<b>Weight:</b>	1.82kg
<b>E Regulation:</b>	10 - EMC

### Wireless Rear Camera (RBGCB3) Key Features



### 7" 2CH Monitor (RBGMB7) Key Features







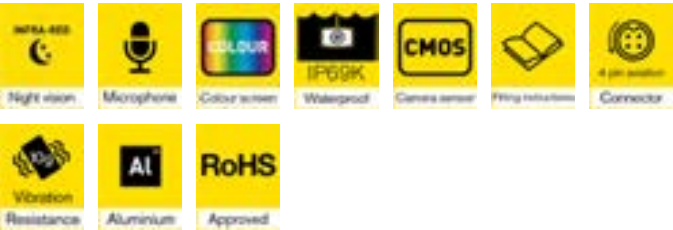
# 7" Reversing Camera System

- Reversing camera with colour CMOS camera
- 120° degree lens for wide view of rear of the vehicle
- 7" monitor with integral control box
- Infra red night vision up to 10m
- Built-in microphone and speakers
- Reversing trigger for automatic power on
- Anti-glare sunshade on camera
- Fully adjustable mounting bracket
- Shockproof to 10G
- IP68 rated - dust, dirt and sand proof, plus waterproof up to 1.5m for up to half an hour
- Additional cameras available

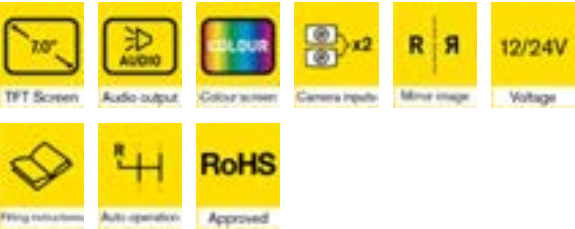
## Specification

Product Code:	RBGB1070
Product Dimensions:	H133 x W186 x D111mm
Voltage:	12/24V DC
Weight:	1.598kg
E Regulation:	10 - EMC

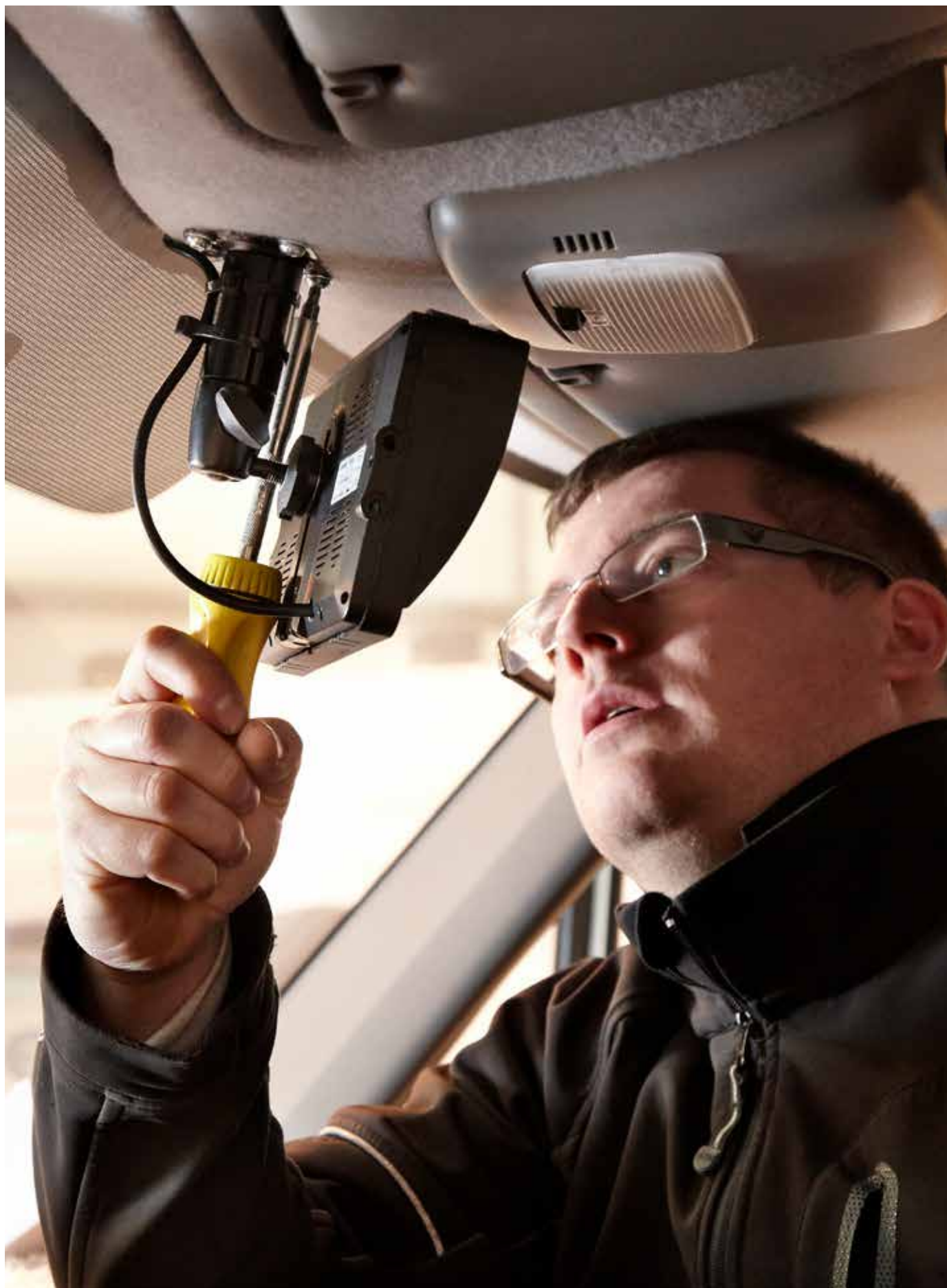
## Rear Camera (RBGCB1) Key Features



## 7" Monitor (RBGMB7) Key Features







## Cameras Accessories



### Camera Extension Cable

Extension cable for reversing camera systems. Available in 5m, 10m or 20m length.

#### Specification

<b>Product Code:</b>	RBGB005	RBGB010	RBGB020
<b>Length:</b>	5m	10m	20m
<b>Weight:</b>	0.178kg	0.356kg	0.694kg

### 2CH Power Harness for 7" Monitor

Harness compatible with all Ring High Level Brake Lights and Brake Light Kits.

RBGBWH - Works with the following brake light cameras:

- RBGCBMS
- RBGCBFD
- RBGCBFT
- RBGCBRT
- RBGCBGV

Comes as part of the following kits:

- SPRKIT1
- DUCKIT1
- TRAKIT1
- VIVKIT1
- UNIKIT1



### Vehicle and Trailer Coiled Connection System ("Suzi" cable)

Truck and trailer coiled connection system. Includes weatherproofing tape.

- Trailer socket with 4 pin female lead
- Trailer socket with 4 pin male lead
- RBGM46 adaptor cable
- RBGM64 adaptor cable
- Flexible coiled cable - coiled length 0.98m
- Working length - 3m
- Maximum length - 4.5m
- Includes waterproofing tape

#### Specification

<b>Product Code:</b>	RBGSC8
<b>Product Dimensions:</b>	H47 x W830 x D47mm
<b>Weight:</b>	1.094kg



### Metal Monitor Mounting Brackets

Metal mounting bracket for reversing system monitors. Small base. Adjustable to fix and position at the best angle for the driver. Resilient metal is hard wearing.

- Reversing camera monitor mounting bracket
- Adjustable
- Hard wearing

#### Specification

<b>Product Code:</b>	RBGMB5
<b>Product Dimensions:</b>	H92 x W68 x D65mm
<b>Weight:</b>	0.142kg



### High Level Brake Light Camera Rear View Mirror Monitor

- Rear view mirror monitor with 4.3" embedded screen
- Easy to view for drivers
- Provides OEM-style finish
- Two channels
- Rated IP68, making it dust, sand and waterproof
- Vibration resistant
- Includes mounting bracket and cables for installation
- E approved
- For use with RBGCB5/ RBGCB6/RBGCB7

#### Specification

<b>Product Code:</b>	RBGMM43
<b>Product Dimensions:</b>	H82 x W268 x D127mm
<b>Voltage:</b>	12-24V DC
<b>Weight:</b>	0.526kg
<b>E Regulation:</b>	10 - EMC

## Rear/Side/Front Camera (HD CMOS)

### Specification

<b>Product Code:</b>	RBGCB5	RBGCB7
<b>Image Sensor:</b>	1/3" CMOS	1/3" CMOS
<b>Horizontal Resolution:</b>	700 TV lines	700 TV lines
<b>Aperture:</b>	f2.8mm	f2.8mm
<b>Viewing Angle:</b>	120°	120°
<b>Video Output:</b>	1.0Vp-p, 75Ω	1.0Vp-p, 75Ω
<b>Night Vision:</b>	9 x IR LEDs	9 x IR LEDs
<b>Infra Red Distance:</b>	7m	7m
<b>Ingress Rating:</b>	IP69K	IP69K
<b>Audio</b>	-	-
<b>Voltage:</b>	12V DC	-

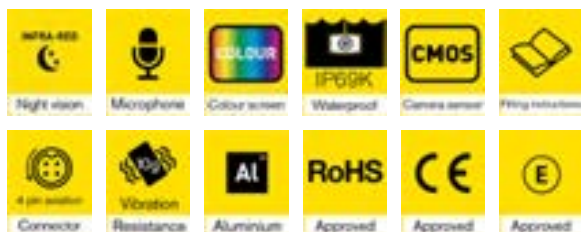


RBGCB5

FOR USE  
WITH  
RBG4070 /  
RBG2070



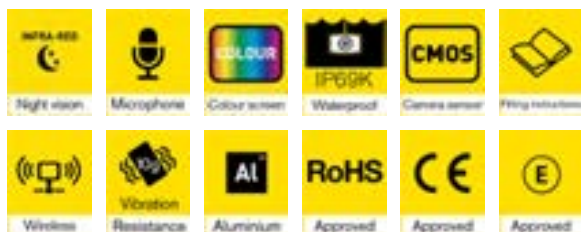
RBGCB7



## Wireless Rear Camera (HD CMOS)

### Specification

<b>Product Code:</b>	RBGWC1
<b>Image Type:</b>	1/3" CMOS
<b>Horizontal Resolution:</b>	700 TV lines
<b>Aperture:</b>	f2.8mm
<b>Viewing Angle:</b>	120°
<b>Night Vision:</b>	16 x IR LEDs
<b>Infra Red Distance:</b>	10m
<b>Ingress Rating:</b>	IP69K
<b>Frequency:</b>	2.4GHz
<b>TX Distance:</b>	Up to 100m (open space)
<b>Audio</b>	Microphone
<b>Voltage:</b>	12V-24V DC



FOR USE  
WITH  
RBG4070 /  
RBG2070

# Vehicle Safety

Additional Cameras

## Cameras and Monitors



SUITABLE  
VEHICLE  
Universal

FOR USE  
WITH  
RBG4070 /  
RBG2070

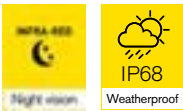
### Sharks Fin Reversing Camera

- Infra red night vision up to 7m
- Rated IP69K - weather, water and dust proof
- 120° degree lens for wide view of rear of the road



### Side View Colour Camera

- Side view colour camera
- Infra red up to 7m
- Adjustable mount to position in best place on vehicle
- 800mm cable included
- IP68 rated - dust, dirt and sand proof, plus waterproof up to 1.5m for up to half an hour
- Extra models are RBGCB1, RBGCB2, RBGCB3, RBGCB5, RBGCB7, RBGWC1 – wireless



FOR USE  
WITH  
RBG8100

### Audio Colour Camera

Colour camera with audio and infra red night vision. An additional camera to upgrade Ring camera safety systems. 500 x 582 pixel camera, with 110° viewing angle. Infra red distance of up to 12m. Rated IP68, making it water and weather resistant. 800mm cable to install with existing camera systems.

