

Design and Fabrication of Disposable Face Shield

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(Note: Assembly instructions, and legal disclosure, are included in the packet of components)

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Components and Fabrication

- Polyethylene terephthalate (PET; or similar) film¹

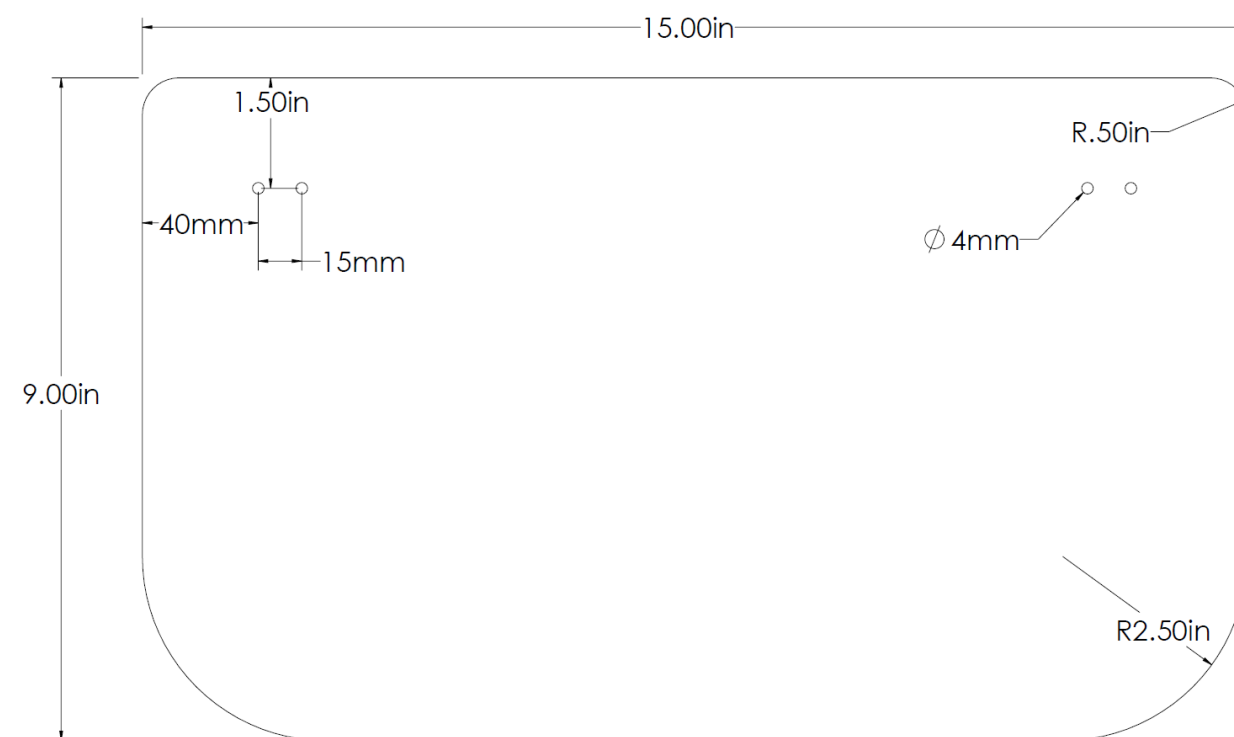
- ~0.4 mm (15 mil) thick sheet cut to these dimensions using a laser cutter (*Figure below*)

- Polyethylene (or similar) foam²

- 1 inch thick sheet cut into 1 inch X 1 inch X 1 inch cubes to attach to PET film

- Elastic band³

- Ties to PET film to secure around the head



¹ www.mybinding.com: TC1511X17S

² McMaster: 8865K53

³ https://www.amazon.com/gp/product/B01GPI9HJA/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1

Coronavirus (“COVID-19”) has evolved into a serious worldwide pandemic which has depleted the supply of Personal Protective Equipment (“PPE”), including face masks, parts for face masks, and face shields, in the nation. Under the direction of its faculty in the College of Engineering, the University of Nevada, Las Vegas (“UNLV”) has engaged its 3D printing and laser cutter resources for the purposes of fabricating printable PPE in a non-sterile environment to be used on an emergency basis by healthcare workers engaged in the diagnosis and treatment of COVID-19. **The PPE fabricated by UNLV bear no certification whatsoever for the use intended by healthcare workers. UNLV does not guarantee performance of the printable PPE at the level of PPE that is generally certified for such use.**

Assembly Instructions:

- 1) Remove all components from the bag



- 2) Place plastic shield with the UNLV logo backwards and at the top
- 3) Remove backing from foam piece and stick on small red circles



- 4) Repeat step 3 a total of five times (a sixth foam piece is included to ensure enough parts)
- 5) Tie ends of elastic band to circles in upper right and upper left corners of shield



- 6) Place on head with foam pieces in contact with forehead to ensure snug fit, if fit is not satisfactory adjust elastic band

