

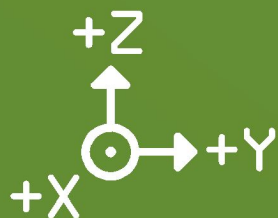
M1

SpaceLab UFSC 2021

M2

Interstage Interface Panel Board N.4 Rev 2.0 Camera Variant

Ready  
for  
launch



line limit   
external connectors

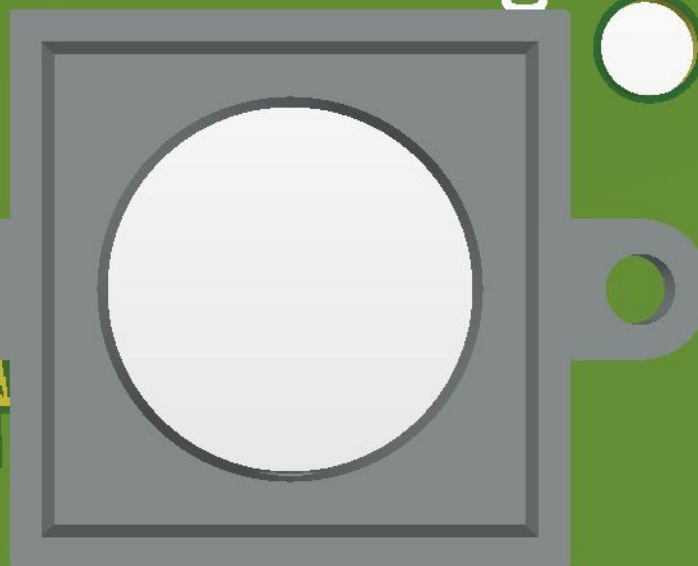


structure contact  
area

M3

M4

From the ilha da magia to space.



Say cheese

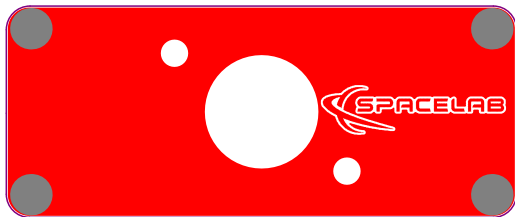



Space Technology Reserach Laboratory  
of the Federal University of Santa Catarina, Florianopolis, Brazil.

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

### Fabrication specifications:

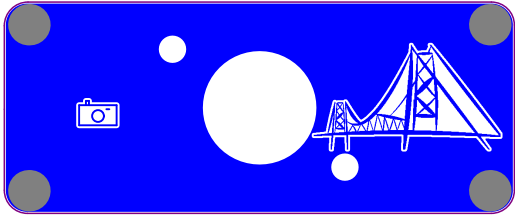
- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None




SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <b>Top Layer</b> <b>Board Edge</b>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

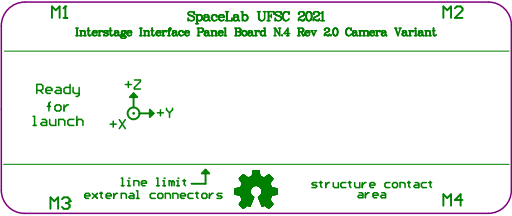
- Fabrication specifications:
- Copper base: 1oz
  - PCB Material: Prepeg FR4—Standard
  - PCB Thickness: 1.6mm
  - PCB Surface: HASL (with lead)
  - Silkscreen Color: White (top and bottom)
  - Soldermask Color: Green
  - Stack-up: Standard 2 layer 1.6mm thickness
  - Special requirements: None




SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: Bottom Layer Board Edge		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

- Fabrication specifications:
- Copper base: 1oz
  - PCB Material: Prepeg FR4—Standard
  - PCB Tickness: 1.6mm
  - PCB Surface: HASL (with lead)
  - Silkscreen Color: White (top and bottom)
  - Soldermask Color: Green
  - Stack-up: Standard 2 layer 1.6mm thickness
  - Special requirements: None




SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <span>Top Overlay</span> <span>Board Edge</span>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4

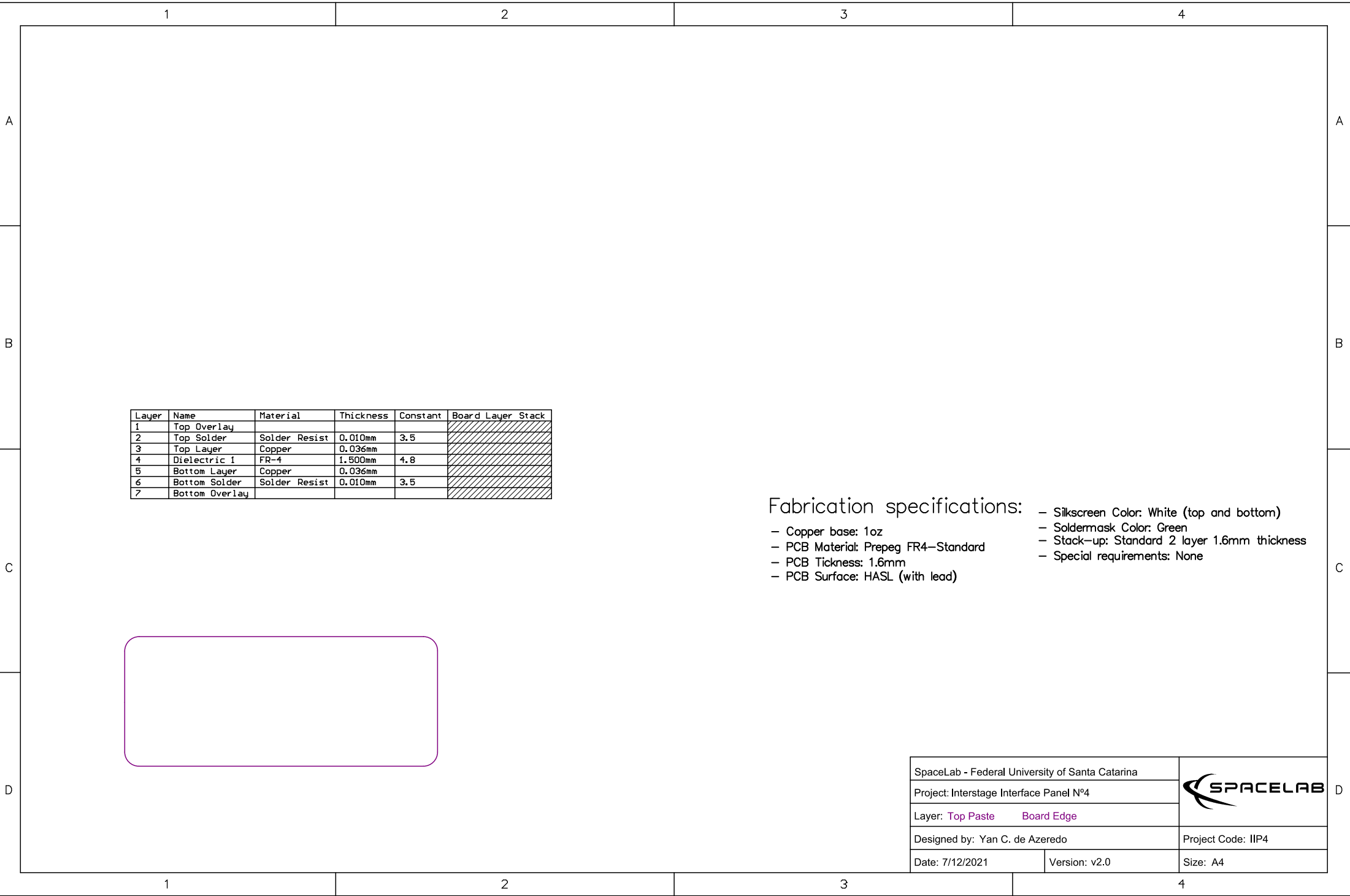
Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

