

LIGHT

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We put 31 sets of driving lights through the wringer to determine which give you the best bang for your buck





ING THE WAY



Hitting the tracks at night demands a whole new level of concentration compared to driving in the daylight. Whether it's scrambling over the rocks or barrelling down outback roads, seeing exactly what lies ahead once the sun goes down is vital to safe 4WDing.

With the majority of factory headlights doing little more than filling in the holes at the corners of the grille, many of us turn to a trusty set of driving lights to help shine the way at night.

With the abundance of aftermarket driving lights to choose from on the market, it can often be difficult to decide on a particular set that can light up the way. If you're anything like us, you'll want to know that the lights you're about to hand over your hard-earned for are going to be up to the task for years to come!

Driving lights are one of the most popular 4WD accessories. You'll find a set bolted to the bullbar of practically every 4WD on a trip, but just how well does each brand actually work? Is it worth saving your coin for the new high-intensity discharge (HID) and light-emitting diode (LED)

technology or should you stick with the cheaper halogen lights?

There's more to a driving light than simply how far down the road it will illuminate. Sure that's important, but it's just one of many factors that need to be considered when choosing your next set of driving lights.

For instance, how good is the light at helping you pick objects that are on the side of the road? Can it withstand a serious impact? Or how about repeated dunking into cold water? Can it be adjusted to suit your fourby? Oh, and just how tough is the construction?

Yep, there's more to it than just the light output, and we set out to test each and every one to its limits. We did the 'real world' testing over months so you don't have to! We've hunted down 31 sets of driving lights from 16 different manufacturers, including a number of previously untested lights new to the market.

Not only does this epic comparo include both halogen and HID lights, but for the first time you'll see LED driving lights compared against each other. So sit back and quench your thirst as we put each and every light through its paces. *AWD*

> THE CONTENDERS

Each light manufacturer was given the opportunity to provide one set of driving lights from each of the three categories of driving lights – halogen, HID and LED. The only preference given was that a driving and spot-style combination of lights be provided (either through lens, reflector or cover design).

This would see the best-selling light from each manufacturer included in the comparo. We were more interested in rolling up our sleeves for some in-depth testing on the most popular lights that are available, rather than displaying each manufacturer's full range of lights.

HALOGEN LIGHTS

BRITAX – X-Ray Vision 220 Series
BUSHRANGER – Night Hawk 205mm
HELLA – Rallye FF 4000 Compact
IPF – 900XS
KC – Daylighters 6in
LIGHTFORCE – 240 XGT
NARVA – Ultima 225
NIGHT STALKER – 200 Series
ROO LIGHT – 180 XP
ULTRA AUTO – Power Vision Quattro Elite
XXX – 220 Series

HID LIGHTS

BAJA DESIGNS – Soltek 6in Pre-Runners HID
BRITAX – X-Ray Vision 220 Series HID
BUSHRANGER – Night Hawk 205mm HID
HELLA – Rallye FF 4000 Compact Xi XGD
IPF – 900XS HID
KC – HID PODs
LIGHTFORCE – 240 XGT HID
NARVA – Extreme 225 HID
NIGHT STALKER – 170 Series HID
PIRANHA OFF-ROAD – CAT Series HID
ROAD VISION – Viper
ULTRA AUTO – Power Vision Quattro Elite HID
XXX – 2003 Series HID

LED LIGHTS

BAJA DESIGNS – 20in Stealth light bar
BRITE LED TECH – High Intensity 20in LED bar
KC – LED PODs
NARVA – High-powered 24in light bar
RIGID INDUSTRIES – 20in 'E' Series combo light bar
ROAD VISION – 6in round 6100 Series
ULTRA AUTO – Dura Vision 22in Euro light bar



HALOGEN LIGHTS

Halogen lights are the entry-level driving lights that most of us settle on if the budget's a little on the tight side.

Halogen globes are similar to most of the incandescent globes fitted to your 4WD, in that they have a filament that glows to produce light.

As current from the battery passes through this thin tungsten filament, it causes resistance, which makes it heat up and give off the light we see.

The difference is in what surrounds the filament. Halogen globes are filled with a pressurised gas that helps the filament operate hotter without blowing, at the same time producing a brighter light.

MOST SUITED TO:
BUDGET-CONSCIOUS 4WDER

HIGH-INTENSITY DISCHARGE LIGHTS

The majority of HID lights will leave traditional halogen globes in their dust. HID lights work very differently to halogen globes to give them the advantage when it comes to light output versus rated wattage.

HID lights fire a pulse of electrical charge triggered by separate ballast, between two electrodes encased in the gas-filled globe. Since the globe has no filament like a halogen, the life expectancy of a HID globe is approximately 2000 hours. As there is no resistance from the bulb filament, the pulse uses less current to produce a much brighter output, much like fluorescent light.

MOST SUITED TO:
HIGH-SPEED TOURING

LIGHT-EMITTING DIODES

While LED technology has been around for some time now, the prospect of running a driving light incorporating LEDs powerful enough to light the way is a relatively new concept.

The compact nature of the LED brings with it a whole new range of light design. Like HID lights, LEDs also don't have a filament. Instead, light is produced as the electrons are excited inside the individual LED wafer chip. They draw very little power and are extremely resistant to vibrations.

MOST SUITED TO:
LOW-RANGE 4WDING

WHAT IS LUX?

Lux is a measurement of the actual intensity of light falling on a specified area, and is an accurate way to describe lighting requirements. Unfortunately, since it depends on how the light gets from the bulb to the area, it is not often specified by the manufacturer.

Lux is defined as lumens (The total amount of light that a bulb is capable of generating) per square metre. If all the light from a 3000-lumen bulb was perfectly focused on a 1m² area, the intensity at any spot in that area would be 3000 lux. The thing is, the way typical driving light reflectors both shape and reflect their light is mostly where the difference in light performance develops from.

To give you an idea how the lux readings we used for the light output test relate to what your eye can see, we've included these everyday lux readings.

1 LUX	– Enough light to read a newspaper
50 LUX	– Family living room
80 LUX	– Hallway/toilet
100 LUX	– Very dark overcast day
320-500 LUX	– Typical office lighting
400 LUX	– Sunrise or sunset on a clear day
10,000-25,000 LUX	– Full daylight (not direct sunlight)
32,000-130,000 LUX	– Direct sunlight

WHAT THE LIGHTS WERE UP AGAINST PUNCHING INTO THE DARKNESS

In true 4WD Action style, we nipped out a series of real-world tests that would see only the strongest lights survive. First off, we tested how far each set of lights could illuminate down the road, which included the width of useful light off to each side. After all, the main reason most of us turn to a set of driving lights is to increase our night-driving visibility!

The driving lights were fitted to our test jig, powered up with a constant 12V supply and precisely aligned down the road. A reference image was taken with each set of lights operating in complete darkness using identical exposure settings on the camera. The brightness of each light was measured using a lux meter at set points along the road. Lux meters measure the amount of visible light in lumens per square metre and are an ideal indicator for what the human eye can see.





UNDERWATER ANTICS

The next test we had lined up was the submersion test. This wasn't going to be your average dunk in the water. Each light was powered up for 15 minutes to bring it up to its operating temperature. While the lights were still powered up and the lens, globe and housing were hot, they were fully submerged in the icy-cold river for one minute. Once it was removed, we inspected the lights thoroughly for water entry both in the housing and lens area.

