

AKSLEN[®]
Safety, Reliability, Durability[™]

Continue the day

LED battery lights 2012



Safety, Reliability, and Durability

As the important safety equipments for cyclists, the bicycle lights must have good safety performance, that is, sufficient light intensity and proper illuminating angle and range. Also, they must have reliable quality to let cyclists feel at ease, and be durable, no matter for each battery's duration time, or for months and years of use.

The "Safety performance", "Reliable quality", and "Durable utility", are the objectives and incentives that AKSLEN insists to keep on working and progressing in research, development, and production.

With 30 years of strong technical groundwork in ODM production of parts and components for optical-electronics, such as cameras and liquid crystal displays, Haoli Precision is now the only one Taiwanese cycle light maker, who do from product design, mould design, mould manufacture, parts production, to assembly and packaging, all the processes in his own factory.

Furthermore, Haoli Precision is the only one Taiwanese cycle light maker who owns related optical patents in Taiwan (by September 2009, only the other Japanese maker owns optical patents in Taiwan). Different from other normal structural or outlook design patents that only apply to one single model, these optical patents are all universal principles in designing cycle light optics, and are applied to all AKSLEN's headlights or taillights. Haoli Precision is the only one Taiwanese maker whose optical performances of all taillights surpass the requirements of German national StVZO cycle light standards, and has his factory acquired the German approval.

The excellent technical abilities in research, design, development, precision manufacturing, ISO9001 quality control, and production, just are the foundations that AKSLEN can insist in "Safety, Reliability, and Durability".

For providing excellent lights to cyclists around the world, dedicating to the joy and safety of cycling, we will go all out with passion. We trust that our customers will take pride in choosing AKSLEN as we take pride in producing it.

City



HL-110



HL-80



HL-53



HL-43

Downtown area with many commercial and residential buildings; where the environment is full of light from streetlights, business buildings, billboards, signs, vehicles, etc.

For AKSLEN headlights of this class, the luminous intensity distribution conforms to Japan JIS national standard.

Suburbs



HL-92

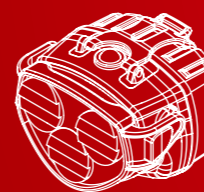


HL-60

Suburban areas; where there is only some light coming from small commercial and residential buildings; not much traffic, with a few streetlights; and occasionally no streetlights at all in some short-distance sections.

For AKSLEN headlights of this class, the luminous intensity distribution is 2 times of the Japan JIS national standard.

Country rural



HB-122V



HL-100

Rural or countryside areas; where there is virtually no light from buildings; Only scarce streetlights, or no streetlights at all.

For AKSLEN headlights of this class, the luminous intensity distribution is 2.5 times of the Japan JIS national standard.

Auxiliary warning



HL-140



HL-160



SL-10W



HL-130



HL-70

As an auxiliary unit of the above lights; or an independent warning light; or upgrade modules for extending the brightness or functions of the light.



HL-140 2012 NEW

Small size and light-weight. Soft outer-casing made of special eco-friendly elastomeric material. Elastic mounting band. Boosted / Steady High-Output Circuit.

- Most Advanced Super Luminosity White LEDs
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Full Power, Half Power, and Flashing modes
- Elastic Mounting Band for diameter 22 to 35 mm
- Easy installation and battery change, tool-free

- Bulb** • Super Luminosity White LED x 2
- Battery** • LR03(size "AAA") x 2
- Mode** • Full Power + Half Power + Flashing / 3 modes
- Battery Life** • Steady High-Output: Full Power 10 hrs
Steady High-Output: Half Power 25 hrs
Flashing 80 hrs
- Color** • Black, White
- Size** • 36 x 65 x 43 mm
- Weight** • 50 g (mounting band included, no battery)

350 CANDELA



HL-160 2012 NEW

Small size and light-weight. Soft outer-casing made of special eco-friendly elastomeric material. Elastic mounting band. Boosted / Steady High-Output Circuit.