- Additional camera for Ring camera safety systems
- Colour and audio camera
- Infra red up to 12m
- 800mm cable
- IP68 rated - dust, dirt and sand proof, plus waterproof up to 1.5m for up to half an hour
- 110° viewing angle



#### Specification

Product Code:	RBGCB6
Product Dimensions:	H213 x W132 x L64mm
Weight:	0.268kg
Voltage:	12V DC

#### Specification

Product Code:	RBGC7
Product Dimensions:	H65 x W65 x D98mm
Weight:	0.248kg
Voltage:	12V DC

#### Specification

Product Code:	RBGC8
Product Dimensions:	H77 x W93 x D65mm
Weight:	0.484kg
Voltage:	12V DC

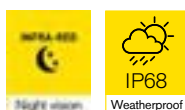


## 5.6" Reversing Camera System

- Reversing camera system
- 110° degree lens for wide view of rear of the vehicle
- 5.6" monitor with integral control box
- Infra red night vision up to 12m
- Built-in microphone and speakers
- IP68 rated - dust, dirt and sand proof, plus waterproof up to 1.5m for up to half an hour
- Includes 20m four core cable
- Additional cameras available

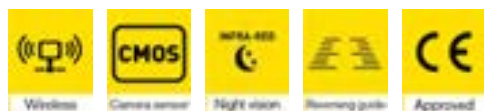
### Specification

<b>Product Code:</b>	RBG8100
<b>Product Dimensions:</b>	H127 x W150 x D27mm
<b>Weight:</b>	1.844
<b>Voltage:</b>	-



## Wireless Reversing Camera System

- Wireless reversing camera
- 4.3" screen, with suction mount
- Colour 1/4" colour CMOS camera
- 110° degree lens for wide view of rear of the vehicle
- Infra red night vision up to 1.5m
- Parking guidelines
- Optional second camera available

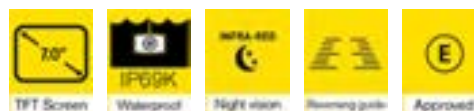


### Specification

<b>Product Code:</b>	RBGW430
<b>Product Dimensions:</b>	H31 x W139 x D96mm
<b>Weight:</b>	0.394kg
<b>Voltage:</b>	8-30V DC

## 7" Wireless Quad Channel Reversing Camera System

- Quad channel wireless digital reversing camera system
- 7" TFT monitor
- Capable of supporting up to four cameras
- Comes with high definition camera, with 120° viewing angle to give complete view
- IP69 rated - dust, dirt and sand proof, plus resistant to high pressure water jets and steam
- Infra red night vision up to 10m
- Built-in speakers for audio
- Adjustable parking guidelines
- Power and video harness for installation
- E approved



### Specification

<b>Product Code:</b>	RBGW470
<b>Product Dimensions:</b>	H134 x W184 x D57mm
<b>Weight:</b>	1.264kg
<b>Voltage:</b>	12-24V DC

# Battery Care

Battery maintenance is essential for preserving the reliability and performance of vehicles, and prevention is better than cure. Modern vehicles command more attention due to the increased levels of technology, and this can be split into 2 main categories:

### Battery Testing

It is important to undertake accurate vehicle diagnosis as low battery levels will cause vehicle faults and system failures. AGM, EFB Stop Start vehicles are especially prone to these issues.

### Support Charging

The charge level must be maintained whilst working on the vehicle. Many modern vehicles have electronic features such as handbrake which will drain charge even if the initial test showed the battery to be optimum.



# Contents

<b>Battery Information and Statistics</b>	<b>74</b>
<b>Tester</b>	<b>76</b>
<b>Chargers</b>	<b>77</b>
<b>Trolleys</b>	<b>79</b>
<b>Jump Starters</b>	<b>81</b>
<b>Booster Cables</b>	<b>85</b>

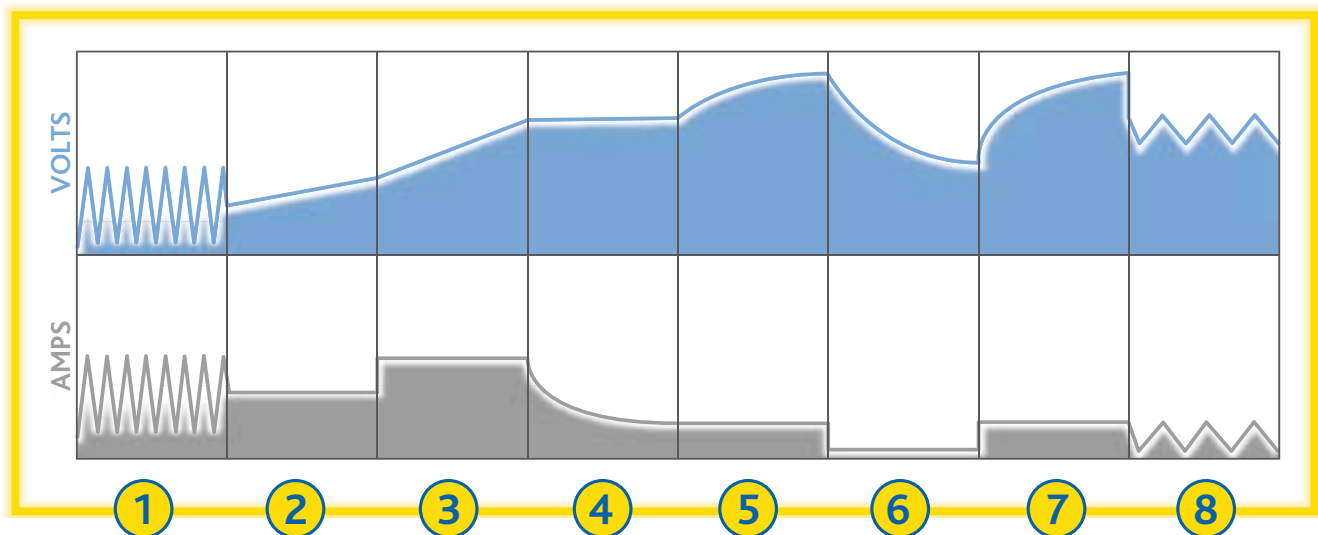




# Battery Information and Statistics



## Ring Automotive SmartChargePro Range



### The Ring Automotive SmartChargepro range are all Multi-Stage battery charges

**1 Desulphation** – The automatic desulphation stage pulse charge the battery to breakdown the build up of lead sulphate crystals. These crystals can occur when a battery has been discharged or left unused for a period of time.

**2 Soft start** – A slow steady build up of the charging process that limits the charging current applied until the battery voltage is above 12v.

**3 Bulk charge** – The main part of the charging process where 80% of the required charge is applied.

**4 Absorption** – Charged up to full capacity with a steady decline in charging current to allow the battery to absorb more power.

**5 Equalisation** – Additional stage for calcium batteries, removes acid stratification.

**6 Battery test** – The SmartCharge conducts an automatic discharge test. If further charging is required the battery recondition function is automatically selected. If fully charged the battery goes into the float stage.

**7 Recondition** – An additional automatic charging stage to recover deeply discharged batteries.

**8 Float** – The float stage maintains the battery at 100% charge without overcharging or damaging the battery, allowing the charger to be left connected to the battery for an indefinite period. Ideal for batteries used only intermittently, such as seasonally used batteries including motorcycles, caravans, boats and classic cars.



# 900%



of vehicles manufactured in **2019** had **Stop Start technology.+**

In **2020** 30% of these will enter the independent aftermarket, and they will all be fitted with AGM or EFB battery types.



The average battery life has become shorter as energy requirements have increased. The battery is designed to supply a sudden **burst of power to the ignition**, not provide energy for electronics and other devices for prolonged periods.

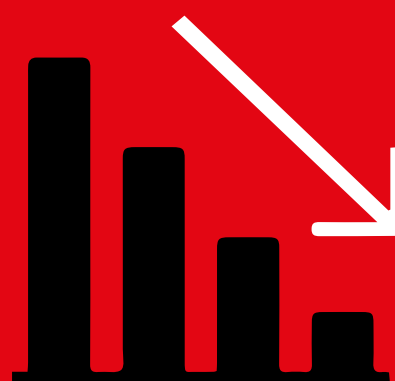
# JUST 30%

**of batteries sold today reach the 48-month mark.** Keeping AGM and EFB batteries fully charged means they will have a longer lifespan and use energy more efficiently.

Sulphation occurs when a battery is deprived of a full charge, the sulphur builds up and remains on battery plates.

# 80%

**of all battery failure is related to sulphur build-up, as this causes the battery to die.**



Operating tail lifts, electronic devices, lights (including interior, such as leaving doors open), etc. whilst the vehicle is idling **will all drain the battery and can even permanently damage it.**

# Battery Care

## Tester

Maintaining and recording both the vehicle battery and ancillary battery condition is vital. Ring's range of professional battery tools help diagnose, repair and recharge batteries, to ensure better performance and longer life. All Ring's battery maintenance range is designed for intensive, long-term use in workshops, fleets and other professional environments.

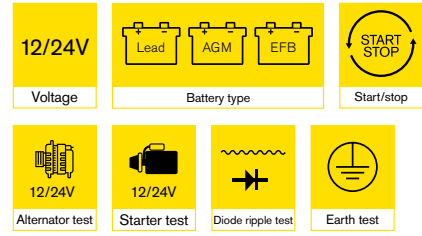


### BATTERY ANALYSERS

Record battery status on build sheets at arrival, during build and shipment.