How well a driving light resists water entering the reflector area indicates two main points. Firstly, water trapped in the reflector area will most certainly lead to condensation on the inside of the lens, decreasing its performance. While the water we were testing in was fairly clear, had it been muddy, like when crossing a churned-up creek, the light's output will become drastically reduced if any foreign muck is allowed to settle on the reflector or globe surfaces. The second factor to consider is if water can enter the light, so can dust when you're barrelling down a dusty track in a convoy.

SMASH AND GRAB

The last test we had in store for the lights was the impact-resist-

ance test. Getting stones flung up at your 4WD is a common occurrence when travelling off-road, especially when passing another 4WD or road train along an outback road. We fabricated a jig to hold and power up the lights, which incorporated a pendulum swing that was set up to strike the centre of each light.

The pendulum was specifically weighted to simulate the impact of a large rock strike similar to what you would come across in gibber country travelling. This test would see every aspect of the light's construction, including the lens protector design, pushed to its limits.

FACTORING IN THE FEATURES

Along with the real-world testing, we considered a number of points that impacted the overall results. Things such as the mounting system – is it strong and versatile? Was it easy to adjust? Do the lights include a wiring loom and was it good enough? Did the lights come with covers and how well did they fare during the testing? And would the lights fit the average bullbar without modification? We also took note of the current draw during the output testing to compare each light.

Readings were taken at set distances to measure the light's output, marked out every 100m (you can see the white signs along the right side of the road in the images below).

The lux meter was positioned in the centre of the track and remained at a constant height to keep things fair when taking the readings. The width of useful illumination was also measured 25m out from the lights, taking readings at 5m increments out to the side until the light was no longer visible.



ILLUMINATING THE DARKNESS

THE TEST AREA

Skippy sent in a few of his inflatable mates to stand in during the night testing to help give you an idea of just how well (or not so well) the lights illuminated the sides of the road.

There are four kangaroos all up hiding around in the darkness in every light output shot. There's a kangaroo on the left of the track at 30m out, one at 10m on the right of the track, another two are off to the right 25m out, but 10m and 20m further into the darkness.

The white markers you can see down the right side of the track are our distance markers, 100m apart for the lux reading. It's also worth noting how well some lights filled the rut running across the track with light. Whether it's a kangaroo hopping out in front of you or the changing track ahead, one thing's for sure: the earlier you can spot these dangers at night, the less chance there is of hitting them.



STAR RATING SYSTEM

MOUNTING SYSTEM: Was the mounting system strong, versatile, and easy to adjust?

WIRING LOOM: Was the loom up to the task? Lights also lost points if their loom came at an additional cost.

LIGHT QUALITY: The overall effectiveness of the light beam pattern and colour. This score was based against the category the lights came from to give you a fair comparison between the other lights in its group.



Each light was precisely aligned before any testing began. The alignment of each light was then double-checked with the lux meter at the 100m mark to ensure the main focal point of the light pattern was at its best

HALOGEN LIGHTS

> BRITAX X-RAY VISION 220 SERIES

BULB WATTAGE: 100W

AMP DRAW: 7.1 amps @ 12 volts

DIMENSIONS (WxDxH): 220mm x 132mm x 237mm

WEIGHT PER LIGHT: 1.7kg

HOUSING MATERIAL: Die-cast alloy

LENS MATERIAL: Hardened glass lens

REFLECTOR TYPE: Vacuum aluminised die-cast alloy

WIRING LOOM: Quick fit wiring loom sold separately for approx \$60

LENS PROTECTORS: Clear protector included

WARRANTY: One year

MADE IN: Taiwan, with European globes

AVAILABILITY: TJM Distributors, www.tjm.com.au,
www.xrayvision.net, www.britaxae.com.au

RRP: \$220 per light



MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★

LIGHT OUTPUT	
DISTANCE	SPREAD
37 lux @ 100m	8 lux @ 5m
9 lux @ 200m	-
4 lux @ 300m	-
2 lux @ 400m	-
1 lux @ 500m	-

> BUSHRANGER NIGHT HAWK 205MM

BULB WATTAGE: 100W

AMP DRAW: 8.3 amps @ 12 volts

DIMENSIONS (WxDxH): 205mm x 130mm x 255mm

WEIGHT PER LIGHT: 1.3kg

HOUSING MATERIAL: Powdercoated steel body with stainless steel outer rim

LENS MATERIAL: UV-stabilised high-impact glass

REFLECTOR TYPE: Steel with Electroless Deposition (ED) coating and electro aluminium finish

WIRING LOOM: Complete loom supplied

LENS PROTECTORS: Clear covers supplied

WARRANTY: One year

MADE IN: China

AVAILABILITY: Bushranger distributors, www.bushranger.com.au

RRP: \$297 (per kit)



MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★

LIGHT OUTPUT	
DISTANCE	SPREAD
15 lux @ 100m	1 lux @ 5m
3 lux @ 200m	-
1 lux @ 300m	-

> HELLA RALLYE FF 4000 COMPACT

BULB WATTAGE: 100W
AMP DRAW: 6.2 amps @ 12 volts
DIMENSIONS (WXDXH): 170mm x 115mm x 170mm
WEIGHT PER LIGHT: 1.5kg
HOUSING MATERIAL: Coated zinc alloy
LENS MATERIAL: Impact-resistant glass
REFLECTOR TYPE: Vacuum aluminised silicon-coated metal
WIRING LOOM: Wiring loom available separately for \$95
LENS PROTECTORS: Clear covers available separately for \$20
WARRANTY: Three years
MADE IN: Germany
AVAILABILITY: All good automotive retailers, www.hella.com.au

PRICE: From \$295 per light
 (check with your nearest retailer for current pricing)

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★

**THERE'S MORE TO
IT THAN JUST THE
LIGHT OUTPUT!**



LIGHT OUTPUT

DISTANCE	SPREAD
15 lux @ 100m	2 lux @ 5m
3 lux @ 200m	-
1 lux @ 300m	-

> KC CLASSIC DAYLIGHTERS 6IN

BULB WATTAGE: 130W
AMP DRAW: 10.8 amps @ 12 volts
DIMENSIONS (WXDXH): 155mm x 133mm x 180mm
WEIGHT PER LIGHT: 0.9kg
HOUSING MATERIAL: Stainless steel
LENS MATERIAL: Hardened glass
REFLECTOR TYPE: Parabolic metal
WIRING LOOM: Pre-terminated loom included
LENS PROTECTORS: Yellow 'happy face' covers included, clear covers available for \$39
WARRANTY: 23 years
MADE IN: USA
AVAILABILITY: 4WD USA - Western Australia and other 4WD accessory retailers, www.4wdusa.com.au
RRP: \$377 (per kit)

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
5 lux @ 100m	1 lux @ 5m
1 lux @ 400m	-

