

LIGHTING

# LIGHTING THE WAY FOR **AUTOMOTIVE** **INNOVATION**

Explore the diverse range of meticulously crafted lighting solutions.



**PERFORM@CHANGE**



**CUTTING-EDGE.**  
**TAILORED.**  
**EFFICIENT.**

**INTRODUCING OUR**  
**UNIQUE LIGHTING**  
**VARIANTS**

Varroc stands as a global leader in providing cutting-edge exterior lighting solutions. We bring technological prowess to develop and produce tailored solutions for both exterior and interior automotive lighting across 2W vehicles. Our extensive portfolio includes headlamps, rear lamps, small lamps, CHMSL, and Reflex Reflectors. With approximately 90% of electronic components designed and produced in-house.



## MULTIFUNCTION PROJECTOR HEADLAMP



Highly aesthetic



Compact & robust design



Improved lighting functions for safety



### PRODUCT DESCRIPTION

This headlamp is based on direct projector concept having multiple lens curvatures combined in a single lens. The simple construction of the lamp provides low beam, high beam and booster functions. The additional bending and cornering lenses provide better illumination and removes dark spots on curvy roads. Making it a stylish protection for vehicles.

### FEATURES

Lighting functions – low beam, high beam, booster, turning and bending light

Additional lighting functions such as bending & turning lights provide better illumination on curvy roads

Certified for ECE 113 Class-D with ALU feature

Freeform direct projector units for different functions, combined as a single lens unit

Design registration filed

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## WELCOME FEATURE LAMP



Unique welcome & goodbye signatures



Highly aesthetic



Compact & robust design



### PRODUCT DESCRIPTION

Designed for aesthetic appeal, our Welcome Feature Lamps are equipped with signature position functions that provide a uniform glowing effect to the lamp styling. The LED sequencing for on and off illuminates in a unique manner to indicate welcome and goodbye gestures.

### FEATURES

Position functions for front and rear  
Provides welcome and goodbye signatures by LED sequencing  
Diffused material for uniform and glowing appearance  
Certified for ECE, CCC, VSCC EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )  
Wide Operating Voltage Range:  
9V to 16V  
Operating Temperature Range:  
-20°C - 55°C  
Storage Temperature Range:  
-30°C - 80°C



## REAR COMBINATION LAMP



Stylised lighting



Multiple functions



Compact design



### PRODUCT DESCRIPTION

A state-of-the-art design, Varroc Rear Combination Lamp consists of all the rear lamp functions such as tail, stop, blinker, rear fog, reverse and rear reflex reflector. It also comes with a version that includes side amber rear reflex lamp. While the tail and stop functions are based on milky lens that provide a uniform glow across, a combination of green filter and red lens is used to accentuate the blinker function.

### FEATURES

Lighting functions – tail, stop, blinker, rear fog, reverse, rear reflex reflector

Available in two sizes

Homogeneous look for tail and stop functions

The colour of blinker function achieved by a combination of green filter and red lens

Certified for ECE, and FMVSS

EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ ) (also available in 28V version)

Operating Temperature Range:  
-20°C – 55°C

Storage Temperature Range:  
-30°C – 80°C



## TRI-FUNCTIONAL PROJECTOR HEADLAMP



Aesthetic  
appearance



Compact &  
robust design



### PRODUCT DESCRIPTION

This compact LED Headlamp is based on direct projector concept having three different lens curvatures combined in a single lens. A multifunction lamp, it provides 3 different lighting functions - low beam, high beam and ALU. The ALU option can be customised as per customer needs, such as booster, fog like pattern and so on.

### FEATURES

Lighting functions - low beam, high beam, booster or fog-like pattern

Certified for ECE 113 Class-D with ALU feature

Freeform direct projector units for different functions, combined as a single lens unit