- Most Advanced Super Luminosity White LEDs
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Full Power, Half Power, and Flashing modes
- Elastic Mounting Band for diameter 22 to 35 mm
- Easy installation and battery change, tool-free

- Bulb** • Super Luminosity White LED x 2
- Battery** • LR03(size "AAA") x 2
- Mode** • Full Power + Half Power + Flashing / 3 modes
- Battery Life** • Steady High-Output: Full Power 10 hrs
Steady High-Output: Half Power 25 hrs
Flashing 80 hrs
- Color** • Black, White
- Size** • 74 x 36 x 45 mm
- Weight** • 52 g (mounting band included, no battery)

350 CANDELA

SL-10W

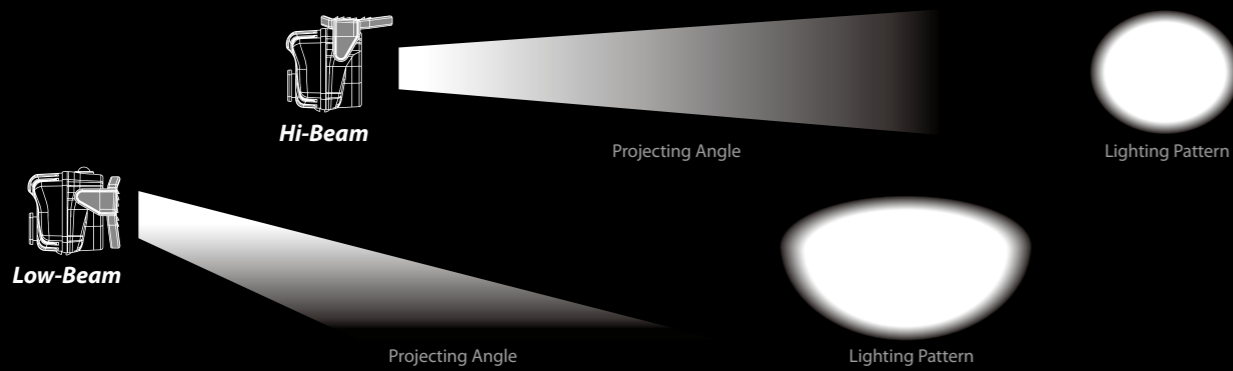
Safety Light "Water Spider"

The outer case is made of special eco-friendly elastomeric material. It can be fixed on a circular or non-circular tube of the bicycle, or on the bicycle helmet. With unique structure design, it can also be tied on the arm or ankle, with a velcro band, strap, or belt ...etc, passing through its outer case. It can be tied on the strap of a knapsack as well.

- Most advanced Super Luminosity White LEDs
- Constant and flashing modes
- Easy installation and battery change, totally tool-free
- Flexible mounting for diameters 22 to 35 mm

- Bulb** • Super Luminosity White LED x 2
- Battery** • CR2032 x 2
- Mode** • Constant + Flashing / 2 modes
- Battery Life** • Constant 60 hrs / Flashing 120 hrs
- Color** • Black, White, Red, Yellow, Blue, Orange, Pink
- Size** • 98 x 45 x 15 mm
- Weight** • 18 g (not include battery)





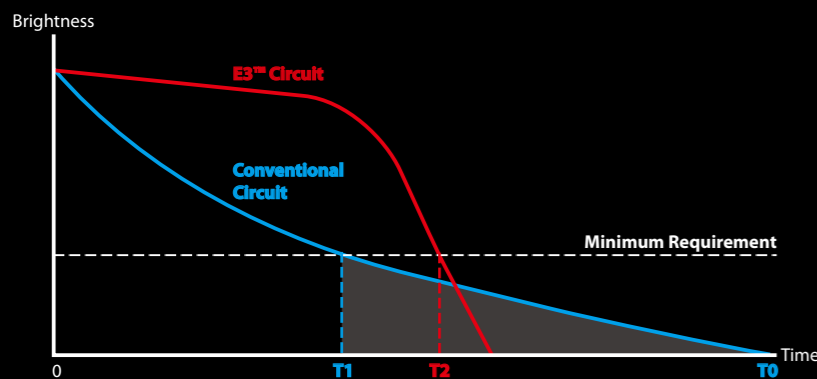
World's First Variable Lighting Pattern Technology