## 12V/24V Graphical Battery Analyser

- 12V/24V graphical battery analyser
- Carry out a battery health check on Flooded, AGM or EFB batteries rated up 2000CCA
- Detect battery charging problems by checking alternator voltages fall within normal operating ranges
- Check for potential starting problems by measuring battery voltage drop during engine cranking
- Test earth connections between battery, engine and chassis are in good condition
- Integrated thermal printer - instantly print test results including garage name and address details
- Memory storage for up to 80 results, allowing rapid multi-vehicle testing
- PC software included for download of results and full report printing
- A handy voltmeter feature checks for flat batteries before each test
- Comes with robust storage case



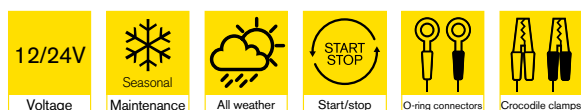
Specification	
Product Code:	RBAG750
Test Method:	Load free Microprocessor controlled
Voltage:	12/24V
Battery Types:	12V SLI, AGM & EFB
Display Type:	Graphic LCD with backlight
Battery CCA Ranges:	40-600 (low range), 100-2000 (high range)
Battery Standards:	CCA/SAE, DIN, EN1, EN2, IEC, JIS, CA/MCA
Battery Test:	Yes
Alternator Test:	Yes
Diode Ripple Test:	Yes
Starter Test:	Yes
Earth Test:	Yes
Data Download & Printing:	Yes
Integral Printer:	Yes
Pack Dimensions:	H461 x W352 x D90mm
Case Quantity:	8 x 1

## Chargers



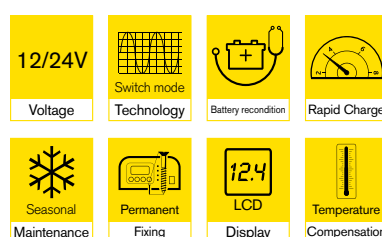
### 8A SmartCharger and Battery Maintainer

- 8A smart charger and battery maintainer
- For 12V and 24V vehicles
- STOP/START compatible
- 7-Stage charging process
- Large LCD display screen that clearly shows voltage and charging progress
- Cold weather charging mode which protects batteries in cold temperatures
- Quick connectors with clamps or O-ring terminals for long term connection
- One button operation for ease-of-use
- Backlit display can be seen in low light
- Reverse polarity and short-circuit protection
- Connect and be sure - automatically adjusts to long-term maintenance mode when battery is full



### 12 & 24V SmartCharge Pro

- Eight stage smart battery charging cycle
- Includes remote control
- Suitable for lead acid, gel, AGM and calcium 24V batteries.
- Restores a battery from a deeply discharged state, following it to operate at full performance
- Fast charging
- Adjusts the charge rate to compensate for any increase in the battery temperature



#### Specification

<b>Product Code:</b>	RSC808
<b>Voltage Output:</b>	12/24V DC
<b>Voltage Input:</b>	220-240V AC
<b>Charger Rate:</b>	12V: Up to 8A 24V Up to 4A
<b>Battery Type:</b>	Lead Acid, Gel, Calcium, EFB & AGM
<b>Max. Battery Capacity:</b>	12V: Up to 150Ah 24V: Up to 70Ah
<b>Min. Battery Capacity:</b>	4Ah
<b>Weight:</b>	0.902kg
<b>Product Dimensions:</b>	H268 x W144 x D127mm

#### Specification

<b>Product Code:</b>	RSCPR824	RSCPR25	RSCPR50
<b>AC Input Voltage:</b>	230V AC Input	230V	230V
<b>DC Output Voltage:</b>	24V DC Output	12V	12V
<b>Charge Rates:</b>	2/4/6/8A	2/6/12/25A	2/6/12/25/50A
<b>LCD Display:</b>	Yes	Yes	Yes
<b>Battery Capacity:</b>	14-160Ah	14-500Ah	14-1000Ah
<b>Battery Compatibility:</b>	Flooded/Calcium/ Gel/AGM	Flooded/Calcium/ Gel/AGM	Flooded/Calcium/ Gel/AGM
<b>Temp Compensation:</b>	Yes	Yes	Yes
<b>Weight:</b>	2.432kg	3.2kg	4.1kg
<b>Pack Dimensions:</b>	H85 x W175 x D245mm	H97 x W304 x D425mm	H97 x W304 x D425mm

# Battery Care



## Workshop Bench Battery Charger

- 30A trade workshop charger
- Suitable for 12V and 24V vehicles
- Includes 150A jump starter
- Includes slow and fast charge options
- Analogue ammeter to show charging status
- Rugged metal casing and transport handles
- Fully insulated battery clamps for enhanced safety
- Thermal and overload protection
- Suitable for intensive professional use

12/24V

Voltage

Lead

Battery type

Ammeter

Jump start

Charge settings

### Specification

Product Code:	RCBT30
AC Input Voltage:	230V
AC Input Power (12/24V):	650 / 1200W
Charge Current (effective RMS):	30A
Start Current (effective RMS):	150A
Battery Capacity:	30 - 300Ah
Output Fuse:	Thermal
Weight:	11kg
Product Dimensions:	H354 x W403 x D338mm



## Workshop Bench Battery Charger

- 35A trade workshop charger
- Suitable for 12V and 24V vehicles
- Includes 150A jump starter
- Includes slow and fast charge options
- Analogue ammeter to show charging status
- Rugged metal casing and transport handles
- Fully insulated battery clamps for enhanced safety
- Thermal and overload protection
- Suitable for intensive professional use

12/24V

Voltage

Lead

Battery type

Ammeter

Jump start

Charge settings

### Specification

Product Code:	RCBT35
AC Input Voltage:	230V
AC Input Power (12/24V):	800 / 1400W
Charge Current (effective RMS):	35A
Start Current (effective RMS):	180A
Battery Capacity:	40 - 350Ah
Output Fuse:	1 x 50A
Weight:	14kg
Product Dimensions:	H373 x W486 x D426mm

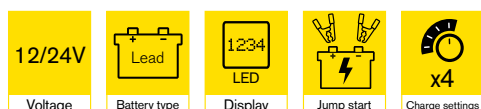


## Trolleys



### Workshop Trolley Battery Charger and Jump Starter

- 40A trolley battery charger and jump starter
- For 12V and 24V vehicles with lead acid batteries
- 4x charge rate settings for different battery capacities and conditions
- 280A jump starter quickly revives flat batteries
- Includes LED display to show charging status
- Ideal to move round large commercial workshops and vehicle depots
- Rugged metal casing, ideal for tough working environments
- Fully insulated battery clamps
- Includes thermal and overload protection



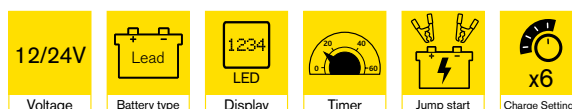
#### Specification

<b>Product Code:</b>	RCBT40T
<b>AC Input Voltage:</b>	230V
<b>AC Input Power (12/24V):</b>	1200 / 2000W
<b>Charge Current (effective RMS):</b>	40A
<b>Start Current (effective RMS):</b>	280A
<b>Battery Capacity:</b>	50 - 400Ah
<b>Output Fuse:</b>	1 x 50A
<b>Weight:</b>	21kg
<b>Product Dimensions:</b>	H750 x W453 x D407mm



### Workshop Trolley Battery Charger and Jump Starter

- 55A trolley charger and jump starter
- Suitable for 12V and 24V vehicles
- For use with lead acid batteries
- 420A jump starter quickly revives flat batteries
- 6x charge settings, to provide the best charge for the battery capacity and condition
- 60 minute timer
- Fully insulated battery clamps
- Rugged metal casing for tough workshop conditions
- Easy to read LED display
- Thermal and overload protection



#### Specification

<b>Product Code:</b>	RCBT55T
<b>AC Input Voltage:</b>	230V
<b>AC Input Power (12/24V):</b>	1400 / 2600W
<b>Charge Current (effective RMS):</b>	55A
<b>Start Current (effective RMS):</b>	420A
<b>Battery Capacity:</b>	60 - 600Ah
<b>Output Fuse:</b>	2 x 50A
<b>Weight:</b>	28kg
<b>Product Dimensions:</b>	H818 x W513 x D433mm

# Battery Care



**LED display shows voltage, current and charge mode selected**  
Making it easy to select the required charging mode and review charging performance



## 12/24V Fully Automatic 60A Battery Charger with SmartCharger Technology

60A automatic trolley smart battery charger, with 540A jump starter. Suitable for 12V and 24V vehicles and mixed battery types in cars and commercial vehicles, including those with START/STOP batteries. Ideal for intensive use with fleets of mixed vehicles including cars, LCV and HGVs, plus in commercial garages and workshops.

Features three stage smart charge technology, which optimises battery performance and improves the ability to hold charge. The 540A jump starter quickly revives flat batteries. The easy to view LED display shows voltage, current and the charge mode selected. Easy to pick the correct charge mode and review charging performance. Includes thermal and overload protection.

The rugged metal casing and design makes it able to withstand tough workshop conditions, whilst also easy to move to where it's needed.

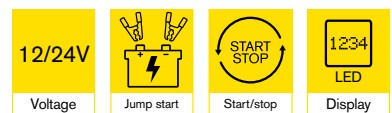
- 60A trolley charger
- Suitable for 12V and 24V vehicles
- Compatible with a range of battery types in cars and commercial vehicles
- Ideal for START/STOP vehicles
- Smart charge technology optimises battery performance and ability to hold charge
- 540A jump starter quickly revives flat batteries
- LED display shows voltage, current and the charge mode selected
- Tough design and materials make it ideal for workshops and intensive commercial use

### Key features

- ➊ **3 Stage SmartCharge technology** – Optimises battery performance and improve a batteries ability to hold charge
- ➋ **Includes jump starting function** – 540A starting current for when a flat battery needs to be revived quickly
- ➌ **Suitable for 12V, 24V and Stop/Start batteries** – Will work across mixed battery types in cars to commercial vehicles

### Specification

<b>Product Code:</b>	RCBT60T
<b>Input Voltage AC:</b>	230V
<b>AC Input Power:</b>	900W
<b>Charge Current:</b>	60A (RMS) / 40A (EN)
<b>Start Current:</b>	540A (RMS)
<b>Cranking Cut-off:</b>	30 seconds
<b>Charging Voltage (12V/24V):</b>	Lead acid 14.5V / 29.0V AGM 14.8V / 29.6V Gel 13.8V / 27.6V
<b>Battery Capacity (12V):</b>	20-700Ah
<b>Battery Capacity (24V):</b>	20-350Ah
<b>Weight:</b>	18.5kg
<b>Product Dimensions:</b>	H875 x L360 x W375mm



## Jump Starters



WEIGHS  
ONLY 4KG



Docking station



LED indicators



12V

# Lithium Professional Jump Starter

The Ring RPPL700 Lithium Professional Jump Starter is ideal for petrol vehicles up to 8.0L and diesel vehicles up to 6.0L, such as motorcycles, cars, 4x4s, vans, commercial vehicles and boats.

The RPPL700 has a tough build with rubber moulding and is 75% lighter than an equivalent lead acid jump starter, making it more mobile and ideal for being used frequently in a workshop.

Under normal conditions, with a fully functioning alternator, if the jump starter is fully charged before use, leaving the clamps connected to the vehicle will recharge the jump starter from the vehicle alternator in around 60 seconds.

Mains docking station included.

- Lithium professional charger with 1500 Peak Amps
- Up to 8.0L petrol vehicles
- Up to 6.0L diesel vehicles
- 75% lighter than an equivalent lead acid jump starter
- Multiple safety protections
- Tough build with rubber moulding
- Rapid recharge

## Key features

- ① Ergonomic easy to grip handle
- ② Durable rubber moulded body
- ③ Convenient docking station
- ④ Premium spark-free clamps
- ④ Reinforced cable connection

## Specification

<b>Product Code:</b>	RPPL700
<b>Internal Battery Voltage (nominal):</b>	12.8V
<b>Cable:</b>	20mm <sup>2</sup> Pure Copper Cable
<b>Starting Current:</b>	650A
<b>Peak Current:</b>	1500A
<b>Battery Type:</b>	Lithium-ion Phosphate (LiFePO <sub>4</sub> )
<b>Battery Capacity:</b>	6Ah (76.8Wh)
<b>Operating Temperature:</b>	0°C - 45°C
<b>Cable Clamp Opening:</b>	30mm
<b>Weight:</b>	4kg
<b>Product Dimensions:</b>	H196 x L235 x W180mm

12V Voltage	6.0L Diesel Engine size	8.0L Petrol Engine size
----------------	-------------------------------	-------------------------------

# Battery Care



Optional trolley RPPTTR

**UP TO  
10X STARTS  
PER  
CHARGE**  
(24V 7 Litre)



## ProStart Ultra Power Pack

1400A cranking amp professional power pack, ideal for demanding environments such as truck and bus depots. 12V and 24V settings, making it versatile and capable of starting the majority of vehicles. Able to jump start petrol engines of all sizes, and diesel engines up to 14L. Large enough to jump start around 10 heavy duty trucks from one charge. Includes 12V DC socket, suitable for charging inspection lamps or small tools. It also features external fuse, making it easy to replace if needed. The reverse polarity warning buzzer sounds if clamps are attached to the wrong pole.