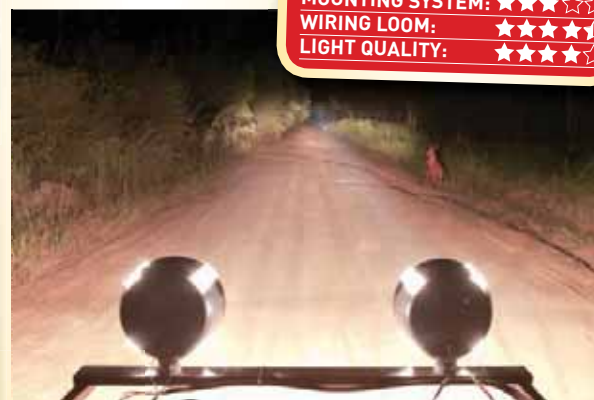


> IPF 900 XTREME SPORT SERIES

BULB WATTAGE: 65W
AMP DRAW: 4.7 amps @ 12 volts
DIMENSIONS (WXDXH): 200mm x 115mm x 220mm
WEIGHT PER LIGHT: 1.2kg
HOUSING MATERIAL: Heavy gauge steel
LENS MATERIAL: Hardened glass
REFLECTOR TYPE: Heat-proof resin
WIRING LOOM: Complete plug-in loom included with kit
LENS PROTECTORS: White protectors included, clear protectors available for \$35
WARRANTY: Two years
MADE IN: Japan
AVAILABILITY: ARB stores and stockists, www.arb.com.au
RRP: \$448 per kit

**BEST
VALUE
FOR MONEY**

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
19 lux @ 100m	16 lux @ 5m
5 lux @ 200m	-
2 lux @ 300m	-
1 lux @ 400m	-





> LIGHTFORCE 240 XGT

BULB WATTAGE: 100W

AMP DRAW: 8.33 amps @ 12 volts

DIMENSIONS (WDXH): 247mm x 175mm x 265mm

WEIGHT PER LIGHT: 1.3kg

HOUSING MATERIAL: Polycarbonate, glass-filled nylon composite

LENS MATERIAL: Polycarbonate

REFLECTOR TYPE: Vacuum metallised, copolymer carbonate resin

WIRING LOOM: Sold separately for \$125

LENS PROTECTORS: Clear clip-on spot protectors included, coloured and spread diffuser covers can be purchased for \$33 each

WARRANTY: Three years

MADE IN: Australia

AVAILABILITY: Leading 4WD accessory retailers, www.lightforce.com

RRP: \$266 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
40 lux @ 100m	7 lux @ 5m
6 lux @ 200m	5 lux @ 10m
4 lux @ 300m	1 lux @ 15m
1 lux @ 400m	-

> NIGHT STALKER 200 SERIES

BULB WATTAGE: 100W

AMP DRAW: 6.8 amps @ 12 volts

DIMENSIONS (WDXH): 200mm x 127mm x 216mm

WEIGHT PER LIGHT: 1.6kg

HOUSING MATERIAL: Powdercoated steel with stainless steel rim

LENS MATERIAL: Hardened shock-resistant glass

REFLECTOR TYPE: Vacuum aluminised silicon-coated metal

WIRING LOOM: Complete loom available separately

LENS PROTECTORS: Clear Lexan protectors provided. Amber and blue sold separately

WARRANTY: One year (excluded globe)

MADE IN: Taiwan

AVAILABILITY: 4WD and automotive retailers,

www.hansaparts.com.au

RRP: \$199 per pair

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
33 lux @ 100m	0 lux @ 5m
8 lux @ 200m	-
3 lux @ 300m	-
2 lux @ 400m	-
1 lux @ 500m	-

> NARVA ULTIMA 225

BULB WATTAGE: 100W

AMP DRAW: 7.3 amps @ 13.8 volts

DIMENSIONS (WDXH): 225mm x 150mm x 250mm

WEIGHT PER LIGHT: 1.4kg

HOUSING MATERIAL: Glass reinforced nylon

LENS MATERIAL: Hardened polycarbonate

REFLECTOR TYPE: Vacuum aluminised coated metal

WIRING LOOM: Complete plug and play harness (including polarity switch box)

LENS PROTECTORS: Clear polycarbonate protectors included

WARRANTY: One year

MADE IN: Taiwan

AVAILABILITY: All specialised automotive retailers,

www.narva.com

RRP: \$449 per kit

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
38 lux @ 100m	9 lux @ 5m
10 lux @ 200m	-
4 lux @ 300m	-
2 lux @ 400m	-
1 lux @ 500m	-

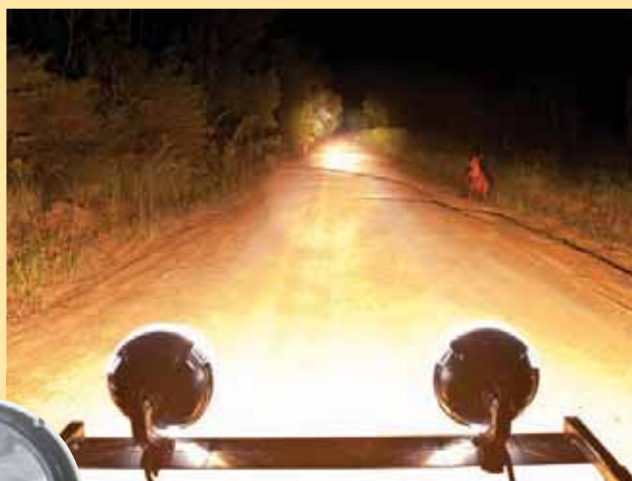


> ROO LIGHT 180XP

BULB WATTAGE: 100W
AMP DRAW: 6.8 amps @ 12 volts
DIMENSIONS (WXDXH): 180mm x 155mm x 200mm
WEIGHT PER LIGHT: 0.7kg
HOUSING MATERIAL: Impact-resistant ABS plastic
LENS MATERIAL: Shatterproof Lexan
REFLECTOR TYPE: Plated metal
WIRING LOOM: Full wiring harness included with kit
LENS PROTECTORS: Supplied with clear covers. Amber, blue and clear standard, and wide angle covers sold separately
WARRANTY: One year (excludes globes)
MADE IN: Taiwan
AVAILABILITY: 4WD and automotive retailers,
www.hansaparts.com.au

RRP: \$299 per kit

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
25 lux @ 100m	0 lux @ 5m
6 lux @ 200m	-
2 lux @ 300m	-
1 lux @ 400m	-

> ULTRA AUTO POWER VISION QUATTRO ELITE 210MM

BULB WATTAGE: 100W
AMP DRAW: 6.2 amps @ 12 volts
DIMENSIONS (WXDXH): 210mm x 135mm x 230mm
WEIGHT PER LIGHT: 1.6kg
HOUSING MATERIAL: Reinforced nylon composite
LENS MATERIAL: Hard coated, UV stable polycarbonate
REFLECTOR TYPE: Aluminium free-form
WIRING LOOM: Complete loom included
LENS PROTECTORS: Clear polycarbonate protector included, blue also available
WARRANTY: Three years
MADE IN: Australia
AVAILABILITY: Major 4WD retailers, www.ultraauto.com.au

RRP: \$249 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
12 lux @ 100m	10 lux @ 5m
3 lux @ 200m	-
1 lux @ 300m	-