Utilizing a set of sophisticated double lenses, the light can be easily shifted between different lighting patterns, and maybe colors, to satisfy the need for illumination and safety in various cycling environments. On different AKSLEN headlights, this technology may be applied for one of the following:

1. Illumination / Warning modes shift: When the movable second lens is lifted, the light is focused and intense for illuminating purpose. When the second lens is put down, the lighting pattern will be changed to a wide spread for warning purpose, and even a different color, such as yellow, for stronger warning effect. Featured model: HL-70.

2. High-beam / Low-beam modes shift: This is similar to that of an automobile. When the movable second lens is lifted, the light is focused and intense, and projected to a farer distance in front. When the second lens is put down, the lighting pattern will be changed to a wider spread, and projected to a near distance in front. Featured model: HL-120 and HL-100

This Variable Lighting Pattern technology is AKSLEN's unique innovation and is patent-protected.



1. The actual lighting performance of E3 Circuit is more than doubled than that of a conventional Circuit.
2. Though for conventional circuit, it may claim its battery duration to be T0, its practical duration is actually only T1.
3. The electricity of the SHADED AREA will be wasted, because the user will change the battery at T1.

E3™, Boost / Steady High-Output Circuit

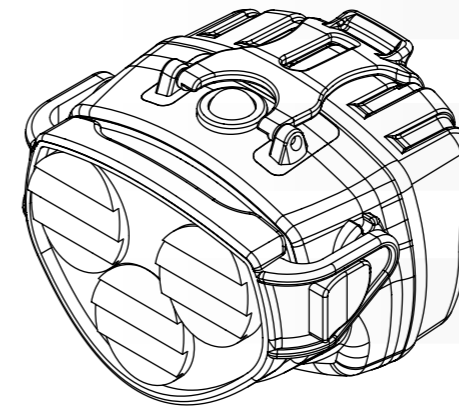
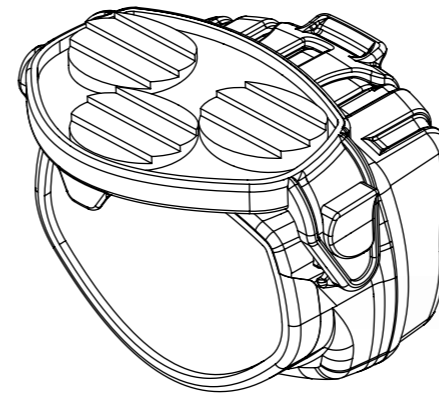
The E3 circuit is a sophisticated regulating circuit maintaining the initial brightness as long as the batteries have sufficient voltage. Conventional lights are bright initially, but gradually and continually dim until the batteries are drained. The E3 circuit maintains the light at high output during most of the battery life, and makes the best use of the batteries' energy.

In addition, because the standard voltages of rechargeable batteries are lower than one-time batteries, when using rechargeable batteries on an conventional light, the light output will be lower. The E3 circuit can fill up the voltage gap between rechargeable and one-time batteries and makes the light output with rechargeable batteries as powerful as that with one-time batteries.



HB-122V 2012 NEW

Featuring world's first Variable Lighting Pattern technology for bicycle lights, it can be shifted between "High-Beam" (focused far projecting) and "Low-Beam" (wide spread and near projecting) modes.