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## IMAGE PROJECTION LAMP



Low-cost projector



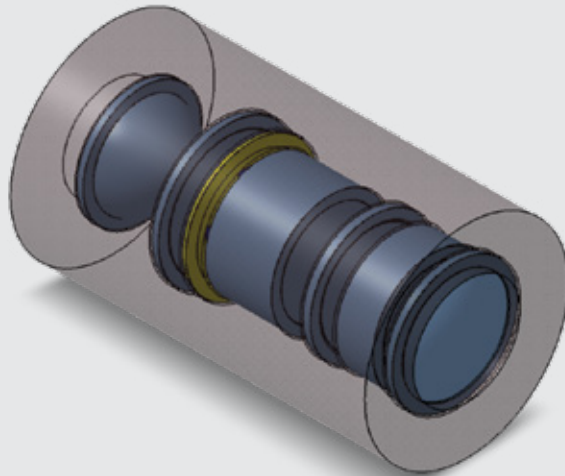
Optimal lens array design



Highly aesthetic



Compact design



### PRODUCT DESCRIPTION

Varroc Image Projection Lamp consists of an array of lenses that are used to project a symbol on the road. A state-of-the-art design that ensures there is no spatial or chromatic aberration in the projected image, this simple mechanism delivers an outstanding performance at a low cost. While this projection system is primarily used to project symbols that enhance road safety, it is also used to project logos for styling or branding requirements.

### FEATURES

- Symbol or Logo Projection Lamp
- Projects different symbols and enhances road safety
- Compact design having a set of different lenses
- EMI/EMC as per ECE R10
- Can be adjusted to different heights

### TYPICAL APPLICATION

- Normal Operating Voltage: 13.5V DC ( $\pm 0.5V$ )
- Wide Operating Voltage Range: 9V to 16V
- Operating Temperature Range:  $-20^{\circ}\text{C} - 55^{\circ}\text{C}$
- Storage Temperature Range:  $-30^{\circ}\text{C} - 80^{\circ}\text{C}$



## SINGLE LED TAIL LAMP



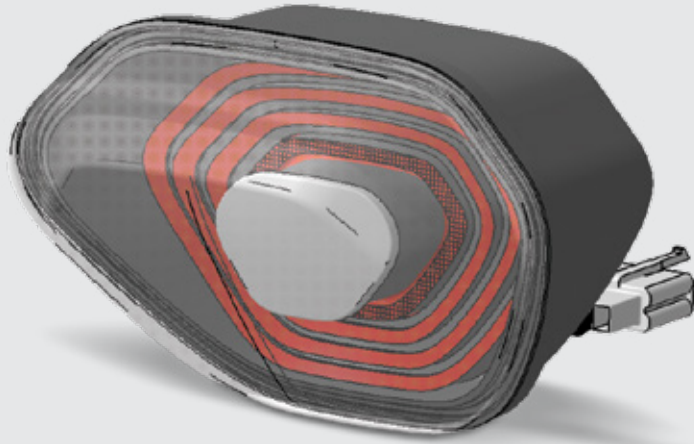
Wide area illumination



Compact design



Aesthetic appearance



### PRODUCT DESCRIPTION

A unique technology based on virtual image concept; Varroc Single LED Tail Lamp is a patented design with stylized lighting features. It is operated with a single LED for tail function that is uniquely designed to illuminate a wider area.

### FEATURES

Lighting functions – tail function, stop function

Patented design having just one LED for wide area illumination

Tail Function with a single LED

Collimator optics for stop function for sleek and blight appearance

Certified for ECE, FMVSS, CCC, VSCC and AIS

EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
 $-20^{\circ}\text{C} - 55^{\circ}\text{C}$

Storage Temperature Range:  
 $-30^{\circ}\text{C} - 80^{\circ}\text{C}$





## SMART LED HEADLAMP



Aesthetic appearance



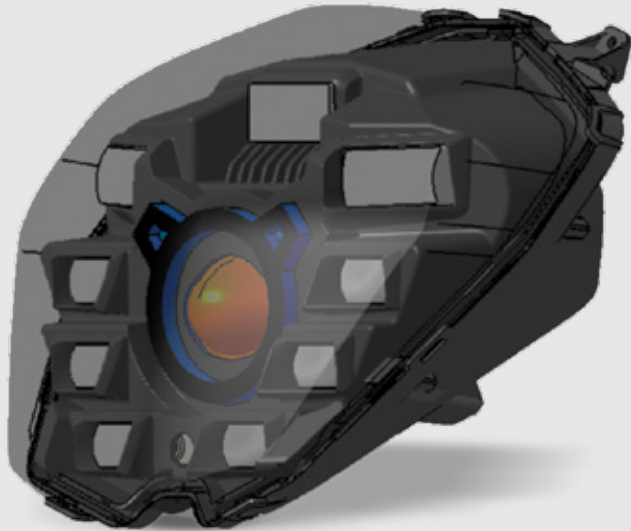
Compact design



Additional safety lighting functions



Better range at high speeds



### PRODUCT DESCRIPTION

Varroc Smart LED Headlamp consists of key lighting functions including Low Beam, High Beam, DRL/PO, Booster, and Cornering as ALU. The High Beam function comes with inbuilt sensors that prevent it from emitting glare at incoming traffic. The Booster function provides longer-range illumination, a necessity at higher speeds. The Cornering function provides side-to-side illumination during bends or turns.

### FEATURES

Lighting functions - low beam, high beam, DRL/PO, booster, cornering lights

Certified for ECE 113 Class-D with ALU feature

Freeform direct projector units for different functions, collimator unit for DRL/POSITION

Camera based HB function for avoiding glare for incoming traffic

Booster light to provide better range at above 60 kmph

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## PROJECTION HEADLAMP



Stylised projection unit



Compact & robust design



Advanced safety features



### PRODUCT DESCRIPTION

An evolution in safety and style, Varroc Matrix Projection Headlamp consists of a compact bi-functional projector unit and a matrix lamp for sign projection. The pixel- based sign projection can be used to project moving images and signs.

### FEATURES

Lighting Functions - Main lighting function such as low beam and high beam along with sign projection unit

Moving pixels for projecting images on the road

Enhanced safety projection feature integrated within headlamp

EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## CLASSIC HEADLAMP



Classic aesthetics



Enhanced visibility functions



HB pattern upto 200+ metres



### PRODUCT DESCRIPTION

An all-time favourite among bikers, this classic design now comes with added illumination functions and comprehensive thermal protection to enhance LED life and performance. While the low beam and high beam functions come with freeform reflectors, the position function occupies two semicircular chambers with a light guide.

### FEATURES

- Low beam, high beam & position functions
- ECE 113 class D, FMVSS, CCC, VSCC & AIS certified
- Freeform reflectors for low beam & high beam
- Enhanced near field visibility
- Additional extended thermal protection

### TYPICAL APPLICATION

- Normal Operating Voltage: 13.5V DC ( $\pm 0.5V$ )
- Wide Operating Voltage Range: 9V to 16V
- Operating Temperature Range: -20°C - 55°C
- Storage Temperature Range: -30°C - 80°C



## DURABLE LED HEADLAMP



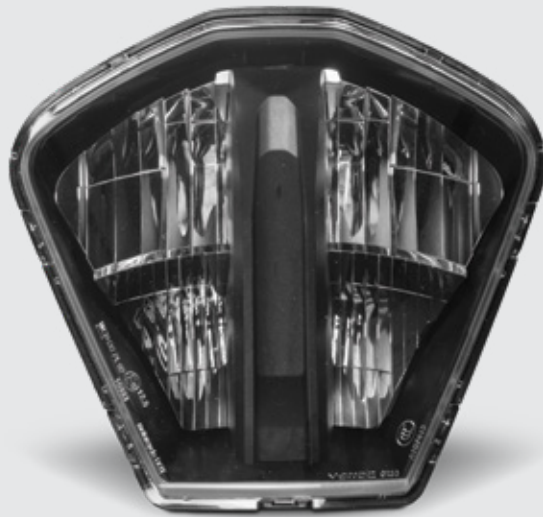
Widespread low beam feature



Ergonomic design



HB pattern upto 200+ metres



### PRODUCT DESCRIPTION

This ergonomic design comes with an impressively wide low beam function and a precise high beam function, both equipped with freeform reflectors. With ample thermal protection, the headlamp is built to last.

### FEATURES

- Low beam & high beam functions
- ECE 113 class D, FMVSS, CCC, VSCC & AIS Certified
- Freeform reflector for low beam & high beam
- Additional extended thermal protection
- Available in chrome plated bezel

### TYPICAL APPLICATION

- Normal Operating Voltage: 13.5V DC ( $\pm 0.5V$ )
- Wide Operating Voltage Range: 9V to 16V
- Operating Temperature Range: -20°C - 55°C
- Storage Temperature Range: -30°C - 80°C





Stunning  
aesthetics



Compact  
design



High daytime visibility  
for DRL function



### PRODUCT DESCRIPTION

With exceptionally compact bi-functional projector units for both low beam and high beam functions and aesthetically placed DRL and position functions, this is one of the most efficient and attractive headlamps out there. Not to mention, the milky lens at the top circle accentuates all lighting functions with a soft, white glow.