Double insulated copper cables ensure safe jump starting, and cast bronze jaws with bridging strap are durable for long term, repeated use. The shatterproof polymer case is robust enough for tough workshop conditions. Illuminated battery/charge meter makes it easy to take readings. 1860 peak amps for 24V, and 3720 peak amps for 12V.

Trolley is also available, to make it easier to transport the power pack. See part number RPPTTR.

- 1400A cranking amps
- Pure lead AGM battery
- Suitable for 12V and 24V vehicles
- 1860 peak amps for 12V, 3720 peak amps for 24V
- Jump starts all size petrol vehicles
- Jump starts diesel vehicles up to 14L
- Up to 10x heavy duty truck starts from one charge
- 12V DC charging socket
- External fuse for easy replacement if needed
- Double insulated pure copper cables
- Durable cast bronze jaws with bridging strap
- Shatterproof polymer casing
- Illuminated battery/charging meter
- Transport trolley also available

### Specification

<b>Product Code:</b>	RPP1400
<b>Voltage:</b>	12V/24V
<b>Peak Amps:</b>	3720A / 1860A
<b>Cranking Amps:</b>	1400A / 700A
<b>Cold Cranking Amps:</b>	720A / 360A
<b>Battery Size:</b>	2 x 22Ah
<b>Battery Type:</b>	Pure Lead AGM
<b>Starting Ability:</b>	<div> <div>Petrol Engines</div> <div>Diesel (with battery)</div> <div>Diesel (no battery)</div> </div> Most Car, 4x4, LCV & Agricultural Engines 24V Engines up to 500HP / 14 Litres 24V Engines up to 250HP / 7 Litres
<b>Charger Specification:</b>	4 Amp, 12V
<b>Cable Length/Gauge:</b>	1.8m, 35mm <sup>2</sup>
<b>Weight:</b>	20.5kg
<b>Product Dimensions:</b>	H600 x W550 x D190mm

12/24V  
Voltage

All sizes  
Petrol  
Engine size

14.0L  
Diesel  
Engine size

35mm<sup>2</sup>  
Copper cables

CCA  
1400/700  
Cranking amps

3720/1860A  
Peak amps





# High Power Jump Starter and Power Bank

The Ring RPPL400 High Power Jump Starter and Power Bank is a safe and compact lithium jump starter, ideal for vans, SUVs, all car sizes and motorcycles. Able to start 12V vehicles up to 6.0L with petrol engines, 3.5L with diesel. Its compact design fits easily into a vehicle's glovebox without compromising on power. Also provides power to recharge electronic gadgets including smartphones and tablets.

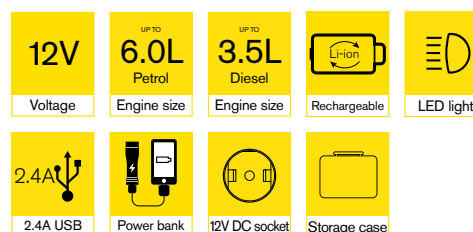
The safe connect system protects the user, vehicle and jump starter when in use. The intelligent clamps safely manage power between the jump starter and vehicle, plus the device features reverse polarity, short circuit and anti-spike protection.

Comes with micro USB for fast four hour recharge time. Also includes LED torch to make jump starting easier and a storage case to keep the product undamaged in the car.

- Includes storage case
- Safe and compact lithium jump starter
- Provides power to recharge electronic gadgets
- Compact design that fits easily into your glovebox
- Fast 4 hour recharge time
- Suitable for small to medium cars and vans - up to 6.0L petrol, 3.5L diesel
- Safe connect system to protect the user, vehicle and jump starter
- Intelligent clamps to safely manage power between the jump starter and vehicle
- Reverse polarity, short circuit and anti-spike protection
- LED torch
- Storage case included

## Specification

<b>Product Code:</b>	RPPL400
<b>Internal Battery Voltage (nominal):</b>	12V
<b>USB Output:</b>	5V 2.4A, 9V 2.0A, 12V 1.5A
<b>Starting Current:</b>	400A
<b>Peak Current:</b>	800A
<b>Max Cranking Time:</b>	3 secs
<b>Battery Type:</b>	Lithium Cobalt Oxide LiCoO <sub>2</sub>
<b>Battery Capacity:</b>	16,800mAh
<b>Operating Temperature:</b>	-10°C - 40°C
<b>Cable Clamp Opening:</b>	30mm
<b>Weight:</b>	0.7kg
<b>Product Dimensions:</b>	H90 x L213 x W30mm



# Battery Care



## TradeStart S4000 Power Pack

Professional 4000A power pack, suitable for 12V and 24V batteries. Can jump start a 12V petrol engine up to 12 litres, a 12V diesel engine up to 9 litres and a 24V diesel engine up to 7 litres. Ideal for depots and garages that need to start larger petrol and diesel cars and vans, including commercial vehicles. Unit contains a HD SLA battery, with AGM technology to provide powerful starting performance. The RPPS4000 has a multi-function LED display, which shows battery voltage and alternator. High cranking ability, low shelf-discharge and long service life of up to eight years. SafeGuard protect batteries against incorrect connection, and includes reverse polarity warning buzzer and indication. Rugged metal casing is tough enough for the workshop, and comes with 2m of cable with fully insulated clips. Includes trolley to make moving round the workshop easier.

- 4000A professional power pack
- SafeGuard protected
- Starts 12V petrol vehicles up to 12L
- Starts 12V diesel vehicles up to 9L
- Starts 24V diesel vehicles up to 7L
- HD SLA battery with AGM technology for exceptional performance
- Long service life: up to 8 years
- Reverse polarity indicator
- Rugged metal casing for tough workshop conditions

### Specification

<b>Product Code:</b>	RPPS4000	
<b>Voltage:</b>	12V	24V
<b>Peak Amps:</b>	4000A	2000A
<b>Cranking Amps:</b>	1500A	800A
<b>Cold Cranking Amps:</b>	620A	310A
<b>Battery Size:</b>	2 x 26Ah	
<b>Battery Type:</b>	Spiral AGM	
<b>Battery Shelf Life:</b>	18 months	
<b>Battery Service Life:</b>	Up to 8 years	
<b>Starting Ability:</b>	<b>12V Petrol engines</b>	Up to 12 Litres
	<b>12V Diesel engines</b>	Up to 9 Litres
	<b>24V Diesel engines</b>	Up to 7 Litres
<b>Charge Time From Flat:</b>	11.5hrs to 95%	
<b>Charger Specification:</b>	4A, 12V	
<b>Cable Length/Gauge:</b>	1.5m, 35mm²	
<b>Weight:</b>	33kg	
<b>Product Dimensions:</b>	H580 x W355 x D335mm	



## Heavy Duty Booster Cables for Professional Use

### Quality

Each set of cables are manufactured using multi-strand conductors and coated in flexible PVC. All cables are colour coded red and black in order to identify correct polarity.

### Safety

A full set of instructions are printed on the packaging of all products. Additionally, instructions are printed on a durable tag attached to the cables.



## Professional 350A Copper Booster Cables

- 350A heavy duty booster cables
- 3.5m long cables
- Flexible PVC coating for ease of use
- 25mm<sup>2</sup> cross section
- Colour-coded to identify correct polarity
- Comes with protective nylon bag
- Suitable for vehicles up to 5.5L

## Professional 450A Copper Booster Cables

- 450A heavy duty booster cables
- 4.5m long cables
- Pure copper multi-strand conductors
- Flexible PVC coating for ease of use
- 35mm<sup>2</sup> cross section
- Fully insulated battery clamps
- Colour-coded to identify correct polarity
- Nylon bag for easy and tidy storage
- Suitable for vehicles up to 7.0L

## Professional 600A Copper Booster Cables

- 600A agricultural and commercial booster cables
- 5m long cables
- Pure copper multi-strand conductors
- Flexible PVC coating for ease of use
- 50mm<sup>2</sup> cross section
- Fully insulated battery clamps
- Colour-coded to identify correct polarity
- Suitable for vehicles up to 9.5L

### Specification

<b>Product Code:</b>	RBC250A
<b>Cross Sectional Area:</b>	25mm <sup>2</sup>
<b>Cable Length:</b>	3.5m
<b>Continuous Rating:</b>	350A
<b>Peak Rating:</b>	700A
<b>Weight:</b>	3.1kg
<b>Product Dimensions:</b>	H290 x W305 x D80mm

### Specification

<b>Product Code:</b>	RBC350
<b>Cross Sectional Area:</b>	35mm <sup>2</sup>
<b>Cable Length:</b>	4.5m
<b>Continuous Rating:</b>	450A
<b>Peak Rating:</b>	900A
<b>Weight:</b>	4.4kg
<b>Product Dimensions:</b>	H323 x W323 x D97mm

### Specification

<b>Product Code:</b>	RBC500
<b>Cross Sectional Area:</b>	50mm <sup>2</sup>
<b>Cable Length:</b>	5.0m
<b>Continuous Rating:</b>	600A
<b>Peak Rating:</b>	1200A
<b>Weight:</b>	6.4kg
<b>Product Dimensions:</b>	H350 x W350 x D125mm

# Around the Workshop

All professionals need durable equipment that can withstand inevitable knocks and drops whilst carrying out tough installation and engineering tasks. Our range offers robust garage and workshop equipment that has been extensively tested to ensure that it lasts.





# Contents

<b>Multifunction Tester</b>	<b>88</b>
<b>Battery Analyser</b>	<b>89</b>
<b>Introduction to Inspection Lamps</b>	<b>93</b>
<b>Inspection Lamps</b>	<b>94</b>
<b>Inspection Torches</b>	<b>96</b>



# Electrical Testing

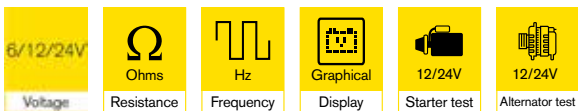
## Multifunction Tester



## Multi-Function Automotive Tester

- The Multi-function Automotive tester will diagnose electrical faults in 6V, 12V and 24V vehicles, with specific electrical tests for the starter motor and alternator.
- Auto ranging, 6/12/24V battery testing with traffic light LED result
  - Will test up to a maximum of 50V
  - Rapid current testing, up to 80A without removing fuses
  - Current adapter for in-line current testing
  - 12/24V Starter Test, checks battery during engine cranking
  - Normal and Smart 12/24V alternator test, for checking vehicle charging system
  - Frequency and duty cycle settings, aid testing of sensors
  - Continuity and resistance modes, for locating wiring faults
  - Robust storage case

Specification	
Product Code:	RMM500
Voltage Test:	6/12/24V
Starter Test:	12/24V
Alternator Test:	12/24V
Voltage Range:	0 - 50V DC $\pm 2\%$
Current (Parallel):	0 - 80A $\pm 3\%$ , 3A - 30A (Mini fuse), 3A - 40A (Standard fuse), 20A - 80A (Maxi fuse)
Current (In-line):	1 - 999mA $\pm 1\%$ (Low range), 1 - 30A $\pm 2\%$ (High range)
Resistance:	0 - 1M $\Omega$ $\pm 2\%$
Frequency:	1Hz - 20KHz $\pm 1\%$
Continuity:	0 - 500 $\Omega$
Working Temp:	0 - 50°C
Batteries:	3 x AA (not included)
Pack Dimensions:	H260 x W360 x D98mm
Case Quantity:	8 x 1



# Battery Maintenance

Maintaining and recording both the vehicle battery and ancillary battery condition is vital. Ring's range of professional battery tools help diagnose, repair and recharge batteries, to ensure better performance and longer life. All Ring's battery maintenance range is designed for intensive, long-term use in workshops, fleets and other professional environments.