- Next Generation HB White LEDs
- Patented Variable Lighting Pattern Technology
- Patented LitCell Advanced™, Light Convergence Technology
- E3™, Boosted / Steady High-Output Circuit
- Optimized Lighting Pattern for Cycle Headlights
- Low Power Indicator
- Quick-release 180 degrees adjustable bracket (clamps for diameter 22 - 30 and 30 - 38 mm)
- Easy installation and battery change, tool-free

• Detailed and final specification to be confirmed

Luminous intensity distribution characteristics conform to JAPAN JIS national Standard TRIPLE

HL-130

The HL-130, "Little Hammer", is powerful as entry-level 0.5W lights. Boosted / Steady High-Output Circuit. Use ONLY one AA battery. It can be mounted on the handle-bar vertically or horizontally.



- Most Advanced Super Luminosity White LEDs
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Constant and Flashing modes
- Quick-release 180 degrees adjustable bracket (clamps for diameter 16 - 22 and 25 - 32 mm)
- Easy battery change and bracket mounting, totally tool-free

- Bulb** • Super Luminosity White LED x 1
- Battery** • LR06 (size "AA") x 1
- Mode** • Constant + Flashing / 2 modes
- Battery Life** • Steady High-Output: 12 hrs
Flashing 35 hrs
- Size** • 45 x 24 x 75 mm
- Weight** • 62 g (bracket included, no battery)

250 CANDELA



HL-110

Powerful as entry-level 1W lights. Boosted / Steady High-Output Circuit, making the best use of the batteries' energy. It can be mounted on the handle-bar and positioned right in front of the stem, or on the head tube of folding bikes.

- Most Advanced Super Luminosity White LEDs
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Optimized Lighting Pattern for Cycle Headlights
- Constant and flashing modes
- Low Power Indicator
- Quick-release 180 degrees adjustable bracket (clamps for diameter 22 - 30 and 30 - 38 mm)
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 3
Battery • LR06 (size "AA") x 2
Mode • Constant + Flashing / 2 modes
Battery Life • Steady High-Output 15 hrs / Flashing 40 hrs
Size • 46 x 64 x 52 mm
Weight • 90 g (bracket included, no battery)

500 CANDELA

Luminous intensity distribution characteristics conform to **JAPAN JIS** national Standard



HL-92 2011 NEW

The newest "Vertical Series" headlight, mounted right in the middle of the handle-bar, and right in front of the stem. Powerful as High-level 1W lights. Boosted / Steady High-Output Circuit, making the best use of the batteries' energy. Full Power and City Eco, 2 constant modes.

- Most Advanced Super Luminosity White LEDs
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Optimized Lighting Pattern for Cycle Headlights
- Full Power, City Eco, and Flashing modes
- Low Power Indicator
- Quick-release 180 degrees adjustable bracket (clamps for diameter 22 - 30 and 30 - 38 mm)
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 5
Battery • LR06 (size "AA") x 2
Mode • Constant 2 + Flashing 1 / 3 modes
Battery Life • Steady High-Output: Full Power 10 hrs
 Steady High-Output: City Eco 15 hrs
 Flashing 60 hrs
Size • 70 x 42 x 52 mm
Weight • 75 g (bracket included, no battery)

850 CANDELA

Luminous intensity distribution characteristics conform to **JAPAN JIS** national Standard **DOUBLE**

HL-100



The newest "Vertical Series" headlight, mounted right in the middle of the handle-bar, and right in front of the stem. Powerful as High-level 1.2 W lights. Super E3™ Steady High-Output Circuit, making the best use of the batteries' energy. Exclusive Variable Lighting Pattern Technology, which can be shifted, fully or partially, between the "High-Beam" (far projecting with narrow angle) and the "Low-Beam" (near projecting with wide angle). Full Power and City Eco, 2 constant modes.



