Proof of Concept Center
3D Printer (Objet 350 Connex3)
Polyjet 3D Printing Guidelines

Introduction

The Objet350 Connex3 3D printer by Stratasys is a rapid prototyping machine capable of quickly producing accurate parts out of a variety of materials. The printer uses PolyJet technology, which jets and instantly cures tiny droplets of liquid photopolymer to create parts from STL files. Up to 3 different materials can be loaded into the printer at once. The printer can print single materials or combine 2 or more materials to print "Digital Materials" with varying material properties.

Design for Manufacturability: Clearances and Dimensions

When designing your part, keep these numbers in mind. They are only meant to be a starting place, and you are encouraged to experiment and learn what works for you. Please use the minimum "safe" wall thickness and clearance if you want to be sure that your part will print correctly. If you choose to ignore these minimums, you do so at your own risk and will have to pay for the parts even if they do not print properly.

| Properties	Objet 350
Maximum Part Dimensions	13.4"(342mm) x 7.8"(200mm) x 13.4"(342mm)
Material / Color / Properties	*Single Materials*: Material Properties
	Rigid: VeroClear (RGD810), VeroWhitePlus (RGD835), VeroBlack(RGD875), VeroYellow (RGD836), VeroCyan (RGD841), VeroMagenta (RGD851)
	Flexible: Agilus30Black (FLX935), Agilus30Clear (FLX935)
	Digital Materials: Material Properties
Slice Height [1]	0.001 inches (30 microns) High Quality .0006 inches (16 microns)
XY Dimensional Tolerance	± 0.008 inches (± 200 microns)
Minimum "safe" wall thickness	0.063 inches (1.6 mm)

Minimum "printable" wall thickness	0.031 inches (0.8 mm)
Minimum "safe" clearance between surfaces	0.079 inches (2 mm)
Minimum clearance between surfaces	0.039 inches (1 mm)
Minimum Text Height	0.031 inches (0.8 mm)

[1] The Slice Height, also called the Bead Height, is the vertical thickness of an individual layer of plastic. Unless your part is an exact integer multiple of this value (which would be rare), your part will be slightly shorter. Your design should tolerate this. If you need parts with greater precision, 3D Printing may not be a good solution for you.

Material Options
It is possible to load up to 3 different materials into the Objet printer at the same time.

Materials we stock: Digital ABS, Agilus30 Black, VeroClear, VeroWhite, VeroBlack, VeroCyan, VeroMagenta, and VeroYellow
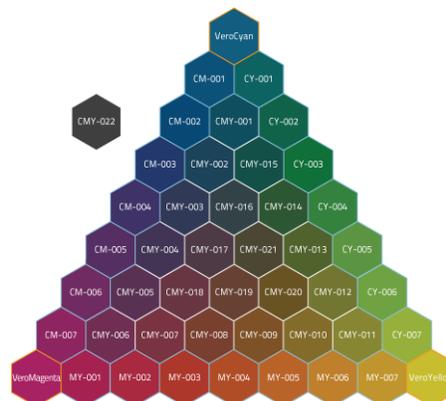
Color palettes with material codes show all of the Connex350 available options.

YELLOW SQUARES PRINTED WITH DIFFERENT THICKNESSES

One final note on color
When printing different colors next to or on top of each other, especially when printing a light color over a dark color, the thickness of the layers is important. In order to prevent the base color from showing through, make sure that the top color is at least 0.08 inches (2 mm) thick.