Suitable for  
EFB & AGM  
'Stop/Start' Batteries

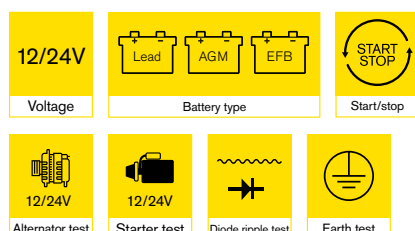


## BATTERY ANALYSERS

Record battery status on build sheets at arrival, during build and shipment.

## 12V/24V Graphical Battery Analyser

- 12V/24V graphical battery analyser
- Carry out a battery health check on Flooded, AGM or EFB batteries rated up 2000CCA
- Detect battery charging problems by checking alternator voltages fall within normal operating ranges
- Check for potential starting problems by measuring battery voltage drop during engine cranking
- Test earth connections between battery, engine and chassis are in good condition
- Integrated thermal printer - instantly print test results including garage name and address details
- Memory storage for up to 80 results, allowing rapid multi-vehicle testing
- PC software included for download of results and full report printing
- A handy voltmeter feature checks for flat batteries before each test
- Comes with robust storage case



### Specification

<b>Product Code:</b>	RBAG750
<b>Test Method:</b>	Load free Microprocessor controlled
<b>Voltage:</b>	12/24V
<b>Battery Types:</b>	12V SLI, AGM & EFB
<b>Display Type:</b>	Graphic LCD with backlight
<b>Battery CCA Ranges:</b>	40-600 (low range), 100-2000 (high range)
<b>Battery Standards:</b>	CCA/SAE, DIN, EN1, EN2, IEC, JIS, CA/MCA
<b>Battery Test:</b>	Yes
<b>Alternator Test:</b>	Yes
<b>Diode Ripple Test:</b>	Yes
<b>Starter Test:</b>	Yes
<b>Earth Test:</b>	Yes
<b>Data Download &amp; Printing:</b>	Yes
<b>Integral Printer:</b>	Yes
<b>Pack Dimensions:</b>	H461 x W352 x D90mm
<b>Case Quantity:</b>	8 x 1



## Battery Start





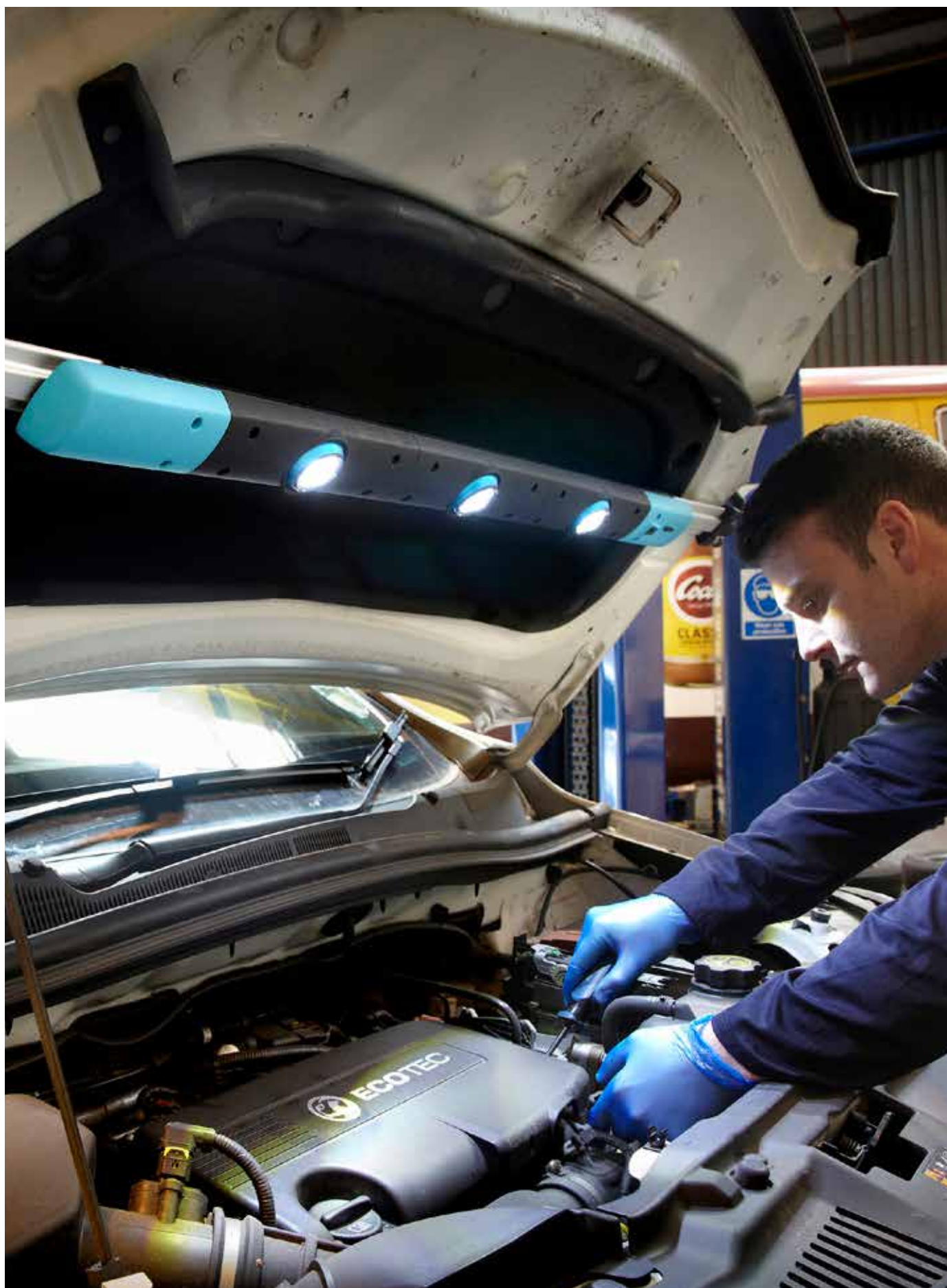


**SEE PAGES  
72 – 85  
FOR MORE  
BATTERY CARE**



# Workshop Equipment

## Inspection Lamps





# Inspection Lamps

## The right tool for every job...

Whether you're working on the van or installing equipment in it, Ring has the right inspection lamp for the job.

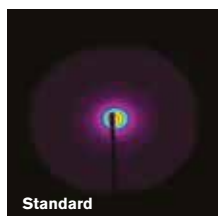
Bright, portable, rechargeable, resistant to oil and dirt and tough enough to withstand knocks in a workshop.

### Features Explained



#### High Power

High power lamps utilise the latest technology to provide a brighter, uniform, wide angle light output compared with conventional LEDs. This allows a larger area of the engine bay to be illuminated.



#### Multi-Positioning

Multi-positioning is an essential feature for directional lighting allowing "hands free" operation. The magnets, ratcheting mechanisms and hooks allow you to position the light output exactly where you need it.



#### Light Output

Lumens are measurements of total light output, making this measurement applicable for torches.



#### CE Approved

All Ring inspection lamps are tested and certified to the relevant EMC & LVD Directives.

RIL3900HP REIL3900HP	RIL3600HP REIL3600HP	RUBL1000 REUBL1000
UP TO 400 Lumens	250 Lumens	1000 Lumens
Torch function	Torch function	
▶ 3h Operating time	▶ 3h Operating time	▶ 15h Operating time
⚡ 4h Charging time	⚡ 4.5h Charging time	⚡ 6.5h Charging time
6000K Colour temp	6000K Colour temp	6000K Colour temp
Multi-angle	Multi-angle	Multi-angle
Rechargeable	Rechargeable	Rechargeable
Magnet	Magnet	Extendable arms 1.75m 1.2m

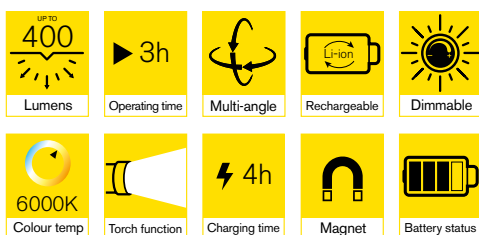
# Workshop Equipment

## Inspection Lamps

### MAGflex Pivot Slim Inspection Lamp

Created to illuminate the most inaccessible of spaces. The MAGflex Pivot combines a slim design with multi axis rotation and tilt, meaning light can be directed exactly where required and the flexible mounting options allow hands free working.

- Rechargeable and cordless
- New technology COB LED provides 400 lumens light output
- Dimmable switch for adjustable light output
- Fully foldable and pocket sized
- Slim design to illuminate the smallest of spaces
- Multi axis rotation and tilt for full angle illumination
- White light output simulates daylight
- High power LED torch function for a focused light
- Wide angle of light output that has uniform intensity
- Multiple magnets (one at the base, two at the rear) for hands free use
- Integral hanging hook
- Battery usage LED indicator
- Anti-slip comfortable grip
- Li-ion battery for faster consistent recharging
- Includes AC mains charger



#### Specification

<b>Product Code:</b>	RIL3900HP (UK) REIL3900HP (Euro)
<b>Light Output:</b>	Up to 400 Lumens
<b>Battery:</b>	3.7V Li-ion, 2600mAh
<b>Mains Adaptor:</b>	Input: 230V AC 50/60Hz Output: 5V DC 1000mA
<b>Operating Time:</b>	3h
<b>Charging Time:</b>	4h
<b>Product Dimensions:</b>	H230 x W30 x D42mm
<b>Weight:</b>	0.134kg
<b>Case Quantity:</b>	12 x 1



#### Key features

- 1 LED Torch
- 2 5W COB LED
- 3 ON/OFF Dimmer Switch
- 4 Torch ON/OFF
- 5 Magnet
- 6 Charging Indicator
- 7 Charging Socket
- 8 Integral Hanging Hook







Expandable arms to 1.75m



### MULTI-USE

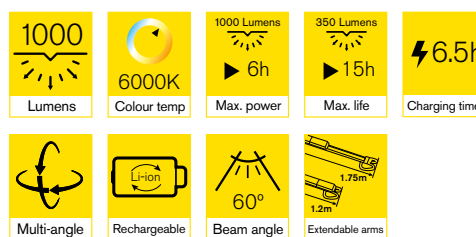
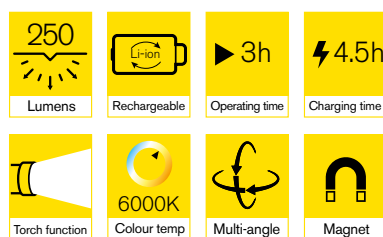
Also ideal for illuminating rear work area