### FEATURES

Low beam, high beam, DRL & position lighting functions  
Compact bi-functional projector unit for low beam & high beam  
Single-rounded collimator unit for DRL  
Water-resistant 2K technology housing  
ECE 113 class D, FMVSS, CCC, VSCC certified  
Additional extended thermal protection  
EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )  
Wide Operating Voltage Range:  
9V to 16V  
Operating Temperature Range:  
-20°C - 55°C  
Storage Temperature Range:  
-30°C - 80°C



## LED PROJECTOR



Stylish and compact



Widespread lowbeam & high beam



Customizable across vehicle categories



### PRODUCT DESCRIPTION

Introducing one of the most innovative projectors that are customisable across vehicle categories. Built with a patented collimator concept that allows low beams and high beams to function without a cut-off shield, this bi-functional LED projector is a cut above the rest.

### FEATURES

- Low beam & high beam lighting functions
- Patented collimator concept for uninterrupted visibility
- IP 67 protection
- Customizable for ECE, FMVSS, symmetric & anti-symmetric vehicles
- EMI/EMC as per ECE R10

### TYPICAL APPLICATION

- Normal Operating Voltage: 13.5V DC ( $\pm 0.5V$ )
- Wide Operating Voltage Range: 9V to 16V
- Operating Temperature Range:  $-20^{\circ}\text{C} - 55^{\circ}\text{C}$
- Storage Temperature Range:  $-30^{\circ}\text{C} - 80^{\circ}\text{C}$



## CUSTOMISABLE PROJECTOR



Hyper compact  
build



Combination of thick  
lens & free form reflector



Customizable across  
vehicle categories



### PRODUCT DESCRIPTION

Designed with a combination of a thick lens for low beam and a freeform reflector for high beam, this classy, hyper-compact projector is made to optimise visibility. The projector can be customised to fit vehicles across categories making it the perfect accessory.

### FEATURES

Low beam & high beam lighting functions  
IP 67 protection  
EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )  
Wide Operating Voltage Range:  
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Operating Temperature Range:  
-20°C - 55°C  
Storage Temperature Range:  
-30°C - 80°C



## GLITTER TAIL LAMP



Edgy aesthetics



Robust design



### PRODUCT DESCRIPTION

There are a few things that can amplify a bike's appearance like an edgy tail lamp. And it doesn't get any edgier than the Glitter Tail Lamp with its captivating design. The lamp is equipped with the tail and stop functions comes with a patented lens that creates a 3D effect when illuminated.

### FEATURES

- Tail & stop lighting functions
- Patented lens for 3D effect
- Freeform reflector optics & lens facets
- ECE & AIS certified
- EMI/EMC as per ECE R10

### TYPICAL APPLICATION

- Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )
- Wide Operating Voltage Range:  
9V to 16V
- Operating Temperature Range:  
-20°C - 55°C
- Storage Temperature Range:  
-30°C - 80°C





## SIGNATURE TAIL LAMP



Intense  
brightness



Aesthetic  
design



### PRODUCT DESCRIPTION

The Signature Tail Lamp illuminates with intense brightness and a distinctive glow that's a class apart. With Freeform Fresnel optics that amplify the intensity of the stop lighting function and a milky lens in the tail region, this lamp could make a stunning accessory for any ride.

### FEATURES

Tail & stop lighting functions  
Glowing milky lens  
Freeform fresnel optics for intense brightness  
ECE, FMVSS, CCC, VSCC & AIS certified  
EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )  
Wide Operating Voltage Range:  
9V to 16V  
Operating Temperature Range:  
-20°C - 55°C  
Storage Temperature Range:  
-30°C - 80°C



## SEQUENTIAL BLINKER



Sleek  
design



Superior  
aesthetics



### PRODUCT DESCRIPTION

The Sequential Direction Indicator is one of the best tools for traffic navigation. Instead of merely flashing lights to indicate turns, this indicator has lights moving in the direction of the turn. The sleek, compact design that comes with freeform reflector optics makes for an attractive accessory.