- 2009 Annual Innovative Products Competition Award Winner
- Most Advanced Super Luminosity White LEDs
- Super E3™, Steady High-Output Circuit
- Patented Variable Lighting Pattern Technology
- Patented LitCell™, Light Convergence Technology
- Optimized Lighting Pattern for Cycle Headlights
- Full Power, City Eco, and Flashing modes
- Low Power Indicator
- Quick-release 180 degrees adjustable bracket (clamps for diameter 22 - 30 and 30 - 38 mm)
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 6
Battery • LR06 (size "AA") x 4
Mode • Constant 2 + Flashing 1 / 3 modes
Battery Life • Steady High-Output: Full Power 12 hrs
 Steady High-Output: City Eco 18 hrs / Flashing 80 hrs
Size • 93 x 80 x 82 mm
Weight • 131 g (bracket included, no battery)

1000 CANDELA

Luminous intensity distribution characteristics conform to **JAPAN JIS** national Standard **DOUBLE**



Police Version

HL-70

Helmet Auxiliary Light

This light is suggested for "auxiliary" purpose, it should be the third light that you have, in addition to the headlight and taillight on your bike. (More about this special light, please see the remark below.)

- Most advanced Super Luminosity White LEDs
- Variable Lighting Pattern Technology
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Constant and flashing modes
- Quick-release bracket for helmet
- Easy battery change and bracket mounting, totally tool-free

HL-70 • with helmet bracket only
HL-70B • with bicycle bracket only
HL-70P • with helmet and bicycle brackets

Bulb • Super Luminosity White LED x 2
Battery • LR03 (size "AAA") x 2
Mode • Constant + Flashing / 2 modes
Battery Life • Steady High-Output: 10 hrs
Flashing: 20 hrs
Size • 50 x 62 x 34mm
Weight • 52g (bracket included, no battery)

350 CANDELA



Why this auxiliary helmet light?

When you need to readjust or fix your bike, such as a dropped chain or a flatted tire, in the dark, it is difficult and sometimes impossible to hold a light in one hand and fix the bike with only the other hand. It will be much easier if you have an auxiliary light on your helmet.

Also, this light can work as an auxiliary light to your headlight or taillight, and as a back-up when those lights are malfunctioned or out of battery. Its innovative design of "Variable Lighting Pattern", and tool-free mounting, allows it to be easily mounted on the front or the rear of the helmet, and shifted between the "illuminating" and the "warning" modes, to satisfy the needs in different situations.

And, it is super light-weight, only 68 g in total (including Alkaline batteries). When be mounted on the helmet, it will not cause pressure or discomfort on the head or neck of the cyclist.



HL-80

The newest "Vertical Series" headlight, mounted right in the middle of the handle-bar, and right in front of the stem. Powerful as entry-level 1W lights. Boosted / Steady High-Output Circuit, making the best use of the batteries' energy.

- Most Advanced Super Luminosity White LEDs
- E3™, Boosted / Steady High-Output Circuit
- Patented LitCell™, Light Convergence Technology
- Optimized Lighting Pattern for Cycle Headlights
- Constant and flashing modes
- Low Power Indicator
- Quick-release 180 degrees adjustable bracket (clamps for diameter 22 - 30 and 30 - 38 mm)
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 3
Battery • LR06 (size "AA") x 2
Mode • Constant + Flashing / 2 modes
Battery Life • Steady High-Output 15 hrs / Flashing 40 hrs
Size • 70 x 42 x 52 mm
Weight • 71 g (bracket included, no battery)

500 CANDELA

Luminous intensity distribution characteristics conform to **JAPAN JIS** national Standard



HL-60

The HL-60, "Goblet of Fire", is powerful as high-grade 1W lights. High efficient optical design with "semicircle" lighting pattern (which looks like a goblet of fire). Great freedom of mounting: Up-right, upside-down, and sideways mounting possible.

- Most advanced Super Luminosity White LEDs
- Optimized Lighting Pattern for Cycle Headlights
- Patented LitCell™, Light Convergence Technology
- Constant and flashing modes
- Quick-release 360 degrees adjustable bracket (clamps for dia. 22 - 30 and 30 - 38 mm)
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 5
Battery • LR03(size "AAA")x 4
Mode • Constant + Flashing / 2 modes
Battery Life • Constant: up to 15 hrs bright
Flashing: about 60 hrs total run
Size • 103 x 57 x 49 mm
Weight • 99g (bracket included, no battery)

850 CANDELA

Luminous intensity distribution characteristics conform to **JAPAN JIS** national Standard **DOUBLE**



HL-53

Powerful as entry-level 1W lights, but consumes 40% ~ 50% less electricity. Features the more efficient "flatted" lighting pattern with wider lighting span.

- Most advanced Super Luminosity White LEDs
- Patented LitCell™, Light Convergence Technology
- Optimized Lighting Pattern for Cycle Headlights
- Constant and flashing modes
- Quick-release 360 degrees adjustable bracket (clamps for dia. 22 - 30 and 30 - 38 mm)
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 3
Battery • LR03(size "AAA")x 4
Mode • Constant + Flashing / 2 modes
Battery Life • Constant: up to 25 hrs bright
 Flashing: about 100 hrs total run
Size • 85 x 68 x 25 mm
Weight • 75g (bracket included, no battery)

500 CANDELA

Luminous intensity distribution characteristics conform to JAPAN JIS national Standard

HL-43

- 2006 Annual Innovative Products Competition Award Winner
- Most advanced Super Luminosity White LEDs
- Patented LitCell™, Light Convergence Technology
- Constant and flashing modes
- Quick-release 360 degrees adjustable bracket (clamps for dia. 22 - 30 and 30 - 38 mm); can be fixed on the suspension front forks of mountain bikes
- Easy battery change and bracket mounting, totally tool-free

Bulb • Super Luminosity White LED x 3
Battery • LR03(size " AAA ")x 4
Mode • Constant + Flashing / 2 modes
Battery Life • Constant: up to 25hrs bright
 Flashing: about 100 hrs total run
Size • 96 x 42 x 45 mm
Weight • 73g (bracket included, no battery)

500 CANDELA

Luminous intensity distribution characteristics conform to JAPAN JIS national Standard

The luminous intensity and light distribution pattern of all AKSLEN taillights, except for TL-60S and SL-10R, conform with Germany StVZO and Japan JIS national standards (and the visible angles of adequate brightness are over 220 to 280 degrees).



TL-100
Seatpost



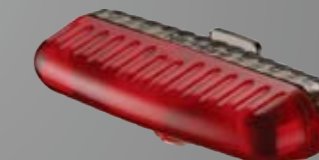
TL-70
Saddle Bag
Back Carrier



TL-52
Seatpost
Saddle Bag
Seatstay



TL-80
Seatpost
Seatstay



TL-60
Seatpost
Saddle Bag
Back Carrier



TL-90
Seatpost
Saddle Bag
Back Carrier



TL-32
Seatpost
Saddle Bag
Back Carrier



TL-60S
Seatpost
Saddle Bag
Back Carrier



SL-10R



TL-100 2011 NEW

Small size and light-weight. Soft outer-casing made of special eco-friendly elastomeric material. Elastic mounting band.

- Super Luminosity Red LEDs
- Patented LitWings II™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- Constant and flashing modes
- Elastic Mounting Band for diameter 22 to 35 mm
- Easy installation and battery change, tool-free

- Bulb** • Super Luminosity Red LED x 1
Battery • LR03(size "AAA") x 2
Mode • Constant + Flashing / 2 modes
Battery Life • Constant 180 hrs / Flashing 360 hrs
Color • Black, White
Size • 45 x 43 x 65 mm
Weight • 47 g (mounting band included, no battery)

Luminous intensity distribution characteristics conform to **JAPAN JIS** and **GERMAN StVZO** national Standards



SL-10R

Safety Light "Water Spider"
 The outer case is made of special eco-friendly elastomeric material. It can be fixed on a circular or non-circular tube of the bicycle, or on the bicycle helmet. With unique structure design, it can also be tied on the arm or ankle, with a velcro band, strap, or belt ...etc, passing through its outer case. It can be tied on the strap of a knapsack as well.

