We also carry JamStrait® Brand LED Load Equalizers...

Because LED bulbs draw about 1/10 of the electrical current consumed by a regular turn signal bulb, many vehicles equipped with turn signal bulb-failure Indication subsystems sense an LED bulb the same way as a standard incandescent turn signal bulb that is burned out. This triggers a bulb-failure feedback situation in most autos and light trucks when the turn signals on the affected side of the vehicle have been replaced by LED bulbs.

Bulb-failure indication subsystems stem from a 1970 Society Of Automotive Engineers standard [SAE J588e] which requires automakers to cause feedback to the driver if and when any turn signal bulb fails. Failure of one or more turn signal lamps to operate is required to be indicated by a steady on, steady off, or significant change in the flashing rate (i.e. 'fast flash') of the dashboard illuminated indicator on the side of the vehicle where the bulb failure occurs. (Note that large trucks and buses are exempt from this bulb-out indication design requirement.)

Load Equalizers

Load equalizers, one per every new LED bulb replaced in a light truck or auto, are wired in place to allow the bulb-failure subsystem to sense the correct load and act as if a standard incandescent turn signal bulb were again present. As these devices compensate or equalize the load, the car's turn signal flasher returns to its former normal slow-cadence operation. AllQuality carries Jam-Strait's Model 650 LE heat-sinked single load equalizer for single bulb replacements (6 Ohm/50w)



650 LE Single Load Equalizer

11.49 each

and JamStrait's Model 3100 LE heat-sinked dual load equalizer for two same-side bulb replacements, ie. right side, or left side. (3 Ohm/50W, see next page)



3100 LE Dual Load Equalizer

19.49 each

3100 LE's are only needed when replacing both front and rear bulbs with LEDs. On some newer trucks and vehicles, a 3100 resistor may not compensate for two bulbs because some vehicles with tow packages have independent rear TS/ Brake light systems specifically for trailer towing and independent from the front system. Call for more details.

How do I install Load Equalizers?

Load equalizers simply need to be grounded on one end with the other end hooked to the positive turn signal bulb wire. This is called being wired 'in parallel' with the bulb. The new LED bulb plus the load equalizer will let the car's flasher sense that a standard bulb is present, and the turn signals themselves will flash at a normal rate. Instruction sheets are included with all load equalizers.

AllQuality Custom Auto Accessories

We stock amber bulbs and load equalizers, and can get any LEDs JamStrait makes...

Visit www.JamStrait.com and get us your LED bulb needs list: Colors, sizes, whatever, We'll try our best to get 'em to you fast!

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JamStrait® Brand Amber LEDs for Your Car, Truck, Motorcycle or Bus

AllQuality now carries the best quality replacement automotive amber LED bulbs that can be found in the market. JamStrait holds the patents on LED replacement turn signal bulbs, and their quality is second to none. Whether your car uses 1156, 1157, or 3157 type bulbs, we've got you covered.

AllQuality and JamStrait now offer the **very** best in LED auto replacement bulbs—the new Hyper Radial bulb.



Touted as one of the brightest LED replacement bulbs on the market today, the Hyper Radial 3D design has 14 forward facing high brightness individual Hyper LEDs, and 6 side facing Hyper LEDs which are mounted radially to increase the brightness of the bulb's pattern in the reflector behind the bulb itself.

AllQuality carries the JS Super bulb (12 or 15 LEDs):



High brightness bulb at entry level pricing

ACAA also carries the Hyper (15 LEDs): Amber bulb



High brightness format with more direct forward output

We also carry and highly recommend the Hyper Amber Wide 100 degree wide angle bulbs (15 LEDs):



More side output coupled with good forward output

All LEDs are solid state, typically last for hundreds of thousands of hours, and generate very little heat. AllQuality stocks the amber LED bulb replacements, but can quickly order any product or color bulb JamStrait carries. Call us to find out more.

LED Bulb Price List (less shipping & handling)

Super Amber 1157 Dual filament LED replacement bulb, Amber - standard LED output pattern => 1157-SA 12.49 each Hyper Amber 1157 Dual filament LED replacement bulb, Amber - standard LED output pattern => 1157-HA 14.79 each Hyper Amber Wide Angle 1157 Dual filament LED replacement bulb, Amber - 100° Wide LED output => 1157-HAW-100 14.99 each Hyper Amber Radial 1157 Dual filament LED replacement bulb, Amber - 14 forward—6 radial LED output => 1157-HAR 15.99 each Super Amber 1156 Dual filament LED replacement bulb,

Super Amber 1156 Dual filament LED replacement bulb,
Amber - standard LED output pattern => 1156-SA 12.49 each
Hyper Amber 1156 Dual filament LED replacement bulb,
Amber - standard LED output pattern => 1156-HA 14.99 each
Hyper Amber Wide Angle 1156 Dual filament LED replacement bulb,
Amber - 100° Wide LED output => 1156-HAW-100 14.79 each
Hyper Amber Radial 1156 Dual filament LED replacement bulb,
Amber - 14 forward—6 radial LED output => 1156-HAR 15.99 each

Super Amber 3157-3156 Dual filament LED replacement bulb,
Amber - standard LED output pattern => 3157-SA 12.49 each
Hyper Amber 3157-3156 Dual filament LED replacement bulb,
Amber - standard LED output pattern => 3157-HA 14.79 each
Hyper Amber Wide Angle 3157-3156 Dual filament LED bulb,
Amber - 100° Wide LED output => 3157-HAW-100 14.99 each
Hyper Amber Radial 3157-3156 Dual filament LED replacement bulb,
Amber - 14 forward—6 radial LED output => 3157-HAR 15.99 each

1157, 1156, or 3157?

You might be asking, "So which bulb fits my car?"

If your existing bulb has a metal base, is dual filament, and has two connection terminals on its base, then 1157 is your choice. The 1157 fits nearly all pre-1990 domestic vehicles, almost all imports that use dual filaments, and most industrial vehicles.

If your existing bulb has a metal base, is single filament, and has one connection terminal on its base, then 1156 is the choice for you. The 1156 is typically for imports only. Check for these numbers engraved into or printed onto the base of an existing bulb.

If your existing bulb has a modern plug-in or bayonet plastic base and is dual filament, then 3157-3156 is the choice for you. The 3157 is typically for domestic vehicles 1990 or later. We recommend you pull the existing bulb and check before ordering.

LED BULBS REACT FASTER, ARE CONSIDERED BY SOME AS MUCH MORE NOTICEABLE, CAN INCREASE SAFETY, & OFTEN LAST THE LIFE OF THE CAR



Above, left to right: amber 3157 Hyper, 1157 Hyper Wide Angle (illuminated), and a 3157 Super

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