### FEATURES

Sequential direction indicator lighting function  
Freeform reflector optics  
ECECCC, VSCC certified  
EMI/EMC as per ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## SINGLE LED BLINKER



Meets reliability requirements of customer



Highly aesthetic look contributing to overall look of the vehicle



### PRODUCT DESCRIPTION

Sleek Blinker features a single LED for clear and reliable signalling, enhancing visibility and safety on the road. Perfect for motorcycles, bicycles, and other vehicles, it provides crisp illumination for added confidence during turns and maneuvers.

### FEATURES

Unique aesthetic look with single LED concept

EMI/EMC compliance as per AIS 010 & ECE R10

Meets photometric requirement as per ECE and AIS regulation

Low product cost

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



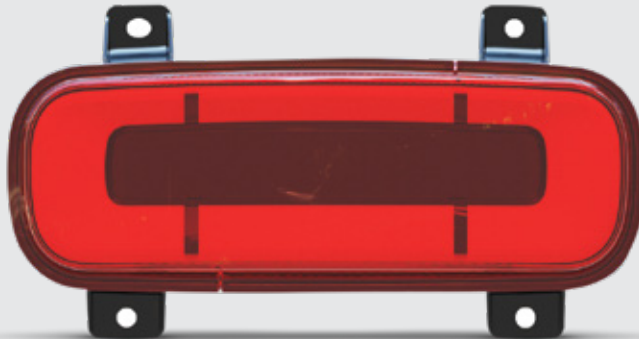
## HOMOGENOUS LED TAIL LAMP



Meets reliability requirements of customer



Highly aesthetic look contributing to overall look of the vehicle



### PRODUCT DESCRIPTION

This advanced LED tail lamp delivers uniform illumination, ensuring enhanced visibility and safety on the road. With its sleek design and reliable performance, it provides optimal lighting for vehicles, promoting confidence and peace of mind for drivers and other road users.

### FEATURES

Lighting functions – tail function, stop function

Reflector based optics for tail and stop function with diffusing material for homogeneous appearance

Meets photometric requirement as per ECE and AIS regulation

EMI/EMC compliance as per AIS 010 & ECE R10

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## CLASSIC ROUND BLINKER



Meets reliability requirements of customer of 1 lakh Km



Highly aesthetic look contributing to overall look of the vehicle



### PRODUCT DESCRIPTION

With its timeless design and modern LED technology, this blinker offers both style and functionality for your vehicle. Enhance your visibility and add a touch of elegance to your ride with this premium LED blinker.

### FEATURES

Lighting functions – Blinker

Fresnel lens based optics for tail and stop function with diffusing material for homogeneous appearance

Meets photometric requirement as per ECE , AIS, CQC & VSCC regulation

EMI/EMC as per AIS 010

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C



## ROUND LED HEAD LAMP



Meets reliability requirements of customer



Highly aesthetic look contributing to overall look of the vehicle



### PRODUCT DESCRIPTION

Designed to illuminate the road ahead with clarity and efficiency, this LED headlamp offers superior brightness and durability for enhanced visibility during nighttime driving.

### FEATURES

Low beam, high beam, DRL & position functions

ECE 113 class D, FMVSS, CCC, VSCC & AIS certified for Photometric performance

Freeform reflectors for low beam, high beam & DRL function

Enhanced near field visibility

Customization option available for lamp with external grill

### TYPICAL APPLICATION

Normal Operating Voltage:  
13.5V DC ( $\pm 0.5V$ )

Wide Operating Voltage Range:  
9V to 16V

Operating Temperature Range:  
-20°C - 55°C

Storage Temperature Range:  
-30°C - 80°C

# CAPABILITIES

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Dedicated Plant for  
PCB Assembly



All testing  
requirements under  
one roof



Software development  
and System validation  
solution experts



## Varroc Corporate Office

B-3010, 3<sup>rd</sup> Floor and B-7010,  
7<sup>th</sup> Floor, Solitaire Business Hub,  
Opp. Neco Garden Society, Datta  
Mandir Chowk, Viman Nagar,  
Pune - 411014, Maharashtra

## Varroc Registered Office

L-4, MIDC Industrial Area, Waluj,  
Aurangabad - 431136, Maharashtra

Phone: +91 240 6653600/6653700

E-mail: [connectwithus@varroc.com](mailto:connectwithus@varroc.com)

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