> XXX 220 SERIES

BULB WATTAGE: 100W
AMP DRAW: 6.8 amps @ 12 volt
DIMENSIONS (WXDXH): 220mm x 175mm x 230mm
WEIGHT PER LIGHT: 0.9kg
HOUSING MATERIAL: Impact-resistant ABS plastic
LENS MATERIAL: Shatterproof Lexan
REFLECTOR TYPE: Plated metal
WIRING LOOM: Available separately
LENS PROTECTORS: Supplied with a blue covers. Amber and clear covers sold separately
WARRANTY: One year (excludes globes)
MADE IN: Taiwan
AVAILABILITY: 4WD and automotive retailers,
www.hansaparts.com.au

RRP: \$289 each

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
23 lux @ 100m	1 lux @ 5m
6 lux @ 200m	-
2 lux @ 300m	-
1 lux @ 400m	-



HID DRIVING LIGHTS

> BAJA DESIGN SOLTEK PRE-RUNNER 6IN

BULB WATTAGE: 55W
BALLAST LOCATION: Internally mounted
AMP DRAW: 5.1 amps (5.3 amps on start-up)
DIMENSIONS (WXDXH): 165mm x 135mm x 186mm
WEIGHT PER LIGHT: 1.5kg
HOUSING MATERIAL: Cast aluminium with steel mounting plate and three-point rubber vibration isolator
LENS MATERIAL: Hard-coated polycarbonate lens with silicone gasket
REFLECTOR TYPE: Multi-surfaced reflector
WIRING LOOM: Complete wiring loom included when lights purchased as a pair
LENS PROTECTORS: In production at time of testing
WARRANTY: Lifetime
MADE IN: USA
AVAILABILITY: Roo Systems Australia, www.baja.roosystems.com.au

RRP: \$495 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

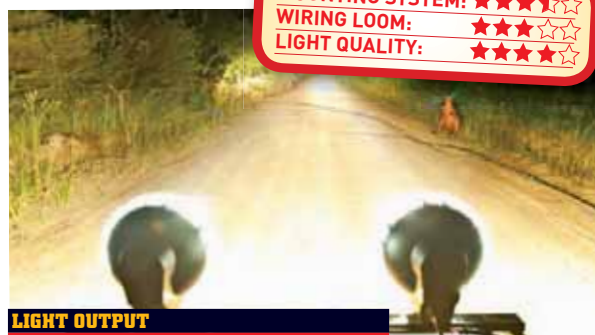
DISTANCE	SPREAD
40 lux @ 100m	10 lux @ 5m
10 lux @ 200m	2 lux @ 10m
5 lux @ 300m	-
3 lux @ 400m	-
2 lux @ 500m	-
1 lux @ 600m	-

> BRITAX X-RAY VISION 220 SERIES HID

BULB WATTAGE: 50W
BALLAST LOCATION: Internally mounted
AMP DRAW: 6 amps (7 amps on start-up)
DIMENSIONS (WXDXH): 220mm x 132mm x 237mm
WEIGHT PER LIGHT: 2.2kg
HOUSING MATERIAL: Die-cast alloy
LENS MATERIAL: Hardened glass
REFLECTOR TYPE: Vacuum aluminised die-cast alloy
WIRING LOOM: Quick-fit wiring loom sold separately for approximately \$60
LENS PROTECTORS: Clear protector included
WARRANTY: One year
MADE IN: Taiwan, with European HID burner
AVAILABILITY: TJM Distributors, www.tjm.com.au, www.xrayvision.net, www.britaxae.com.au

RRP: \$495 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
115 lux @ 100m	43 lux @ 5m
32 lux @ 200m	-
17 lux @ 300m	-
8 lux @ 400m	-
5 lux @ 500m	-
3 lux @ 600m	-
2 lux @ 700m	-
1 lux @ 800m	-
1 lux @ 900m	-

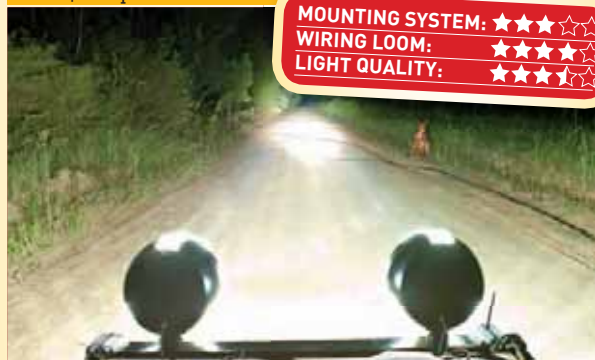


> BUSHRANGER NIGHT HAWK 205 HID

BULB WATTAGE: 35W
BALLAST LOCATION: Remote mounted externally
AMP DRAW: 3.9 amps (6 amps on start-up)
DIMENSIONS (WXDXH): 205mm x 130mm x 255mm
WEIGHT PER LIGHT: 1.6kg
HOUSING MATERIAL: Powdercoated steel body with stainless steel outer rim
LENS MATERIAL: UV Stabilised high impact glass
REFLECTOR TYPE: Steel with Electroless Deposition (ED) coating and electro aluminium finish
WIRING LOOM: Supplied in kit
LENS PROTECTORS: Clear covers supplied in kit
WARRANTY: One year
MADE IN: China
AVAILABILITY: Bushranger distributors, www.bushranger.com.au

RRP: \$495 per kit

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
29 lux @ 100m	4 lux @ 5m
8 lux @ 200m	-
3 lux @ 300m	-
2 lux @ 400m	-
1 lux @ 500m	-



> HELLA

RALLYE FF 4000 COMPACT XI XGD

BULB WATTAGE: 35W

BALLAST LOCATION: Internally mounted

AMP DRAW: 3.5 amps (9.8 amps on start-up)

DIMENSIONS (WXDXH): 220mm x 153mm x 230mm

WEIGHT PER LIGHT: 2.4kg

HOUSING MATERIAL: Coated zinc alloy with chrome rim

LENS MATERIAL: Impact-resistant glass

REFLECTOR TYPE: Vacuum aluminised silicon-coated metal

WIRING LOOM: Complete loom included

LENS PROTECTORS: Clear covers available separately for \$20

WARRANTY: Three years

MADE IN: Germany

AVAILABILITY: All good automotive retailers, www.hella.com.au

PRICE: From \$1200 per light (check with your nearest retailer for current pricing)



MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
40 lux @ 100m	51 lux @ 5m
11 lux @ 200m	20 lux @ 10m
4 lux @ 300m	1 lux @ 15m
2 lux @ 400m	-
1 lux @ 500m	-

> IPF

900 XTREME SPORT SERIES HID

BULB WATTAGE: 35W

BALLAST LOCATION: Remote mounted externally (600mm leads)

AMP DRAW: 3 amps (10 amps on start-up)

DIMENSIONS (WXDXH): 200mm x 115mm x 220mm

WEIGHT PER LIGHT: 1.8kg

HOUSING MATERIAL: Heavy-gauge steel

LENS MATERIAL: Hardened glass

REFLECTOR TYPE: Heat-proof resin

WIRING LOOM: Full wiring loom available separately for \$99

LENS PROTECTORS: Black mesh guards included, clear protectors available for \$35

WARRANTY: Two years

MADE IN: Japan

AVAILABILITY: ARB stores and stockists, www.arb.com.au

RRP: \$850 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
53 lux @ 100m	28 lux @ 5m
16 lux @ 200m	1 lux @ 10m
7 lux @ 300m	-
5 lux @ 400m	-
3 lux @ 500m	-
2 lux @ 600m	-
1 lux @ 700m	-