- Fabrication specifications:
- Copper base: 1oz
  - PCB Material: Prepeg FR4—Standard
  - PCB Thickness: 1.6mm
  - PCB Surface: HASL (with lead)
  - Silkscreen Color: White (top and bottom)
  - Soldermask Color: Green
  - Stack-up: Standard 2 layer 1.6mm thickness
  - Special requirements: None

From the illa da magia to space  
Say cheese


of the Federal University of Santa Catarina, Laboratory  
Space Technology Research Laboratory

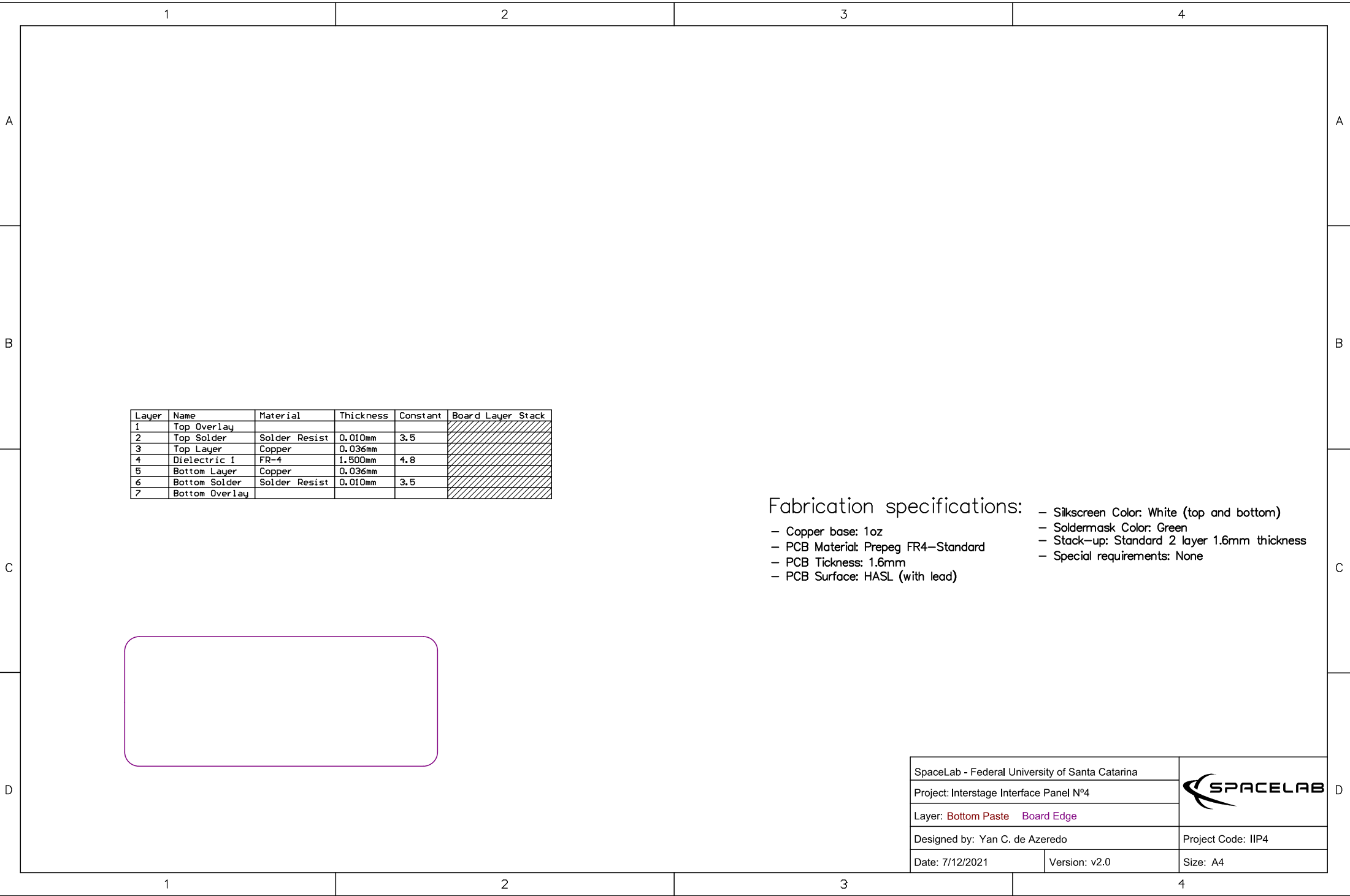
SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: Bottom Overlay Board Edge		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				