## Under Bonnet LED Inspection Lamp

## MAGflex Twist LED Inspection Lamp

- Rechargeable and cordless
- COB LED provides 250 lumens light output
- Lamp can rotate 360° with a 180° ratcheting design to allow ultimate directional lighting
- White light output simulates daylight
- Wide angle of light output that has uniform intensity
- 2 x magnets for hands free use
- Integral hanging hook
- High power LED torch function
- Anti-slip comfortable grip
- Li-ion battery for faster consistent recharging
- Includes AC mains charger

- 3 x 5W LEDs provide 1000 lumens light output
- Long operating time allows full working day usage
- 3 levels of light output:
  - High (3 lamps) - 1000 Lumens
  - Med (2 lamps) - 675 Lumens
  - Low (1 lamp) - 350 Lumens
- 6000K colour temperature for bright white light
- 40° adjustable head to shine light on the engine bay exactly where it is required
- Sturdy polycarbonate, ABS and Aluminium construction
- Rechargeable 3.7V 10400mAh Li-ion battery
- Padded hooks design allows usage with different vehicle types including cars, vans and 4x4s
- Illuminated battery status indicator
- Includes AC mains adaptor



### Specification

<b>Product Code:</b>	RIL3600HP (UK) REIL3600HP (Euro)
<b>Light Output:</b>	250 Lumens
<b>Battery:</b>	3.7V Li-ion, 2200mAh, 8.14Wh
<b>Mains Adaptor:</b>	Input: 230V AC 50/60Hz Output: 5V DC 500mA
<b>Operating Time:</b>	3h
<b>Charging Time:</b>	4.5h
<b>Product Dimensions:</b>	H242 x W51 x D42mm
<b>Weight:</b>	0.488g
<b>Case Quantity:</b>	10 x 1

### Specification

<b>Product Code:</b>	RUBL1000 (UK), REUBL1000 (Euro)
<b>Light Output:</b>	1000 Lumens (3 lamps) 675 Lumens (2 lamps) 350 Lumens (1 lamp)
<b>Battery:</b>	3.7V Li-ion, 10400mAh, 38.48Wh
<b>Mains Adaptor:</b>	Input: 230V AC 50/60Hz Output: 5V DC 2000mA
<b>Operating Time:</b>	6h (3 lamps), 10h (2 lamps), 15h (1 lamp)
<b>Charging Time:</b>	4.5h
<b>Product Dimensions:</b>	H110 x W1195 x D120mm
<b>Weight:</b>	2.196kg
<b>Case Quantity:</b>	4 x 1

For our full range of Inspection Lamps visit [www.ringautomotive.com](http://www.ringautomotive.com)

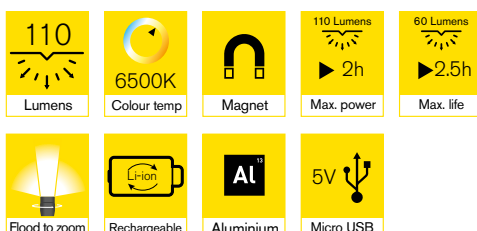
# Workshop Equipment

## Inspection Torches



## Zoom110 Micro LED Inspection Torch

- Up to 110 lumen torch provides bright white light
- Standard setting has a wide-angle light output for total illumination of the work area
- Optical 6x zoom for a focused beam of light to see into the distance
- Built in IC protection to protect battery from over charge or discharge
- Complete with USB to Micro USB cable for convenient 2.5hr charge time
- Magnetic base for hands free usage



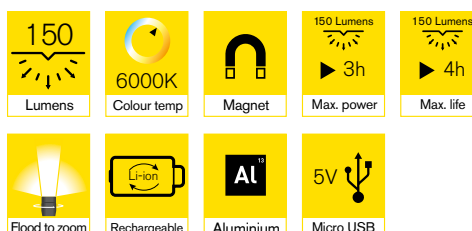
### Specification

<b>Product Code:</b>	RIT1010
<b>Light Output:</b>	110 Lumens (high) 60 Lumens (low)
<b>Battery:</b>	3.7V Li-ion, 600mAh, 2.22Wh
<b>Functions:</b>	High, low
<b>Operating Time:</b>	Up to 2h (high) 2.5h (low)
<b>Product Dimensions:</b>	H89 x W28 x D28mm
<b>Weight:</b>	0.07kg
<b>Case Quantity:</b>	50 x 1



## Zoom150 Duo LED Inspection Torch

- Up to 150 lumen torch provides bright white light
- Standard setting has a wide-angle light output for total illumination of the work area
- Optical 6x zoom for a focused beam of light to see into the distance
- Torch mode up to 150 lumens – 3hr illumination time
- Lamp mode up to 150 lumens – 4hr illumination time
- Magnetic base for hands free usage
- Li-ion rechargeable battery, 2.96Wh
- Built in IC protection to protect battery from over charge or discharge
- Complete with USB to Micro USB cable for convenient recharging
- 6hr recharge time



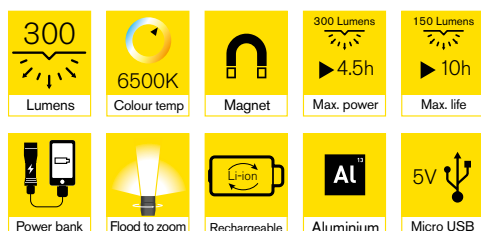
### Specification

<b>Product Code:</b>	RIT1040
<b>Light Output:</b>	150 Lumens (high) 150 Lumens (low)
<b>Battery:</b>	3.7V Li-ion, 600mAh, 2.22Wh
<b>Functions:</b>	High, low
<b>Operating Time:</b>	Up to 2h (high) 2.5h (low)
<b>Product Dimensions:</b>	H89 x W28 x D28mm
<b>Weight:</b>	0.07kg
<b>Case Quantity:</b>	50 x 1



## Zoom300 LED Inspection Torch

- Up to 300 lumen torch provides bright white light
- Standard setting has a wide-angle light output for total illumination of the work area
- Optical 6x zoom for a focused beam of light to see into the distance
- Max power mode up to 300 lumens – 4.5hr illumination time
- Max life mode up to 150 lumens – 10hr illumination time
- Magnetic base for hands free usage
- Li-ion rechargeable battery, 8.14Wh
- Built in IC protection to protect battery from over charge or discharge
- Complete with USB to Micro USB cable for convenient recharging
- Power bank functionality, ideal for an emergency charge of a mobile phone
- 6hr recharge time



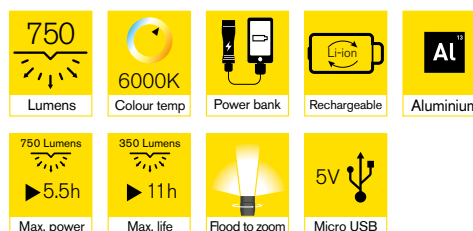
### Specification

<b>Product Code:</b>	RIT1050
<b>Light Output:</b>	300 Lumens (high) 150 Lumens (low)
<b>Battery:</b>	3.7V Li-ion, 2200mAh, 8.14Wh
<b>Functions:</b>	High, low
<b>Operating Time:</b>	Up to 4.5h (high) 10h (low)
<b>Product Dimensions:</b>	H145 x W38 x D38mm
<b>Weight:</b>	0.23kg
<b>Case Quantity:</b>	25 x 1



## Zoom750 LED Inspection Torch

- Up to 750 lumen torch provides bright white light
- Standard setting has a wide-angle light output for total illumination of the work area
- Optical 6x zoom for a focused beam of light to see into the distance
- Max power mode up to 750 lumens – 5.5hr illumination time
- Max life mode up to 350 lumens – 11hr illumination time
- Li-ion rechargeable battery, 16.28Wh
- Built in IC protection to protect battery from over charge or discharge
- Complete with USB to Micro USB cable for convenient recharging
- Power bank functionality, ideal for an emergency charge of a mobile phone
- 12hr recharge time



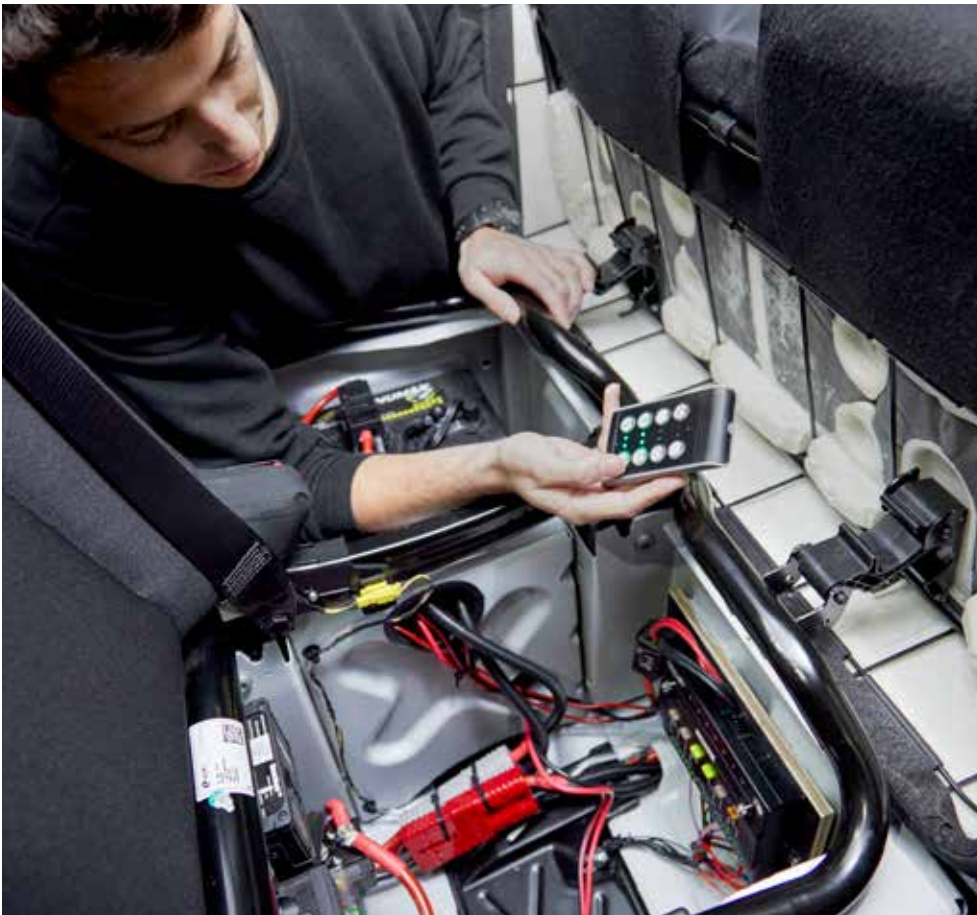
### Specification

<b>Product Code:</b>	RIT1060
<b>Light Output:</b>	750 Lumens (high) 350 Lumens (low)
<b>Battery:</b>	3.7V Li-ion, 4400mAh, 16.28Wh
<b>Functions:</b>	High, low
<b>Operating Time:</b>	Up to 5.5h (high) 11h (low)
<b>Product Dimensions:</b>	H210 x W44 x D44mm
<b>Weight:</b>	0.372kg
<b>Case Quantity:</b>	10 x 1

# Electrical

Ring is continually developing new technology and looking at new ways to future proof its product mix in future advances.

Our new Wireless Connect is the innovative single point switching hub which can control up to 8 electrical ancillaries from 1 remote keypad.