> KC

HID PODS

BULB WATTAGE: 50W

BALLAST LOCATION: Externally mounted on light body

AMP DRAW: 4.7 amps (8.6 amps on start-up)

DIMENSIONS (WXDXH): 185mm x 206mm x 185mm

WEIGHT PER LIGHT: 2.3kg

HOUSING MATERIAL: Carbon fibre

LENS MATERIAL: Hard-coated Lexan

REFLECTOR TYPE: Freeform spot and spread

WIRING LOOM: Supplied when lights purchased as a kit

LENS PROTECTORS: Soft padded yellow vinyl travel covers included, clear not available

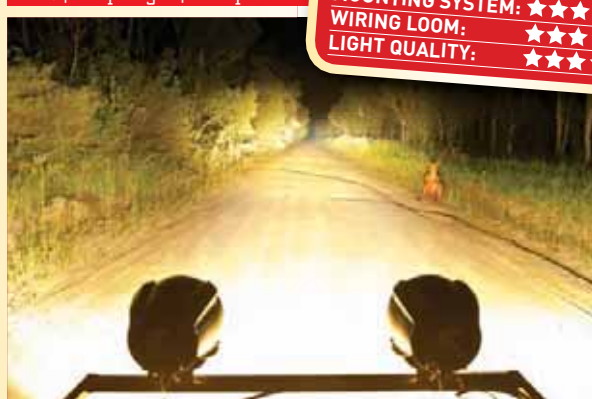
WARRANTY: 23 years

MADE IN: USA

AVAILABILITY: 4WD USA - Western Australia and other 4WD accessory retailers, www.4wdusa.com.au

RRP: \$958 per light/\$1940 per kit

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
68 lux @ 100m	90 lux @ 5m
17 lux @ 200m	3 lux @ 10m
6 lux @ 300m	-
5 lux @ 400m	-
3 lux @ 500m	-
2 lux @ 600m	-
1 lux @ 700m	-



> LIGHTFORCE 240 XGT HID

**BEST
OVERALL**



BULB WATTAGE: 50W
BALLAST LOCATION: Internally mounted
AMP DRAW: 4.1 amps (15 amps on start-up)
DIMENSIONS (WXDXH): 247mm x 175mm x 265mm
WEIGHT PER LIGHT: 1.5kg
HOUSING MATERIAL: Polycarbonate, glass filled nylon composite
LENS MATERIAL: Polycarbonate
REFLECTOR TYPE: Vacuum metallised, copolymer carbonate resin
WIRING LOOM: Sold separately for \$125
LENS PROTECTORS: Clear clip-on spot protectors included, coloured and spread diffuser covers can be purchased for \$33
WARRANTY: Three years
MADE IN: Australia
AVAILABILITY: 4WD accessory retailers, www.lightforce.com

RRP: \$948 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★

LIGHT OUTPUT	
DISTANCE	SPREAD
193 lux @ 100m	40 lux @ 5m
53 lux @ 200m	29 lux @ 10m
21 lux @ 300m	2 lux @ 15m
10 lux @ 400m	-
6 lux @ 500m	-
4 lux @ 600m	-
3 lux @ 700m	-
2 lux @ 800m	-
1 lux @ 900m	-



> NARVA EXTREME HID

BULB WATTAGE: 45W
BALLAST LOCATION: Internally mounted
AMP DRAW: 3 amps (16 amps on start-up)
DIMENSIONS (WXDXH): 242mm x 141mm x 259mm
WEIGHT PER LIGHT: 2.1kg
HOUSING MATERIAL: Glass-reinforced nylon housing with a TIG-welded chromoly steel frame
LENS MATERIAL: Glass lens
REFLECTOR TYPE: Vacuum aluminised coated metal
WIRING LOOM: Optional Narva complete plug and play loom can be purchased for \$99
LENS PROTECTORS: Clear polycarbonate protectors included
WARRANTY: One year
MADE IN: Thailand
AVAILABILITY: All specialised automotive retailers, www.narva.com

RRP: \$1195 per kit

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT	
DISTANCE	SPREAD
55 lux @ 100m	18 lux @ 5m
15 lux @ 200m	1 lux @ 10m
8 lux @ 300m	-
5 lux @ 400m	-
2 lux @ 500m	-
1 lux @ 600m	-



**IS IT WORTH SAVING YOUR
COIN FOR THE NEW HID AND
LED TECHNOLOGY?**

> NIGHT STALKER 170 SERIES HID

BULB WATTAGE: 35W

BALLAST LOCATION: Internally mounted

AMP DRAW: 4.8 amps (5.4 amps on start-up)

DIMENSIONS (WXDXH): 170mm x 108mm x 184mm

WEIGHT PER LIGHT: 1.4kg

HOUSING MATERIAL: Black powdercoated steel with a stainless steel rim

LENS MATERIAL: Hardened shock-resistant glass

REFLECTOR TYPE: Vacuum aluminised and silicon coated

WIRING LOOM: Available separately

LENS PROTECTORS: Supplied with clear Lexan covers, amber and blue covers sold separately.

WARRANTY: One year (excludes globes)

MADE IN: Taiwan

AVAILABILITY: 4WD and automotive retailers,

www.hansaparts.com.au

RRP: \$649 per pair

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
33 lux @ 100m	2 lux @ 5m
8 lux @ 200m	-
3 lux @ 300m	-
2 lux @ 400m	-
1 lux @ 500m	-

> PIRANHA OFF ROAD CAT SERIES HID

BULB WATTAGE: 35W

BALLAST LOCATION: Internally mounted

AMP DRAW: 3.4 amps (9.5 amps on start-up)

DIMENSIONS (WXDXH): 225mm x 210mm x 140mm

WEIGHT PER LIGHT: 1.3kg

HOUSING MATERIAL: Polycarbonate/nylon

LENS MATERIAL: Shock-resistant glass

REFLECTOR TYPE: Parabolic
(Driving - Multi-faceted/Spot - Free-form)

WIRING LOOM: Complete wiring loom included

LENS PROTECTORS: Clear covers included

WARRANTY: One year

MADE IN: Australia

AVAILABILITY: Piranha Off Road Products,

www.piranhaoffroad.com.au

RRP: \$960 per kit

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
50 lux @ 100m	18 lux @ 5m
14 lux @ 200m	-
6 lux @ 300m	-
3 lux @ 400m	-
2 lux @ 500m	-
1 lux @ 600m	-

> ROAD VISION VIPER HID 8500 SERIES

BULB WATTAGE: 35W

BALLAST LOCATION: Internally mounted

AMP DRAW: 3.8 amps (6 amps on start-up)

DIMENSIONS (WXDXH): 220mm x 134mm x 229mm

WEIGHT PER LIGHT: 3.0kg

HOUSING MATERIAL: Lightweight diecast aluminium

LENS MATERIAL: Hardened borosilicate glass

REFLECTOR TYPE: Vacuum aluminium metallised reflector

WIRING LOOM: Full harness included

LENS PROTECTORS: Clear protectors included

WARRANTY: Three years

MADE IN: Korea

AVAILABILITY: Road Vision high performance lights,

www.roadvision.com.au

RRP: \$750 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
29 lux @ 100m	6 lux @ 5m
7 lux @ 200m	-
3 lux @ 300m	-
1 lux @ 400m	-





