

RFD/RFW Number:
FLX-RFD-ALM-CU-0016
Issue
1.0

Spacecraft / Project	FLORIS	Originator's Name	Thomas Gandy	
System / Experiment / Model	FLEX	Signature / Date		
Sub-System		Request Type (Highlight applicable request)	Waiver (RFW)	Deviation (RFD)
Assembly	EQM/PFM	Organisation	Almatech	
Sub-Assembly	Calibration Unit	Ref. Doc. / Drwg No.	ALM-PRO-4174	
Item	-	References	-	
Serial No.	EQM, PFM			

RFW/RFD Title	Optical Cube
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End Items(s) Affected (Hardware, Software)				
Name	CI-Number	Model(s)		
Calibration Unit		EQM, PFM		
Requirement / Interface Documents Affected				
Specification/Drawing Title	Number	Issue	Date	App. Paragraph
FLORIS Calibration Unit URD	FLX-RS-FNM-INS-0006	6D01.1	10.07.2018	5.3.5
Description of Deviation / Discrepancy / Non-Conformance				
<p>FLO-INS-GDI-REQ-0930 says :</p> <p><i>The Optical cubes shall be manufactured with the following properties:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> 5 sides polished perpendicular to better than 5 arcsec <input type="checkbox"/> Surface Area: 1 inch x 1 inch <input type="checkbox"/> Clear Aperture > 90% Surface Area <input type="checkbox"/> Chamfer: 0.4 ± 0.1 mm x 45° <input type="checkbox"/> Material: N-BK7 or equivalent <input type="checkbox"/> Optical quality requirement (according to ISO-10110): <input type="checkbox"/> Surface Accuracy better than 3/1 (0.5) <input type="checkbox"/> Surface Impurities better than 5/3x0.25 <input type="checkbox"/> Roughness better than 10 nm RMS <input type="checkbox"/> Coating Requirement: <input type="checkbox"/> 5 Sides with Protective Aluminium Coating (reflectivity better than 75% at 633 nm). <p>Almatech is partially compliant with this requirement as the cube is made out of Aluminium 6082 with dimensions of 17.1mm</p>				
Other Items or Requirements (Potentially) Affected				
None				
Need for RFW/RFD and Rationale for Acceptance				
The shape of the cube and its localisation made the above reported material and dimensions unavoidable.				

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RFD/RFD CLOSED	Name	Sign & Date	
		Approved	Rejected
Project Manager / Engineering: (Sub System)	Gianluigi Capo		
Engineering: (Almatech)	Marco Lai		
Product Assurance: (Almatech)	Thomas Gandy		
Project Manager: (Leonardo)			
Engineering: (Leonardo)			
Product Assurance: (Leonardo)			
Engineering (ESA)			
Contract Manager (ESA)			

Continuation sheet: