Simulating screens and surfaces

Use Case – Using Stratasys® VeroUltra™ materials to prototype handheld electronics with multiple opacities and surfaces.

Challenge

Traditional, single-material prototyping is an expensive multi-step process with long lead times. And when you're dealing with a prototype with multiple parts and surfaces, there is a higher risk of miscommunication over the appearance of the individual elements. Additionally, simulating an LED screen requires graphics to be adjusted for the chosen technology when applying it to the physical body.

Solution

Using Stratasys PolyJet™ 3D printing technology and VeroUltra family of opaque color materials, this full CMF car key prototype can be created as a single assembly in a single print. The VeroUltra colors allowed for multiple opacities as well as create a color match and sharp screen simulation that are true to the original design intent. Detailed graphics embedded into the 3D print file also produced buttons that mimic the sharpness and brightness of in-mold-labeling.

Impact

The ability to create a prototype with a realistic final fit, form and appearance in a single print dramatically reduced production time from several weeks to a matter of days — streamlining the design validation process and accelerating time to market.