# Contents

<b>Wireless Switching</b>	<b>100</b>
<b>Wireless Connect</b>	<b>101</b>
<b>MAGcode Connectors</b>	<b>102</b>
<b>Horns</b>	<b>103</b>



# Wireless Connect - Electrical Installations Made Easy

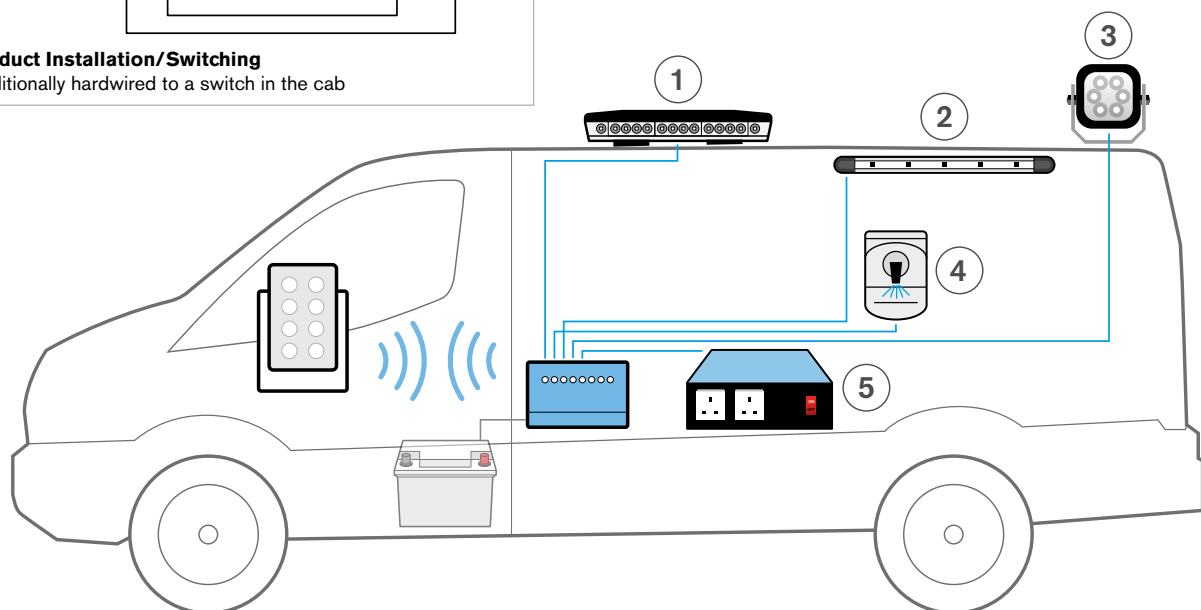
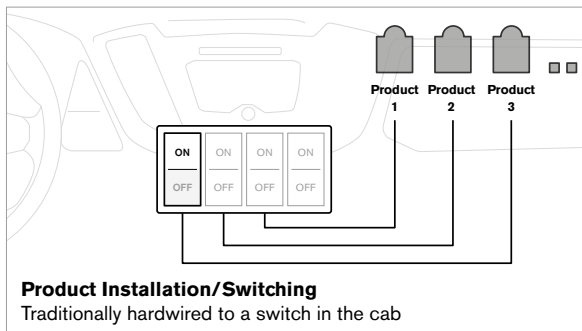
Ring's new Wireless Switching Power Hub (RSU60 - whole kit) can help reduce installation time by up to 35%, and provides up to eight output channels with a total rating of 60A, providing ease of connection for ancillary electrical items.

Switching is controlled via its Rechargeable Wireless Switching Panel and comes complete with 360° swivel mount docking station. The Switch Panel is fully backlit and, like the Power Hub, features switching indicator lights, and it can be used remotely from the docking station, all of which allows the user greater flexibility, ease of use and clear information about the switching status. In practice, the Ring Carnation Power Hub can reduce the installation time on a typical installation with 1x light bar, 2x work lamps, 3x interior lights and a hand wash from three hours to under two hours.



**12V**  
INSTALLATIONS

## Typical System Example





# Wireless Connect

The smart way to switch ancillary electrical products



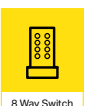
Wireless



8 Outputs


60A  
Ampage


Battery Protection


12V  
Voltage


8 Way Switch



Reduce installation time  
Switch 8 electrical products  
from 1 remote keypad

## RSU60 Wireless Connect Kit Contents



x20



## Available separately

### SWITCH REMOTE (RSURC)


Secondary switch can  
also be paired\*

## Switch Remote

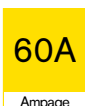
- 8 Fused Output Channel
- Backlit illumination for working in low light
- Active status indicators to show what equipment is on
- Lithium battery for fast charge long-life
- Charge status indicator for clear view of remaining battery life
- Can be used remotely
- Replaceable icons to customise remote



Wireless



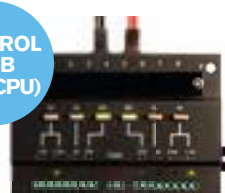
8 Outputs


60A  
Ampage


Battery Protection


12V  
Voltage

### CONTROL HUB (RSUCPU)



## Tech Hub

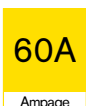
- 12V single point connection
- 8 fused output channels
- Manual override
- Battery protection
- 60Amp capacity
- Single button keypad pairing function



Wireless



8 Outputs


60A  
Ampage


Battery Protection


12V  
Voltage

### DOCKING STATION (RSUCB)



## Docking Station

- Single point connection
- Power indicator
- Secure fitment when travelling

### MOUNT (RSUDM)



## 360 Single Point Mount

# Electrical

## MAGcode Connectors

MAGcode connectors provide power connections for low voltage products, to provide easy connection and disconnection. Ideal for battery chargers, additional lighting and additional power connectors.

**Only live when port and clip are connected.**

**Suitable for internal and external applications.**



PowerPort Pro

PowerClip Pro

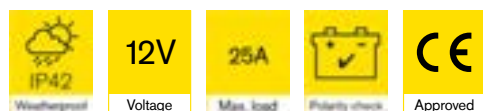


PowerPort

PowerClip

## Auto Magnetic and Mechanical Twist Lock Mechanism for Professional Applications

- Available in 12V
- 25amp max current
- Duty cycles under load - 5000 cycles
- Magnetic twist lock connection
- Only live when the clip and port are connected
- Suitable for interior and exterior applications
- IP42 rated when connected
- Minimum installation depth
- Magnetic coding prevents 12 or 24V incorrect connection and polarity protection



## Auto Magnetic Connection Mechanism

- 12 and 24V variants available
- 15amp max current
- Duty cycles under load - 4000 cycles
- Magnetic quick connection



### Specification

<b>Product Code:</b>	RMGCPRO12B	RMGPPRO12B
<b>Description:</b>	Powerclip Pro	Powerport Pro
<b>Voltage:</b>	12V	12V
<b>Pack Dimensions:</b>	Ø38 x D22mm	Ø38 x D18mm
<b>Pack Quantity:</b>	1 x 1	1 x 1
<b>Approval:</b>	CE	CE

### Specification

<b>Product Code:</b>	RMGC12B	RMGP12B	RMGC24B	RMGP24B
<b>Description:</b>	Powerclip	Powerport	Powerclip	Powerport
<b>Voltage:</b>	12V	12V	24V	24V
<b>Pack Dimensions:</b>	Ø38 x D22mm	Ø38 x D18mm	Ø38 x D22mm	Ø38 x D18mm
<b>Pack Quantity:</b>	1 x 1	1 x 1	1 x 1	1 x 1
<b>Approval:</b>	CE	CE	CE	CE



## Horns

Ring Horns are manufactured to OE specifications and meet all relevant legislation. Please note items REH700 and REH600 are not OE but are E-marked.

### Shell Horns

Ring's shell horns are powerful with a high quality sound level. They can be fitted to many different 24V vehicle models, and are available in high and low tone options.

### Disc Horns

Ring's disc horns give an excellent performance within a simple design, and are available in 12V and 24V options. They are suitable for almost any kind of vehicle.

Both shell and disc horns are compliant with the European electromagnetic horn related ECE R-28 and EEC70/388 regulations and norms based on their environment friendly decibel adjustments, quality and technical specifications.

24V LOW  
TONE



**Disc Horn**



24V HIGH  
TONE



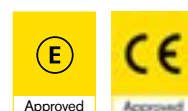
**Disc Horn**



24V LOW  
TONE



**Shell Horn**



24V HIGH  
TONE



**Shell Horn**



#### Specification

<b>Product Code:</b>	D2L24
<b>Voltage:</b>	24V
<b>Type:</b>	Disc Horn
<b>Tone:</b>	Low
<b>Terminals:</b>	Twin

#### Specification

<b>Product Code:</b>	D2H24
<b>Voltage:</b>	24V
<b>Type:</b>	Disc Horn
<b>Tone:</b>	High
<b>Terminals:</b>	Twin

#### Specification

<b>Product Code:</b>	S2L24
<b>Voltage:</b>	24V
<b>Type:</b>	Shell Horn
<b>Tone:</b>	Low
<b>Terminals:</b>	Twin

#### Specification

<b>Product Code:</b>	S2H24
<b>Voltage:</b>	24V
<b>Type:</b>	Shell Horn
<b>Tone:</b>	High
<b>Terminals:</b>	Twin

24V LOW  
TONE



**Shell Horn**



24V HIGH  
TONE



**Shell Horn**



12V LOW  
TONE



**Disc Horn**



12V HIGH  
TONE



**Disc Horn**



#### Specification

<b>Product Code:</b>	REH240
<b>Voltage:</b>	24V
<b>Type:</b>	Shell Horn
<b>Tone:</b>	Low
<b>Terminals:</b>	Twin/Single

#### Specification

<b>Product Code:</b>	REH250
<b>Voltage:</b>	24V
<b>Type:</b>	Shell Horn
<b>Tone:</b>	High
<b>Terminals:</b>	Twin/Single

#### Specification

<b>Product Code:</b>	REH700
<b>Voltage:</b>	12V
<b>Type:</b>	Disc Horn
<b>Tone:</b>	Low
<b>Terminals:</b>	Twin

#### Specification

<b>Product Code:</b>	REH600
<b>Voltage:</b>	12V
<b>Type:</b>	Disc Horn
<b>Tone:</b>	High
<b>Terminals:</b>	Twin

# Guide to Legislation

## Warning Light Legislation

### Which vehicles are affected?



**L** - Motor vehicles with less than four wheels.



**M** - Motor vehicles with at least four wheels and used for the carriage of passengers.



**N** - Power driven vehicles having at least four wheels and used for the carriage of goods.



**O** - Trailers.



**T** - Agricultural, forestry and mobile machinery.

(For full category definition visit [www.unece.org](http://www.unece.org))



## Legislation applicable to beacons, roof bars and strobes used on the highway

### Traffic signs manual - Chapter 8 Traffic Safety Measures and Signs for Road Works & Temporary Situations

**What is it?** - Within the regulations, Chapter 8 specifies the requirement of beacons used 'on high speed roads'. The vehicles included are any that stop on the highway for works purposes or inspections. These shall be equipped with either a roof-mounted flashing amber warning light bar (comprising at least 2 independent light sources) or 2 independent roof mounted flashing amber warning beacons visible through 360°

To comply with the requirements, warning lamps must:

- Be UN ECE Reg 65 approved for Special Warning Lamps
- Be fitted in the correct position i.e. if a roof mounted beacon is likely to be obscured at the rear by other roof mounted equipment, additional beacons should be fitted.