- Most advanced Super Luminosity Red LEDs
- Constant and flashing modes
- Easy installation and battery change, totally tool-free
- Flexible mounting for diameters 22 to 35 mm

- Bulb** • Super Luminosity Red LED x 2
Battery • CR2032 x 2
Mode • Constant + Flashing / 2 modes
Battery Life • Constant 60 hrs / Flashing 120 hrs
Color • Black, White, Red, Yellow, Blue, Orange, Pink
Size • 98 x 45 x 15 mm
Weight • 18 g (not include battery)



TL-90

- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- 1 Constant and 2 flashing modes
- Quick-Release, adjustable Seatpost Mount, Back Carrier Mount, and Bag Clip
- Easy battery change and bracket mounting, totally tool-free

- Bulb** • Super Luminosity Red LED x 4
Battery • LR03(size "AAA") x 2
Mode • Constant 1 + Flashing 2 / 3 modes
Battery Life • Constant 45 hrs / Flashing 90 hrs
Size • 87 x 42 x 34 mm
Weight • 66 g (bracket included, no battery)

Luminous intensity distribution characteristics conform to **JAPAN JIS** and **GERMAN StVZO** national Standards



TL-80

Unique vertical design makes it match nicely to the seat-post and seat-stay of the bike.

- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- 1 Constant and 2 flashing modes
- Quick-Release, adjustable Seat-post and Seat-stay Mounts
- Easy battery change and mounting, totally tool-free

GERMAN StVZO Approval Model: TL-80G ~~~K 611
with only 2 LEDs, Low Power Indicator and Constant mode only (no flashing)

- Bulb** • Super Luminosity Red LED x 3
- Battery** • LR03 (size "AAA ") x 2
- Mode** • Constant + Flashing / 3 modes
- Battery Life** • Constant 60 hrs / Flashing 120 hrs
- Size** • 56 x 68 x 23 mm
- Weight** • 58g (bracket included, no battery)

Luminous intensity distribution characteristics conform to
JAPAN JIS and **GERMAN StVZO** national Standards



TL-60S

Type S: the super power model of TL-60. Comparing to TL-60, it features 2 extra LEDs that are equipped with focused lenses and provide extreme strong light straight to the back of the bike. Extra wide interval between LEDs (70 mm), highly distinguishable at night.

- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- 1 Constant and 2 flashing modes
- Quick-Release, adjustable Seatpost Mount, Back Carrier Mount, and Bag Clip
- Easy battery change and bracket mounting, totally tool-free

- Bulb** • Super Luminosity Red LED x 5
- Battery** • LR03(size "AAA") x 2
- Mode** • Constant 1 + Flashing 2 / 3 modes
- Battery Life** • Constant 36 hrs / Flashing 72 hrs
- Size** • 100 x 40 x 22 mm
- Weight** • 56 g (bracket included, no battery)



TL-70

Combining a big-area retro-reflector, offers the best passive safety (reflectors) and active safety (LED) in one. Long interval between LEDs (70 mm), highly distinguishable at night.

- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- Integrated Retro-Reflector
- Constant and flashing modes
- Quick-Release Back Carrier Mount, and Bag Clip
- Easy battery change and bracket mounting, totally tool-free

- Bulb** • Super Luminosity Red LED x 2
- Battery** • LR03 (size "AAA ") x 2
- Mode** • Constant + Flashing / 2 modes
- Battery Life** • Constant 90 hrs / Flashing 180 hrs
- Size** • 90 x 47 x 30 mm
- Weight** • 56g (bracket included, no battery)

Luminous intensity distribution characteristics conform to
JAPAN JIS and **GERMAN StVZO** national Standards