> **ULTRA AUTO** **POWER VISION QUATTRO** **ELITE HID 210MM**

BULB WATTAGE: 70W
BALLAST LOCATION: Internally mounted
AMP DRAW: 5 amps (6.4 amps on start-up)
DIMENSIONS (WxDxH): 210mm x 135mm x 230mm
WEIGHT PER LIGHT: 1.9kg
HOUSING MATERIAL: Reinforced nylon composite
LENS MATERIAL: Hard coated, UV-stable polycarbonate
REFLECTOR TYPE: Aluminium free-form
WIRING LOOM: Complete loom included
LENS PROTECTORS: Clear polycarbonate protector included, blue also available
WARRANTY: Three years
MADE IN: Australia
AVAILABILITY: Major 4WD retailers, www.ultraauto.com.au

RRP: \$689 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT	
DISTANCE	SPREAD
40 lux @ 100m	24 lux @ 5m
10 lux @ 200m	1 lux @ 5m
5 lux @ 300m	-
2 lux @ 400m	-
1 lux @ 500m	-

> **XXX** **2003 SERIES HID**

BULB WATTAGE: 35W
AMP DRAW: 4.8 amps (5.4 amps on start-up)
DIMENSIONS (DxWxH): 200mm x 127mm x 216mm
WEIGHT PER LIGHT: 1.6kg
HOUSING MATERIAL: Black powdercoated steel with a stainless steel rim
LENS MATERIAL: Hardened shock-resistant glass
REFLECTOR TYPE: Vacuum aluminised and silicon coated
WIRING LOOM: Available separately
LENS PROTECTORS: Supplied with clear Lexan covers. Amber and blue covers sold separately
WARRANTY: One year (excludes globes)
MADE IN: Taiwan
AVAILABILITY: 4WD and automotive retailers, www.hansaparts.com.au

RRP: \$699 per pair

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT	
DISTANCE	SPREAD
74 lux @ 100m	4 lux @ 5m
24 lux @ 200m	-
11 lux @ 300m	-
6 lux @ 400m	-
3 lux @ 500m	-
2 lux @ 600m	-
1 lux @ 700m	-
1 lux @ 800m	-

LED DRIVING LIGHTS

> **BAJA DESIGN** **STEALTH 201N LED**

WATTAGE: 20 LEDs (42W total)
AMP DRAW: 6.9 amps @ 12 volts
DIMENSIONS (LxDxH): 561mm x 77mm x 40mm
WEIGHT PER LIGHT: 1.5kg
HOUSING MATERIAL: Black anodised extruded aluminium, with laser etching
LENS MATERIAL: Hard-coated polycarbonate (Spot/Spread beam)
WIRING LOOM: Complete loom included (Three light function includes High Performance (as tested), Medium (Dust) and Strobe mode (emergency))
LENS PROTECTORS: Not available
WARRANTY: Lifetime
MADE IN: USA
AVAILABILITY: Roo Systems Australia, www.baja.roosystems.com.au

RRP: \$995 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT	
DISTANCE	SPREAD
5 lux @ 100m	23 lux @ 5m
1 lux @ 200m	2 lux @ 10m

> **BRITE LED TECH** HIGH INTENSITY 20IN LED BAR

WATTAGE: 40 x 3W LEDs

AMP DRAW: 4 amps @ 12 volts

DIMENSIONS (LXDXH): 550mm x 75mm x 65mm

WEIGHT PER LIGHT: 1.9kg

HOUSING MATERIAL: High-impact alloy with four adjustable rubber mounts

LENS MATERIAL: High-impact polycarbonate (Spot/Spread beam)

WIRING LOOM: Comes hard-wired with Deutsch connectors

LENS PROTECTORS: Not available

WARRANTY: One year

MADE IN: China

AVAILABILITY: Brite LED Tech Pty Ltd stockist or

www.brightlightautoparts.com

RRP: \$800 per light

MOUNTING SYSTEM: ★★★★★

WIRING LOOM: ★★★★★

LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
1 lux @ 100m	7 lux @ 5m
-	5 lux @ 10m
-	1 lux @ 15m

> **KC** LED PODS

WATTAGE: 2 x 17W LEDs

AMP DRAW: 3 amps per light

DIMENSIONS (WXDXH): 185mm x 195mm x 185mm

WEIGHT PER LIGHT: 1.7kg

HOUSING MATERIAL: Carbon fibre

LENS MATERIAL: Hard-coated Lexan (Bowtie beam)

WIRING LOOM: Pre-terminated harness included

LENS PROTECTORS: Soft padded yellow vinyl travel covers included, clear not available

WARRANTY: 23 years

MADE IN: USA

AVAILABILITY: 4WD USA - Western Australia and other 4WD accessory retailers, www.4wdusa.com.au

RRP: \$925 per light

MOUNTING SYSTEM: ★★★★★

WIRING LOOM: ★★★★★

LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
8 lux @ 100m	0 lux @ 5m*
2 lux @ 200m	-

* Note: Lights also have the option of rotating the narrow bowtie pattern horizontally



> **NARVA** HIGH-POWERED LED LIGHT BAR 24IN SINGLE ROW

HONOURABLE
MENTION

WIDE
USABLE
BEAM

WATTAGE: 12 x 10W LEDs

AMP DRAW: 7.5 amps @ 12 volt

DIMENSIONS (LXDXH): 614mm x 102mm x 70mm

WEIGHT PER LIGHT: 4.8kg

HOUSING MATERIAL: Powdercoated extruded aluminium

LENS MATERIAL: Polycarbonate (Wide beam)

WIRING LOOM: Comes hard wired with Deutsch connectors

LENS PROTECTORS: Not available

WARRANTY: One year

MADE IN: Korea

AVAILABILITY: All specialised automotive retailers,

www.narva.com

RRP: \$1295 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
1 lux @ 100m	15 lux @ 5m
	6 lux @ 10m
	2 lux @ 15m
	1 lux @ 20m





> RIGID INDUSTRIES 'E' SERIES 20IN LED



WATTAGE: 40 x 3W LEDs
AMP DRAW: 5.78 amps @ 12 volts
DIMENSIONS (LXWXH): 581mm x 95mm x 82.5mm
WEIGHT PER LIGHT: 3.5kg
HOUSING MATERIAL: Extruded aluminium with cast aluminium end caps and clamps
LENS MATERIAL: Lexan polycarbonate with abrasion-resistant coating (Spot/Spread beam)
WIRING LOOM: Comes with full plug and play loom
LENS PROTECTORS: In production at time of testing
WARRANTY: Limited lifetime
MADE IN: USA
AVAILABILITY: Snake Racing Australia,
www.snakeracing.com.au

RRP: \$800 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
4 lux @ 100m	17 lux @ 5m
1 lux @ 200m	2 lux @ 10m



> ROAD VISION LED 6IN ROUND 6100 SERIES

STRONGEST
OVERALL

WATTAGE: 6 x 10W LEDs
AMP DRAW: 5 amps @ 12 volts
DIMENSIONS (WXDXH): 180mm x 81mm x 173mm
WEIGHT PER LIGHT: 2.0kg
HOUSING MATERIAL: Lightweight diecast aluminium
LENS MATERIAL: Polycarbonate (Spot and Spread beam)
WIRING LOOM: Full harness included
LENS PROTECTORS: Not available
WARRANTY: Three years
MADE IN: Korea
AVAILABILITY: Road Vision high performance lights,
www.roadvision.com.au

RRP: \$990 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
5 lux @ 100m	21 lux @ 5m
1 lux @ 200m	2 lux @ 10m



> ULTRA AUTO DURA VISION 22IN EURO BEAM

WATTAGE: 40 x 3W LEDs
AMP DRAW: 10 amps @ 12 volts
DIMENSIONS (LXWXH): 548mm x 80mm x 80mm
WEIGHT PER LIGHT: 4.7kg
HOUSING MATERIAL: Extruded 6061 aluminium
LENS MATERIAL: Hard coated, UV-stable polycarbonate (Spot/Spread beam)
WIRING LOOM: Complete harness included
LENS PROTECTORS: Not available
WARRANTY: Five years
MADE IN: Korea
AVAILABILITY: Major 4WD retailers,
www.ultraauto.com.au

RRP: \$969 per light

MOUNTING SYSTEM: ★★★★★
WIRING LOOM: ★★★★★
LIGHT QUALITY: ★★★★★



LIGHT OUTPUT

DISTANCE	SPREAD
3 lux @ 100m	23 lux @ 5m
-	3 lux @ 10m





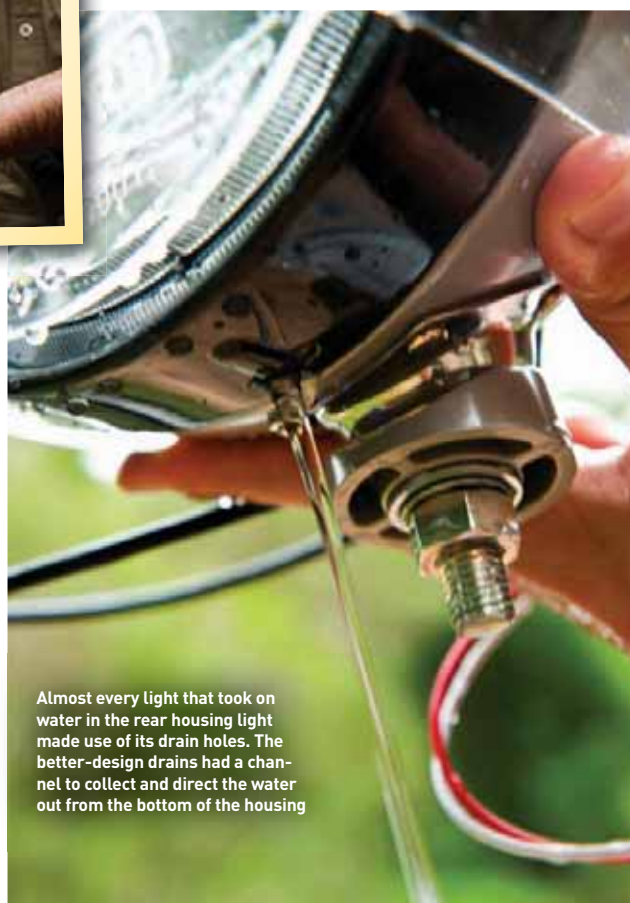
WATER SUBMERSION TESTING



Holding each light underwater as they would normally sit on your bullbar gave us an excellent indication of whether or not the driving lights were a fish tank in a past life! They were also powered up during the test to see if they operated throughout their dip in the drink



The main problem any light will face once it's taken on water in the reflector area is decreased performance, especially if it's muddy water! Once it's trapped in the reflector (as most lights did), it can be extremely difficult to clean out. The highly reflective surface of the light will quickly become tarnished, which leads to the light output suffering



Almost every light that took on water in the rear housing light made use of its drain holes. The better-design drains had a channel to collect and direct the water out from the bottom of the housing



THE RESULTS EXPLAINED

LENS/REFLECTOR REMAINED WATERTIGHT: The light received a tick if the water was kept out of the reflector area, as this is classed as a strong point in any driving light.

WATER WAS ABLE TO DRAIN FROM THE LENS AREA: The light received a tick if it was able to drain any water it took in from the lens area. Ideally you'd want the light to be waterproof, but if it had the ability to drain, this was regarded as a plus.

Where a light didn't take any water in, it was simply noted as 'n/a'.

REAR HOUSING REMAINED WATERTIGHT: The light received a tick if the rear housing (behind the reflector) was able to remain dry. With corrosion causing havoc with any electrical component, it's important that this area remains clean and dry.

WATER WAS ABLE TO DRAIN FROM THE REAR HOUSING: If the light took on water in the rear housing but was able to drain well, it scored a tick.

STILL OPERATING AFTER SUBMERSION: If the globe was no longer working after the test, it received a cross. Surprisingly, many of the lights fared well even though they hit the water while hot, proving that modern light design has improved their resistance to thermal shock.

> WATER SUBMERSION TESTING

	LENS / REFLECTOR REMAINED WATER TIGHT	WATER WAS ABLE TO DRAIN FROM LENS AREA	REAR HOUSING REMAINED WATER TIGHT	WATER WAS ABLE TO DRAIN FROM REAR HOUSING	STILL OPERATING AFTER SUBMERSION
HALOGEN LIGHTS					
BRITAX - X-Ray Vision 220 Series	✗	✗	✗	✓	✓
BUSHRANGER - Night Hawk 205mm	✗	✗	✗	✓	✓
HELLA - Rallye FF 4000 Compact	✗	✗	✗	✓	✓
IPF - 900XS	✓	n/a	✗	✓	✓
KC - Daylighters 6in	✗	✓	✓	n/a	✓
LIGHTFORCE - 240 XGT	✓	n/a	✓	n/a	✓
NARVA - Ultima 225	✗	✗	✗	✓	✓
NIGHT STALKER - 200 Series	✗	✗	✗	✓	✓
ROO LIGHT - 180 XP	✓	n/a	✓	n/a	✓
ULTRA AUTO - Power Vision Quattro Elite	✓	n/a	✓	n/a	✓
XXX - 220 Series	✓	n/a	✓	n/a	✓
HID LIGHTS					
BAJA DESIGNS - Soltek 6in Pre-Runners HID	✓	n/a	✓	n/a	✓
BRITAX - X-Ray Vision 220 Series HID	✗	✗	✗	✓	✓
BUSHRANGER - Night Hawk 205mm HID	✗	✗	✗	✓	✓
HELLA - Rallye FF 4000 Compact Xi XGD	✗	✗	✗	✓	✗
IPF - 900XS HID	✓	n/a	✗	✓	✓
KC - HID POD's	✗	✗	✗	✓	✓
LIGHTFORCE - 240 XGT HID	✓	n/a	✓	n/a	✓
NARVA - Extreme 225 HID	✓	n/a	✓	n/a	✓
NIGHT STALKER - 170 Series HID	✗	✓	✗	✓	✓
PIRANHA OFF-ROAD - CAT Series HID	✓	n/a	✗	✓	✓
ROAD VISION - Viper	✗	✗	✗	✓	✓
ULTRA AUTO - Power Vision Quattro Elite HID	✓	n/a	✓	n/a	✓
XXX - 2003 Series HID	✗	✗	✗	✓	✓
LED LIGHTS					
BAJA DESIGNS - 20in Stealth light bar	✓	n/a	✓	n/a	✓
BRIGHT LIGHT AUTO PARTS	✗	✗	✗	✗	✓
KC - LED POD's	✗	✗	✗	✓	✓
NARVA - 24in light bar	✓	n/a	✓	n/a	✓
RIGID INDUSTRIES - 20in 'E' Series combo light bar	✓	n/a	✓	n/a	✓
ROAD VISION - 6in round 6100 Series	✓	n/a	✓	n/a	✓
ULTRA AUTO - Dura Vision 22in Euro light bar	✓	n/a	✓	n/a	✓