- Fabrication specifications:
- Copper base: 1oz
  - PCB Material: Prepeg FR4—Standard
  - PCB Thickness: 1.6mm
  - PCB Surface: HASL (with lead)
  - Silkscreen Color: White (top and bottom)
  - Soldermask Color: Green
  - Stack-up: Standard 2 layer 1.6mm thickness
  - Special requirements: None

SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <b>Top Paste</b> <b>Board Edge</b>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

- Fabrication specifications:
- Copper base: 1oz
  - PCB Material: Prepeg FR4—Standard
  - PCB Thickness: 1.6mm
  - PCB Surface: HASL (with lead)
  - Silkscreen Color: White (top and bottom)
  - Soldermask Color: Green
  - Stack-up: Standard 2 layer 1.6mm thickness
  - Special requirements: None

SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: Bottom Paste Board Edge		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4




Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

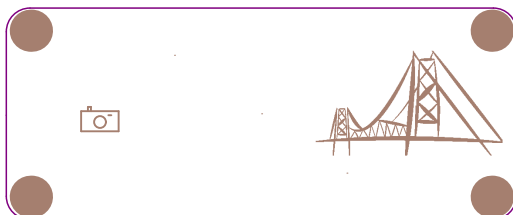



SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <b>Top Solder</b> <b>Board Edge</b>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

### Fabrication specifications:

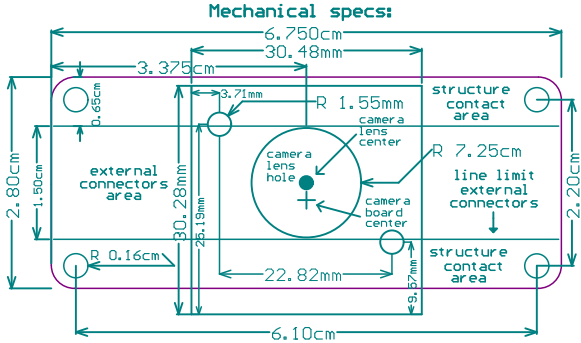
- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None




SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: Bottom Solder Board Edge		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

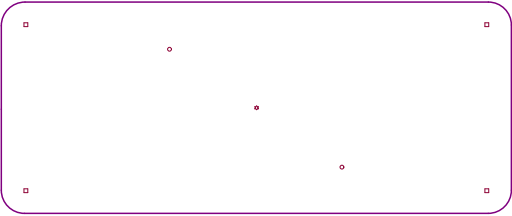
- Fabrication specifications:
- Silkscreen Color: White (top and bottom)
  - Soldermask Color: Green
  - Stack-up: Standard 2 layer 1.6mm thickness
  - Special requirements: None
  - Copper base: 1oz
  - PCB Material: Prepeg FR4—Standard
  - PCB Tickness: 1.6mm
  - PCB Surface: HASL (with lead)



SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <span>Dimensions</span> <span>Board Edge</span>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4


Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

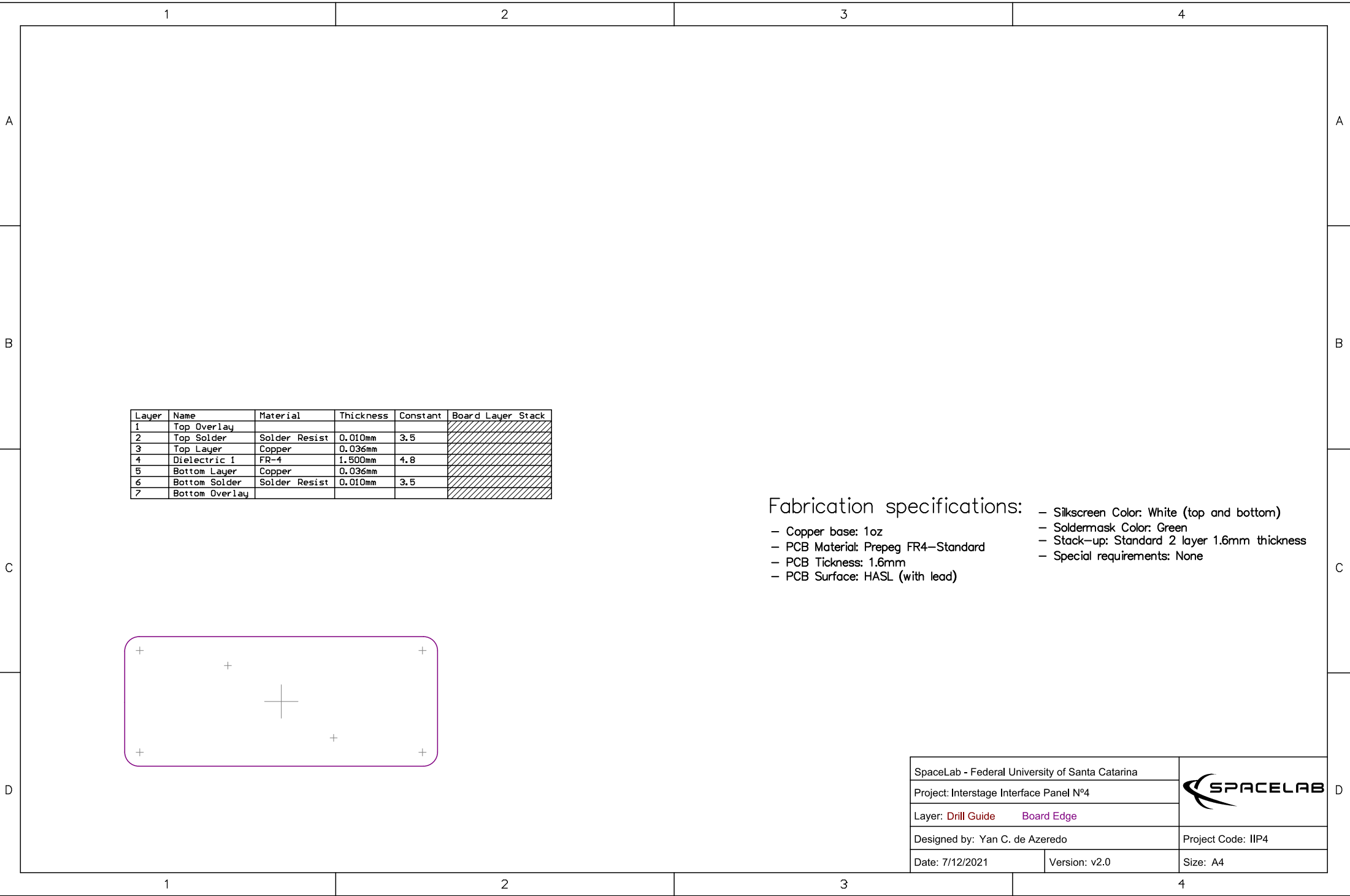
Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape	Template
○	2	3.100mm (122.05mil)	PTH	Round	Top Layer - Bottom Layer	Pad	Rounded	c0h310
□	4	3.200mm (125.98mil)	PTH	Round	Top Layer - Bottom Layer	Pad	Rounded	c550h320
☆	1	14.500mm (570.87mil)	PTH	Round	Top Layer - Bottom Layer	Pad	Rounded	c0h1450
	7 Total							



Fabrication specifications:

- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None
- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)


SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <b>Drill Drawing</b> <b>Board Edge</b>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina		
Project: Interstage Interface Panel N°4		
Layer: <span>Drill Guide</span> <span>Board Edge</span>		
Designed by: Yan C. de Azeredo		Project Code: IIP4
Date: 7/12/2021	Version: v2.0	Size: A4