

FIEM INDUSTRIES LIMITED



fiem

LIGHT UP THE WORLD

Expanding
Horizons



ANNUAL
REPORT
2022-23

www.fiemindustries.com



HUB MOTOR

MOTOR CONTROL UNIT

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Disclaimer:

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EXPANDING HORIZONS



With a clear vision for next level of growth, we are expanding our horizons. Our new focus area includes diversifying product portfolio for Electric-2W and taking strategic initiatives to expand business in the passenger vehicle segment.

EXPANDING HORIZONS...



With our strong Designing, Research & Development capabilities, supported by state-of-the-art Manufacturing facilities, we are expanding our horizons in the Electric-2W segment to start with the Hub Motor, Motor Control Unit (MCU) and Electronic Control Unit (ECU). We are also expanding new products i.e., USB Charger and G-APS Sensor under Technical Assistance Agreement with Toyodenso Co., Ltd. By leveraging our expertise and resources, we aim to expand this product portfolio to cater to the evolving needs of Electric-2W.

We are also taking strategic initiatives to expand business in the passenger vehicle segment. Through these initiatives, we aim to strengthen our position in the Automotive Lighting Industry and establish a strong foothold in Passenger Vehicle segments.

We have fostered a culture of innovation and continuous improvement in our processes and products. By staying ahead of market trends and anticipating customer needs, we are well-positioned to capitalize on emerging opportunities. As we embark on this next phase of growth, we remain focused on delivering value to our OEM customers.



With a strong balance sheet and all the necessary resources in place, our Company stands on the cusp of the next level of growth. Over the year, we have diligently managed our financials, ensuring stability and strength, which positions us favourably for expansion and seizing new opportunities. It enables us to make strategic investments in research and development, acquire cutting-edge technologies, expand our production capacity, and explore new partnership and markets.

Through our product diversification and strategic fit initiatives, we expect to achieve next level of growth, strengthen our market position as well as create sustainable long-term value for our stakeholders!

MFR REFLECTOR
& LIGHT GUIDE



With our World Class
R&D and Designing
Capabilities we provide
Innovative Products from
CONCEPT TO DELIVERY

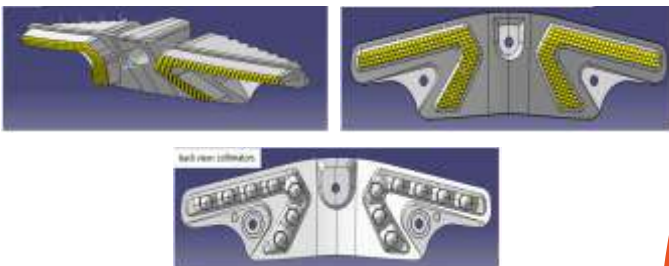
TVS
RAIDER

CHEETAH CONCEPT LED HEADLAMP
with Signature Position Lamp



CONCEPT LED TAILLAMP

Signature ultra sleek profiled
LED tail lamp with light blade concept
with rustic raw edge optical design.





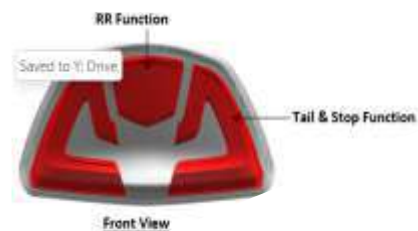
CONCEPT LED HEADLAMP

A modern twist is added to the menacing appearance of the "Beast Eyes" position function with single LED and highly efficient optical concept with frosty Light Bar.



YOGA MUDRA CONCEPT LED TAILLAMP

A three-dimensional light flow for signaling function is extracted from the combination of thick lenses and light pad technology for exceptional lighting experience.





