

## Technical Brief

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### Lightweight, easy-to-assemble face shield that offers full face coverage

#### Technology Summary

CSIR-CSMCRI has developed an easy-to-assemble face shield that offers full face coverage using very economic materials.

#### Background

During the ongoing COVID crisis, the significance of face shields to protect frontline workers has been universally recognized and they are being used extensively across the globe. Face shields are personal protective equipment (PPE) devices that are used for protection of the facial area and associated mucous membranes (eyes, nose, mouth) from splashes, sprays, and spatter of body fluids. They also keep you from touching your hands to your eyes and nose and mouth, considerably reducing the risk of inadvertently exposing oneself to the coronavirus.

#### Technology description

CSIR-CSMCRI has developed an easy-to-assemble lightweight face shield that offers full face coverage. The frame material is made of LDPE, and the visor is a 1mm thick polycarbonate sheet of size 430 mm X 230 mm. The face shield is held in place using an adjustable elastic head band. The face shield complies to test qualification as per ANSI/ISEA Z87.1-2015 –American National Standard for Occupational and Educational Personal Eye and Face Protection Devices

#### Market Potential

The face shield market size is estimated to grow from USD 3.0 billion in 2020 to USD 4.1 billion by 2025, at a CAGR of 6.5%. The market is mainly driven by factors such as awareness due to the outbreak of COVID-19 pandemic, stringent regulations pertaining to safety of personnel, and raising awareness about industrial occupational hazards is driving the face shield market.

(<https://www.marketsandmarkets.com/Market-Reports/face-shield-market-207117099.html>).

#### Value Proposition

- Lightweight and easy to assemble face shield.
- Adequate visor size that offers full face coverage
- Non-allergic frame material
- UV protective face shield
- Reusable shield that can be cleaned and disinfected with any commercial disinfectant
- Complies to test qualification as per ANSI/ISEA Z87.1-2015 –American National Standard for Occupational and Educational Personal Eye and Face Protection Devices.

#### Applications

Face Shields can minimize the risk of virus transmission by offering an extra layer of protection when worn over cloth masks, and even when worn alone, they protect the facial area of the wearer from spatter of body fluids.

#### Technology status

- Ready to license. Seeking licensee