**What it affects** - Roof mounted beacons shall be in use when entering, leaving or moving within the site and when travelling in traffic at less than the general traffic speed and when stationary on the hard shoulder. Vehicles engaged on snow clearing, gritting operations or similar work shall display a flashing amber warning at all times when operating.

**See:** Department for Transport / Highways agency, Department for Regional Development (Northern Ireland), Transport Scotland and Welsh Assembly Government.

### ECE Regulation 65 - Uniform provisions concerning the approval of special warning lamps for power-driven vehicles and their trailers.


**What is it?** - Reg 65 details the specification of Special Warning Lamps (Beacons, Roof Bars & Strobes) which are used on the highway. The regulation ensures the light output, colour, flash frequency and construction of the lamps meet the required standards. The markings on the lamps confirm the lamps approval to Reg 65.

**What it affects** - Vehicles in categories L, M, N, O & T

## Vehicle Upgrade Legislation

**Although this regulation has not been adopted in the UK any beacon carrying the ECE Reg 65 approval mark must meet the standard.**

Look for this symbol on Ring products to be assured of ECE Reg 65 compliance.

**TA1-02**  **xxxx**

**See: UN ECE United Nations Economic Commission for Europe**

**ECE Regulation 10 - Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility (EMC)**

**What is it?** - Electromagnetic compatibility is the ability of a product to function in an electromagnetic environment without affecting other components or the vehicle. This applies to original equipment and aftermarket fitted products including warning lighting such as beacons.

**What it affects** - Vehicles in categories L, M, N & O.

Look for this symbol on Ring products to be assured of Reg10 compliance.

**10R-04**  **xxxx**

**See: UN ECE United Nations Economic Commission for Europe**

## Type Approval - Legislation relevant to vehicle builders and converters

**EC Directive 2007/46/EC – European Community Whole Vehicle Type Approval**

**What is it?** – Certification granted to a product that meets a minimum set of regulatory, technical and safety requirements. A type approved product requires approval certifications, drawings & photographs. These are available from Ring upon request.

**Do I need it?** – As part of European Community Whole Vehicle Type Approval (ECWVTA) set out in 2007/46/EC, all categories of vehicles need to meet the requirements of Directive 72/245/EEC.

**Products requiring E approval** – Only those components that are defined as being 'immunity-related' require Automotive Type Approval.

'Immunity-related' is defined within the Directive, but the term applies to the following:

- Related to the direct control of the vehicle
- Related to driver, passenger and other road-user protection
- Related to causing confusion to the driver and other road users by optical and audible disturbances
- Related to vehicle data bus functionality
- Related to vehicle statutory data

If your product falls within any of these areas, you will need full Type Approval for components (e-marking) Source; [www.dft.gov.uk/vca](http://www.dft.gov.uk/vca) Those products defined as being 'non-immunity related' require compliance with the generic EMC Directive 2004/108/EC or the RTTE Directive 1999/5/EC and CE-marking, along with a 2004/104/EC 'Annex IIIC attestation' from a Technical Service.

**Who it affects** – Anyone who builds on, converts, modifies, or adds to a type approved vehicle.

See: VCA (Vehicle Certification Agency) the designated UK Approval Authority and Technical Service for type approval to all automotive European Community (EC) Directives and the equivalent United Nations Economic Community for Europe (ECE) Regulations.

## Ring bulbs are:



### ECE Reg 37 - E marking

ECE Reg 37 is the European Standard for automotive bulbs implemented to guarantee the performance standards of bulbs. It applies to most exterior lighting and has been adopted throughout Europe. Only bulbs carrying an appropriate E mark can be used on the road. "Off-road vehicles" are exempt. Gas discharge lamps have their own standard which is ECE Reg 99.



### Lead Free

Environmental legislation introduced in July 2006 prohibits the use of lead in bulbs. Ring bulbs are now manufactured using lead free solder and lead free glass.

## All Ring headlamp bulbs are:



### UV Cut

Ultra Violet light can damage headlamps manufactured with plastic components making lenses brittle and cloudy. Ring headlamp bulbs are UV cut to protect the vehicles lighting systems.

# Don't forget...

...Fleet operators also run cars too. Ring has a vast range of handy multifunctional driver and operator accessories to help ease the load for busy work areas and roadside situations.



## 4 x Smart USB In-Car Charger

- Automatically detects the connected device for faster charging
- With built-in fuse to protect your vehicle and device against overload and overcurrent
- Universal intelligent fast charging - charge your devices at an optimal rate



## MP120 Compact Inverter

- 120W inverter, converts 12V DC power to 230V AC power
- Suitable for devices up to 120W
- Simple to use - plug directly into 12V socket
- Includes 2.1A USB socket - ideal for charging smart phones and tablets
- Coiled cable stays tidy in the vehicle



## PowerSource 150W Compact Inverter

- Compact 150W inverter, converts 12V DC power to 230V AC power
- Suitable for devices up to 150W
- Simple to use - plug directly into 12V socket
- Includes 2.1A USB socket - ideal for charging smartphones and tablets
- Compact and lightweight for easy storage



## 2 x 12V, 1x USB Multi Socket

- Double 12V multisocket with a USB port
- 1A USB charging socket suitable for charging smart phones and mp3 players
- 2 x 12V DC sockets suitable for powering products up to 8A
- Battery analyser to keep an eye on your car battery
- Width adjustment fitting collar

### Specification

<b>Product Code:</b>	RMS21
<b>Voltage:</b>	5V
<b>Weight:</b>	0.03kg
<b>AmpsOutput:</b>	6.8A
<b>Wattage:</b>	34W
<b>Product Dimensions:</b>	H32 x W37 x D71mm

### Specification

<b>Product Code:</b>	RINV120
<b>Voltage:</b>	12V DC Input 230V AC Output
<b>Weight:</b>	0.27kg
<b>AmpsOutput:</b>	-
<b>Wattage:</b>	120W
<b>Product Dimensions:</b>	H104 x W73 x D28mm

### Specification

<b>Product Code:</b>	RINVU150
<b>Voltage:</b>	12V DC Input 230V AC Output
<b>Weight:</b>	0.368kg
<b>AmpsOutput:</b>	-
<b>Wattage:</b>	150W
<b>Product Dimensions:</b>	H51 x W105 x D140mm

### Specification

<b>Product Code:</b>	RMS7
<b>Voltage:</b>	12V DC
<b>Weight:</b>	0.174kg
<b>AmpsOutput:</b>	8A
<b>Wattage:</b>	96W
<b>Product Dimensions:</b>	H41 x W120 x D79mm

Ring also has a range of support literature available:



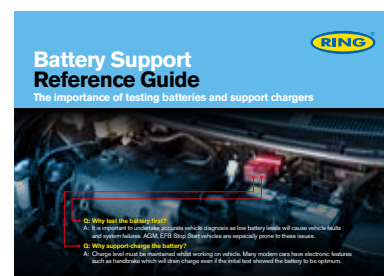
Technical Bulb Guide  
(Part no CAT1341)



Bulb Application Guide  
(Part no CAT1366)



Inverter Guide  
(Part no CAT1354)



Battery Support Guide  
(Part no CAT1407)





## LED Pocket Lamp

- Bright illumination from 8 LEDs
- Produces 40 lumens of light
- Pocket-sized and lightweight, to use anywhere
- Seven hour operating time, with batteries included (3x AAA)
- Use hands free, thanks to the integrated magnet and swivel pocket clip



## LED Head Torch

- Bright white LED torch, producing a light closer to daylight for better illumination
- Long-life LED bulbs last for 100,000 hours
- Produces bright light that doesn't dim as the batteries are used up
- Perfect for working at night or on site in dark areas
- 3 x AAA batteries included



## Handheld Spotlight

- 125 lumen light output for a bright light
- Includes a 90 degree rotating handle for multi-positional handling
- Comfortable grip handling for all round illumination
- Beam output is well focused and reliable with a battery life of 16 hours
- Perfect for leisure activities such as camping and fishing



## Heavy Duty LED Torch

- LED torch with 200 lumen, 100 lumen and flash settings
- CREE LED for superior light quality
- 2 hour operating time (high), 20 hour (low)
- 60m beam
- Aluminium – light and durable
- Batteries included

### Specification

<b>Product Code:</b>	RIL51
<b>Battery Info:</b>	Batteries Included Type: Disposable 3 x Custom
<b>Weight:</b>	0.052kg
<b>Product Dimensions:</b>	H159 x W21 x D28mm

### Specification

<b>Product Code:</b>	RT5174
<b>Battery Info:</b>	Batteries Included Type: Disposable 3 x AAA - LR03
<b>Weight:</b>	0.094kg
<b>Product Dimensions:</b>	H60 x W70 x D82mm

### Specification

<b>Product Code:</b>	RT5180
<b>Battery Info:</b>	Batteries Included Type: Disposable 3 x AA - LR6
<b>Weight:</b>	0.4kg
<b>Product Dimensions:</b>	H163 x W119 x D191mm

### Specification

<b>Product Code:</b>	RT5194
<b>Battery Info:</b>	Batteries Included Type: Disposable 3 x AAA - LR03
<b>Weight:</b>	0.142kg
<b>Product Dimensions:</b>	H120 x W34 x D34mm



## High Visibility Vest

- High visibility vest
- Emergency essential - perfect to keep in car
- Compulsory in most European countries
- Meets EN204721 standards



## Rapid Digital Tyre Inflator

- Digital tyre inflator ideal for cars, vans, motorcycles and more
- Inflates a tyre in two minutes
- Quick setting digital gauge
- Automatically stops at the set pressure and remembers it for future use
- Measures in PSI, BAR and kPA



## Cordless Digital Tyre Inflator and Air Pump

- Cordless tyre inflator
- Inflates a tyre in two minutes
- Inflates a single air bed in two minutes
- Quick setting digital gauge
- Easy to read digital screen

### Specification

<b>Product Code:</b>	RCTHV2
<b>Weight:</b>	0.14kg
<b>Product Dimensions:</b>	H2 x W570 x D690mm

### Specification

<b>Product Code:</b>	RTC1000
<b>Voltage:</b>	12V
<b>Wattage:</b>	180W
<b>AmpsOutput:</b>	15A
<b>Weight:</b>	1.5kg
<b>Product Dimensions:</b>	H225 x W205 x D95mm

### Specification

<b>Product Code:</b>	RTC6000
<b>Voltage:</b>	12V 230V
<b>Wattage:</b>	180W
<b>AmpsOutput:</b>	15A
<b>Weight:</b>	1.8760kg
<b>Product Dimensions:</b>	H310 x W254 x D82mm



**Ring Automotive Limited** . Gelderd Road, Leeds, LS12 6NA United Kingdom  
Telephone +44 (0)113 213 2000 Fax +44 (0)113 231 0266

[www.ringautomotive.com](http://www.ringautomotive.com)

    /ringautomotive

In line with our policy of continuous product development, Ring Automotive Limited reserve the right to alter specification without notice.  
Whilst every care has been taken in compiling the information in this catalogue, Ring Automotive Limited cannot accept legal liability for any errors or omissions. Manufacturers' names and part numbers are for reference only. Illustrations are intended only to be representative of the parts offered, sizes quoted are nominal. © Copyright 2020 Ring Automotive Limited.

CAT1430



BS EN ISO 9001:2008  
FM 504682

