















Structural parts							
.stl, .3mf, .f3d file names*	Rotation	Supports	Brim	Infill	Printing	Components list	
<input type="checkbox"/> Set 01. Alyona Minina. 2019. UHEI	X: 90°	Build plate	No	20%	 Matte black filament, 135 g Printing time: 13 h	<ol style="list-style-type: none"> Motor hub 2x bearing guides 1x bearing guide with the mount for the mini microswitch Mini microswitch housing Mini microswitch pin (tiny dick) Holder for the vertical rail Holder for the LED frame rail 2x bottom for a thumb screw 2x cap for a thumb screw 	
<input type="checkbox"/> Set 02. Alyona Minina. 2019. UHEI	–	Build plate	No	20%	 Matte black filament, 210 g Printing time: 18.5 h	<ol style="list-style-type: none"> Borg's nest Lid for the Borg's nest Lid for the DC connector Holder for the SparkFun MOSFET power control kit 	
<input type="checkbox"/> Set 03a. Alyona Minina. 2019. UHEI	X: 90°	Build plate	No	20%	 Matte black, 50 g Printing time: 5 h	<ol style="list-style-type: none"> Camera housing for Arducam Lid for the camera housing 2x bottom for a thumb screw 2x cap for a thumb screw 2x washer 	
<input type="checkbox"/> Set 03b. Alyona Minina. 2019. UHEI	X: 90°	Build plate	No	20%	 Matte black, 25 g Printing time: 3 h	<ol style="list-style-type: none"> Camera housing for RPi camera Lid for the camera housing 2x bottom for a thumb screw 2x cap for a thumb screw Stabilizer for the camera Focusing tool 	
<input type="checkbox"/> Set 04. Alyona Minina. 2019. UHEI	X: 270°	Build plate	No	20%	 Matte black, 380 g Printing time: 28.5 h	<ol style="list-style-type: none"> Cube-shaped stage with holders for Petri plates 	
<input type="checkbox"/> Set 05. Alyona Minina. 2019. UHEI	Z: 345°	Everywhere	Yes	50%	 Matte black, 260 g Printing time: 23 h Notes: Please ignore messages about toolpath being detected outside the perimeter.	<ol style="list-style-type: none"> The right half of the light screen 	
<input type="checkbox"/> Set 06. Alyona Minina. 2019. UHEI	Z: 355°	Everywhere	Yes	50%	 Matte black, 230 g Printing time: 20.5 h Notes: Please ignore messages about toolpath being detected outside the perimeter.	<ol style="list-style-type: none"> The left half of the light screen 	
<input type="checkbox"/> Set 07. Alyona Minina. 2019. UHEI	Z: 50°	Everywhere	Yes	20%	 Matte black, 140 g Printing time: 14 h Notes: Please ignore messages about toolpath being detected outside the perimeter.	<ol style="list-style-type: none"> The right half of the LED frame 	
<input type="checkbox"/> Set 08. Alyona Minina. 2019. UHEI	Z: 50°	Everywhere	Yes	20%	 Matte black, 130 g Printing time: 12.5 h Notes: Please ignore messages about toolpath being detected outside the perimeter.	<ol style="list-style-type: none"> The left half of the LED frame 	
<input type="checkbox"/> Set 09. Alyona Minina. 2019. UHEI	Z: 50°	–	Yes	30%	 Transparent/milky white, 35 g Printing time: 2.5 h	<ol style="list-style-type: none"> Left diffuser Bottom left diffuser Bottom right diffuser 	
<input type="checkbox"/> Set 10. Alyona Minina. 2019. UHEI	Z: 40°	–	Yes	30%	 Transparent/milky white, 20 g Printing time: 1.5 h	<ol style="list-style-type: none"> Top diffuser 	
<input type="checkbox"/> Set 11. Alyona Minina. 2019. UHEI	Z: 50°	–	Yes	30%	 Transparent/milky white, 20 g Printing time: 1.4 h	<ol style="list-style-type: none"> Right diffuser 	
Notes							
As of today, printing structural parts has been tested using PLA filaments only. Required total amount of black matt PLA = 1685 g							
Required total amount of milky white PLA = 75 g							
Total estimated time of printing = 159.5 h							
Accessories							
.stl, .3mf, .f3d file names*	Rotation	Supports	Brim	Infill	Filament	Additional info	
Anti-reflection lids for square 12 cm plates	Y: 180°	-	No	20%	 PETG black and white, 41 g Printing time: 6 h	<p>Printing instructions: For the sake of durability, we strongly recommend using PETG plastic.</p> <p>The lid should be printed in two colors: the inner pane of the lid should be black and ironed to provide evenly contrasting background for seeds and seedlings, while the rims of the lid should be white to reduce shading and reflect the light back into the plate.</p>	

Anti-reflection lids for round 9 cm plates	Y: 180°	-	No	20%		PETG black and white, 18 g Printing time: 3.5 h	Ironing during printing might result in an unwanted shiny finish of the surface, this can be avoided by manually lowering down the nozzle temperature during printing the ironed level. In our experience, using 190–200 C nozzle temperature results in a matte finish while using PETG filament. The .3mf file contains information required for printing using a Prusa i3 MK3/S printer and can be modified for any other printer.
Seed plating guide for square 12 cm plates	-	-	No	15%		Any filament, 59 g Printing time: 14.5 h	
Seed plating guide for round 9 cm plates	Y: 270°	-	No	15%		Any filament, 51 g Printing time: 9.5 h	
Seed plating guides and insets for multi-well Petri plates	-	-	No	-		-	For more information please refer to Thingiverse: https://www.thingiverse.com/thing:4196441
* Supplementary file 1.zip							