TL-60

- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- 1 Constant and 2 flashing modes
- Quick-Release, adjustable Seatpost Mount, Back Carrier Mount, and Bag Clip
- Easy battery change and bracket mounting, totally tool-free

GERMAN StVZO Approval Model: TL-60G ~~~K 549
with Low Power Indicator and Constant Mode only (no flashing)

- Bulb** • Super Luminosity Red LED x 3
- Battery** • LR03 (size "AAA ") x 2
- Mode** • Constant + Flashing / 3 modes
- Battery Life** • Constant 60 hrs / Flashing 120 hrs
- Size** • 100 x 40 x 22 mm
- Weight** • 53g (bracket included, no battery)

Luminous intensity distribution characteristics conform to
JAPAN JIS and **GERMAN StVZO** national Standards

TL-32

The newest second-generation model. Light intensity increases 30% (comparing to the TL-30 model). Combining a retro-reflector and flashing LEDs, it offers the best passive safety (reflector) and active safety (LED) in one.



- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- 1 Constant and 2 flashing modes
- Quick-Release, adjustable Seatpost Mount, Back Carrier Mount, and Bag Clip
- Easy battery change and bracket mounting, totally tool-free

- Bulb** • Super Luminosity Red LED x 4
- Battery** • LR03 (size "AAA") x 2
- Mode** • Constant 1 + Flashing 2 / 3 modes
- Battery Life** • Constant 45 hrs / Flashing 90 hrs
- Size** • 90 x 45 x 34 mm
- Weight** • 60 g (bracket included, no battery)
- Lampshade Colour** • TL-32R: Red (with Red reflector)
TL-32C: Clear (with Red reflector)

Luminous intensity distribution characteristics conform to **JAPAN JIS** and **GERMAN StVZO** national Standards

TL-52

Small size, super long battery duration.



- Super Luminosity Red LEDs
- Patented LitWings™, Light Diffuse Technology
- Optimized Lighting Pattern for Cycle Taillights
- Constant and flashing modes
- Quick-Release, adjustable Seatpost Mount, Seatstay Mount, and Bag Clip
- Easy battery change and bracket mounting, totally tool-free

- Bulb** • Super Luminosity Red LED x 2
- Battery** • LR03 (size "AAA") x 2
- Mode** • Constant + Flashing / 2 modes
- Battery Life** • Constant 90 hrs / Flashing 180 hrs
- Size** • 54 x 35 x 34 mm
- Weight** • 46g (bracket included, no battery)

Luminous intensity distribution characteristics conform to **JAPAN JIS** and **GERMAN StVZO** national Standards



CF-10
for Front Fork & Seat Stay
(proper screw hole and screw required)



CH-10
for extra big or irregular tube / for helmet



CU-40P
for tube diameter: 22~30 & 30~38 mm



CU-50P
for tube diameter: 22~30 & 30~38 mm



CP-40P
for tube diameter: 16~22 & 25~32 mm

LED battery lights 2012
Safety, Reliability, Durability

Upgrade your vision

Of all our taillight models, the luminous intensity and light distribution pattern conform with GERMAN STANDARD.

(And visible angle over 220° to 280°)
StVZO approved models are available,
please contact us for details.

All our headlight models utilize an exclusive Light Convergence Technology, LitCell™, which is protected by the following patents:

(Germany) 20 2005 004 751.1,
(Netherlands) 1029138,
(Japan) 3111807,
(Taiwan) I 255319,
(China) ZI2005 2 0002748.1,
and others pending.

ISO 9001 Certificated Manufacturer

HAOLI PRECISION INDUSTRIAL CO., LTD.

Safety, Reliability, Durability™

HAOLI PRECISION INDUSTRIAL CO., LTD.

tel:+886-4-2359-1837 fax:+886-4-2359-1003 e-mail: sc@akslen.com
No.18, 10th Road, Taichung Industry Park, Taichung City, 40755, TAIWAN
www.akslen.com