HARLEY-DAVIDSON & HERO MOTOCORP
LAUNCHED **X** IN INDIA
440

LED HEAD LAMP



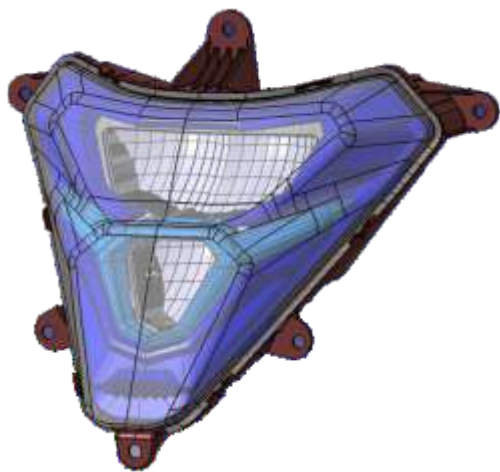
LED TAIL LAMP



SIMPLE ENERGY 1

LED HEADLAMP

Unique Design
with High Beam & Low Beam



LED TAIL LAMP

Thick Lens Technology
with Tail, Stop and Indicator Function



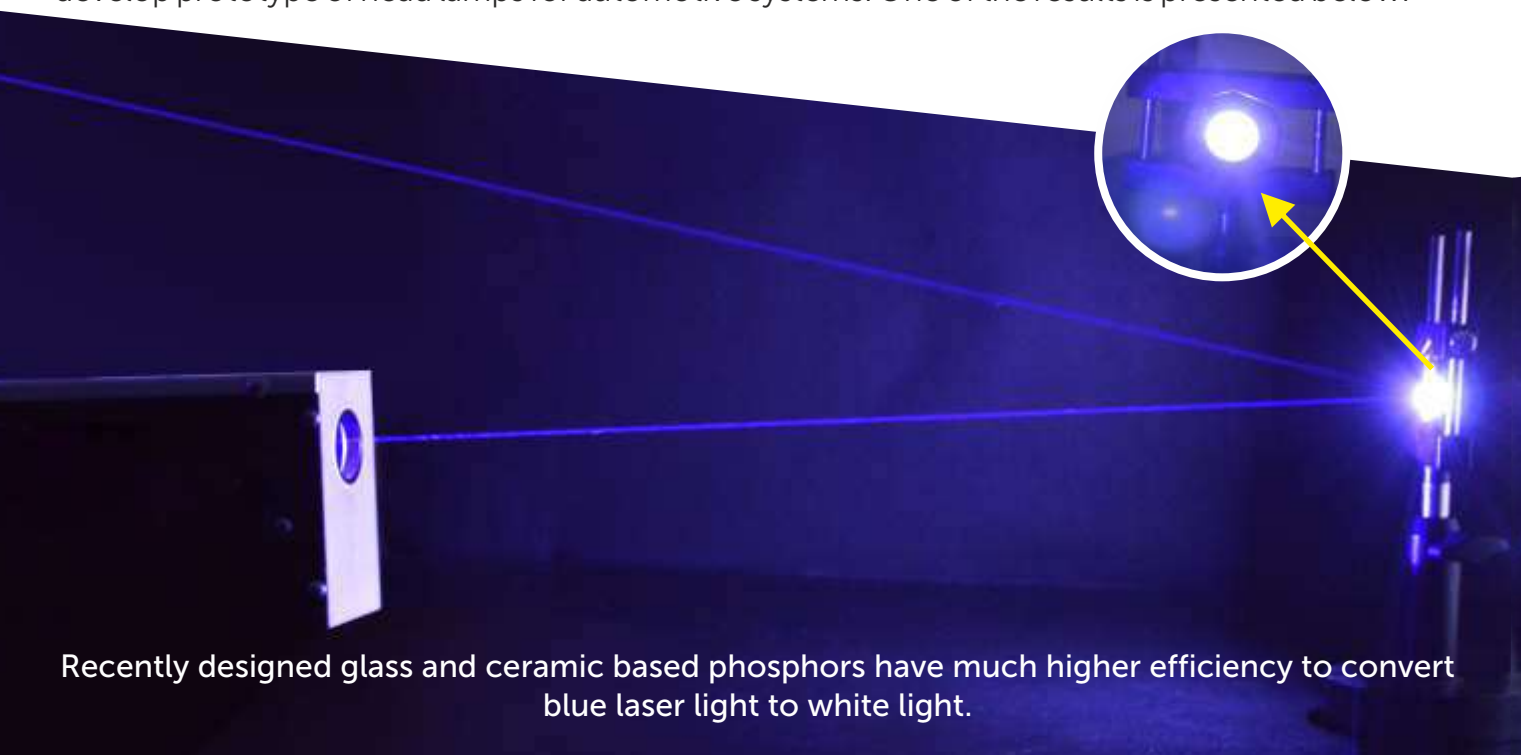


NEXT GENERATION LIGHTING

LASER LIGHTING

Our Research and Developmental work on Laser Lighting by using ceramic and glass based phosphor is continuing for development of high luminous intensity sources...

In the last few years, Fiem has been engaged in the development of phosphors which when excited with a blue laser emitting 450 nm, called blue laser, produce white light. The main problem encountered was the reflection of the laser light from the surface of the phosphor disc. It was substantial fraction of the laser energy which was not being used for converting the laser energy into white light. Not only was it a loss, but it was also creating blue tinged white light which reduces the color rendering index of the converted white light. Therefore, working in this direction, several versions of the phosphor were developed in which a penetration depth of 450 nm could be produced. This helps consume the incident blue laser light of 450 nm completely within the phosphor itself and increases the intensity of the converted white light by 23 percent. This is one of the best phosphors, to the best of our knowledge. Now a further programme is being worked out to develop prototype of head lamps for automotive systems. One of the results is presented below:



Recently designed glass and ceramic based phosphors have much higher efficiency to convert blue laser light to white light.