



DESIGN FOR  
MANUFACTURING

# Carbon

4M010D Picasso

Printing  
End Cap Lens 5-3-2  
4.STL

K9Q0H8FO  
RPU 70



## From Concept to Creation

At Aprios, our Design for Manufacturing (DFM) practice focuses on creating parts and assemblies that streamline the manufacturing process, reduce waste, and enhance quality.

By carefully selecting materials and designing parts that align with the capabilities of both injection molding and 3D printing, we help you achieve precision and consistency in your products.

### OPTIMIZE DESIGNS FOR EFFICIENT PRODUCTION

#### Simplifying Part Design and Ensuring Consistency

By opting for straightforward designs, production becomes more efficient. Our DFM approach is here to provide you with thoughtful, cost-effective solutions.

#### Avoiding and Resolving Failure Points

Designs are refined to avoid potential failure points by using fillets instead of sharp corners, which distributes stress evenly. This practice enhances durability in both injection molding and additive manufacturing applications.

#### Enhancing Part Strength and Ease of Assembly

Rather than increasing wall thickness, strategically placed ribs add strength and rigidity. Bosses are integrated for fastening, ensuring stability and durability across both injection molding and additive manufacturing processes.

#### Optimized Material Selection and Usage

Choosing the right materials is key. Our recommendations are selected to meet performance requirements. This ensures proper filling, reduces cycle and print times, and enhances efficiency.



# Understanding boundaries of DFM

## WHAT DFM IS NOT

Understanding what DFM isn't helps clarify its role in product development and manufacturing strategy, enhancing manufacturability and efficiency when integrated with design, engineering, and quality control practices.

1. **Not a Substitute for Engineering:** DFM enhances engineering and design but doesn't replace technical precision or validation.
2. **Not One-Size-Fits-All:** DFM principles are tailored to specific manufacturing methods, materials, and product needs.
3. **Not a Guarantee of Perfection:** While DFM reduces risks, it doesn't eliminate the need for rigorous quality control.
4. **Not a Replacement for Prototyping:** DFM reduces design iterations, but prototyping remains essential for testing and validation.
5. **Not a Quick Fix:** DFM requires time and teamwork, boosting efficiency and cost savings but not offering immediate solutions.
6. **Not Just a Cost-Reduction Strategy:** DFM can optimize designs for cost savings, but overall production expenses still depend on material, labor, and overhead.
7. **Not Solely About Simplification:** DFM aims for functional and performance-enhancing designs through simplification and strategic improvements.

For more information, please scan the QR code below.



## CONTACT US

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