SIMULATED LARGE ROCK STRIKE AT SPEED



Some lights absorbed the impact by flexing back at their mounting points – no matter how tight we tightened the bolts. At the end of the day, it's much better to be able to simply adjust your lights back into place after a big hit than be looking for a way to hold them together with a handful of cable ties and bottle caps



THE RESULTS EXPLAINED

LENS PROTECTOR WITHSTOOD THE IMPACT: If the lens protector cracked after the impact it was given a cross. Ultimately, the lens protector is valuable insurance that can save your light from being damaged while on a trip, so long as it doesn't allow damage to the lens.

LENS REMAINED INTACT AFTER THE TEST: If the lens itself cracked after the impact it was given a cross. In most cases, if the lens cracked (and it was fitted with a lens protector), it was a case of flex in the protector allowing the impact to penetrate to the lens surface. On the plus side, each of the lights affected had strongly designed mounting systems.

LIGHT/MOUNTING REMAINED ALIGNED AFTER THE IMPACT: If the light pivoted back on its mounting, it was given a cross for this test. Movement in the mounting system after an impact would mean that the lights would need to be realigned after taking a hit.

STILL OPERATING AFTER THE TEST: If the globe no longer worked after the test, it received a cross.

> IMPACT RESISTANCE RESULTS

	LENS PROTECTOR WITHSTOOD IMPACT	LENS REMAINED INTACT AFTER TEST	LIGHT / MOUNTING REMAINED ALIGNED AFTER IMPACT	STILL OPERATING AFTER IMPACT
HALOGEN LIGHTS				
BRITAX – X-Ray Vision 220 Series	✓	✓	✓	✓
BUSHRANGER – Night Hawk 205mm	✓	✓	✓	✓
HELLA – Rallye FF 4000 Compact	✓	✓	✓	✓
IPF – 900XS	✓	✗	✓	✗
KC – Daylighters 6in	✓	✓	✓	✓
LIGHTFORCE – 240 XGT	✓	✓	✗	✓
NARVA – Ultima 225	✓	✓	✗	✓
NIGHT STALKER – 200 Series	✓	✗	✓	✓
ROO LIGHT – 180 XP	✓	✓	✗	✓
ULTRA AUTO – Power Vision	✓	✓	✓	✓
Quattro Elite				
XXX – 220 Series	✓	✓	✗	✓
HID LIGHTS				
BAJA DESIGNS – Soltek 6in Pre-Runners HID	✓	✓	✓	✓
BRITAX – X-Ray Vision 220 Series HID	✓	✓	✓	✓
BUSHRANGER – Night Hawk 205mm HID	✗	✓	✓	✓
HELLA – Rallye FF 4000 Compact Xi XGD	✓	✓	✓	✓
IPF – 900XS HID	✓	✓	✓	✓
KC – HID POD's	✓	✓	✓	✓
LIGHTFORCE – 240 XGT HID	✓	✓	✗	✓
NARVA – Extreme 225 HID	✓	✓	✗	✓
NIGHT STALKER – 170 Series HID	✓	✓	✓	✓
PIRANHA OFF-ROAD – CAT Series HID	✓	✓	✓	✓
ROAD VISION – Viper	✓	✗	✓	✓
ULTRA AUTO – Power Vision	✓	✓	✓	✓
Quattro Elite HID				
XXX – 2003 Series HID	✓	✓	✓	✓
LED LIGHTS				
BAJA DESIGNS – 20in Stealth light bar	n/a	✓	✓	✓
BRIGHT LIGHT AUTO PARTS	n/a	✗	✓	✓
KC – LED POD's	n/a	✓	✓	✓
NARVA – 24in light bar	n/a	✓	✓	✓
RIGID INDUSTRIES – 20in 'E' Series combo light bar	n/a	✓	✓	✓
ROAD VISION – 6in round 6100 Series	n/a	✓	✓	✓
ULTRA AUTO – Dura Vision 22in Euro light bar	n/a	✓	✓	✓



When each light was fitted to the impact test jig, it was adjusted so the pendulum would strike the centre of the light. The light was then powered up to see how it fared during the blow

The pendulum was drawn back and set in position at the same height for each light. With a gentle tug on the yellow release rope, it was all in motion

Interestingly, the lens protector remained intact on the lights that had their glass lens break. This proved that excessive flex or lack of support in the lights' protective covers can lead to an early end should they get hit



Most lights took on the rock strike simulation test without any hesitation

THE VERDICT

No matter which way you look at it, a set of good-quality aftermarket driving lights is a must if you ever plan on travelling off the beaten track after dark. If you've ever had to rely on your factory high beam to light the way down a dark track, then you'll know how taxing it can be. Having the increased vision both out in front and across to the sides is the key to safe 4WDing once the sun sets.

When it comes to choosing your next set (or even your first set) of driving lights, consider where you spend most of your time 4WDing and what type of terrain you'll be travelling on.

While LED lights are unmatched in their ability to spread light across the track, if you find yourself enjoying long stretches of open outback roads, then HID driving lights have the

high-speed touring in the bag. In any case, ideally look for a light that will resist the urge to take on water. The better it can seal against water and dust, the more chance you'll have of getting your money's worth in the long run!

Price aside, our choice would have to come down to a combination of a rock-solid set of HID driving lights, together with an LED light bar for the supreme spread of light off-road. While it's hard to justify spending upwards of \$3000 on lights for the front of your fourby, most of us will have to settle on one set of lights to best suit the tracks we'll be tackling.

Don't discount a good set of halogen driving lights either! Remember that lighting up the road for a kilometre is one thing, but actually being able to focus on an object past 300m is near impossible.

THANKS

We'd like to thank the following companies for their help in getting this comparo to you.

Genquip Australia for the use of its Gi-3300 generator needed to power all our camp lighting and test equipment while we were out in the field.

1300 730 716
www.genquip.com.au

GIC Camper Trailers for supplying one of its fully enclosed trailers to cart all the gear around during testing.

1300 2267 377
www.giccampertrailers.com.au

Federal Batteries sent over a bunch of its Ameron heavy-duty batteries to keep the lights pumping away on the test jigs throughout the comparo.

1300 133 980
www.federalbatteries.com.au

Narva (Brown and Watson) for supplying the abundance of electrical wiring and connectors needed to make the test jigs come to life.

1800 113 443
www.narva.com.au

