



Electroporcelains Division
Bengaluru – 560012, India

PS 901 01 0001

Rev No : 00

Purchase Specification
Group : Photovoltaic Module

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ANODIC COATING FOR ALUMINIUM

1. SCOPE: This specification covers the requirement of electrolytically formed anodic coatings on Aluminum & Al alloy parts which are exposed to direct action of climatic elements (viz sun, wind, rain, dust, salt, and water).

2. GENERAL:

- Aluminum parts to be anodized are made of Al alloy (63400/6063) as per IS-733 and supplied in W P /T6 (temper) condition.
- End use of component is for Solar Photovoltaic module framing.
- Anodizing process as per Type-I: IS-7088
- Type of sealing as per IS-7088 (Clause 7)

3. VISUAL REQUIREMENTS:

The anodic coating shall be continuous, smooth, adherent, uniform in appearance and shall be free from powdery areas, loose films, and discontinuities such as breaks, scratches or other damage.

4. DIMENSIONAL REQUIREMENTS:

After anodic coating, the parts shall comply with dimensional requirements of the applicable drawings.

- Extent of surface to be anodized : All over
- Anodic Coating Thickness: 18 ± 3 microns as per IS 1868 (AC 15 grade), Table 1
- Surface Texture: Natural matte finish
- Continuity: As per IS-8375
- Insulation: As per IS-8554, when anodic parts are checked, the break down potential of the coating is to be not less than 500 V DC.
- Corrosion resistance: Each anodized and sealed member when tested as per IS-9000 (part XI) as per procedure 1(5% salt solution) shall not show more than 5 isolated spots or pits (0.8 mm dia max).

Note: Supplier shall produce test certificate from reputed labs for SI. nos. 4(d), (e) and (f) which shall not be older than one year as on the date of material supply.

Prepared By: PK	Reviewed By: NAR	Approved By: CNP	Date of Issue
			13.08.2016



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5. TEST METHODS:

VISUAL AND DIMENSIONAL

Parts selected in accordance with the sampling plan and tested for visual and dimensional checks shall comply with clause 3.

6. COATING THICKNESS:

Parts selected as per sampling plan and tested for coating thickness in accordance with IS-6012 shall comply with clause 4(a).

7. SAMPLING PLAN:

Sampling Size: Single Sampling Plan as per IS-10673, Special Inspection Level S-4, AQL 4

Prepared By: PK

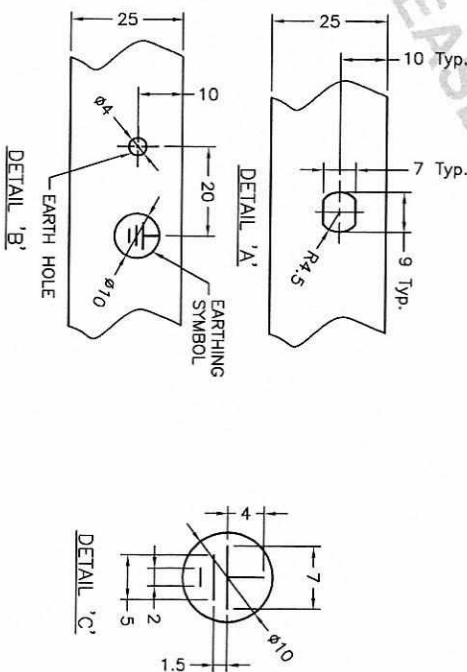
Reviewed By: NAR

Approved By: CNP

Date of Issue

13.08.2016

		1, 2 AND 3. 2). PAPER TO AVOID SCRATCHES AND SUPPLIED IN CARTON BOXES. SUPPLIER NAME TO BE AFFIXED ON EACH CARTON BOX. SCALE NTS	
TITLE: BHARAT HEAVY ELECTRICALS LIMITED. ELECTROPORCELAINS DIVISION, BENGALURU		CARD CODE	
ALUMINIUM EDGE FRAME – 300 W CORNER BLOCK TYPE		No. of SHTS SHT No.	
M.O. No.		DRG. No.	
3 988 04 001 10		01 01	
REV 00		01	



SCALE NTS

DATE	
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TITLE: BHARAT HEAVY ELECTRICALS LIMITED
ELECTROPORCELAINS DIVISION, BENGALURU

ALUMINIUM EDGE FRAME - 300 W
CORNER BLOCK TYPE

CARD CODE

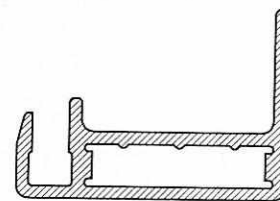
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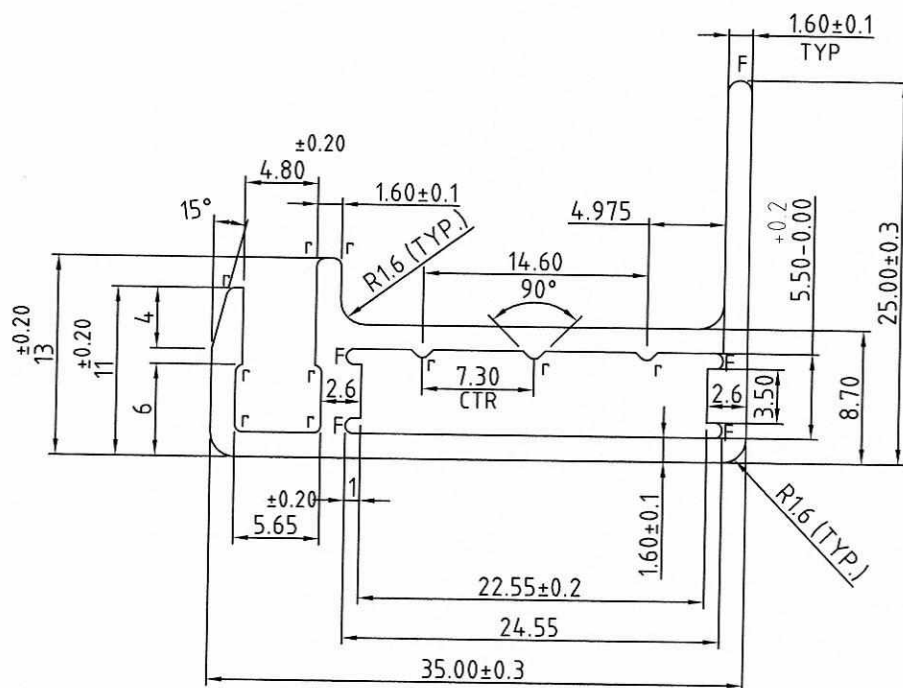
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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION					
		CHECKED			CHECKED						
		APPROVED			APPROVED						
			00	FIRST ISSUE		STATUS OF DRAWING					
						DISTRIBUTION					
						OF PRINTS					



SCALE=1:1



MATERIAL : ALUMINIUM ALLOY - 63400 WP AS PER IS:733 (OR) 6063-T6.

NOTE :

1. ALL UNSPECIFIED WALL THICKNESS - 1.6 ± 0.1 .
2. r-0.50, F - FULL RADIUS.
3. DIMENSIONAL TOLERANCES FOR EXTRUDED ALUMINIUM AS PER IS:3965.
4. HEAT TREATMENT CONDITION : WP (OR) T6.
5. ESTIMATED WEIGHT Kg/m = 0.474.
6. ROUND OF ALL SHARP CORNERS WITH 0.25 mm.
7. VENDOR EXTRUSION DRAWING TO BE APPROVED BY BHEL.

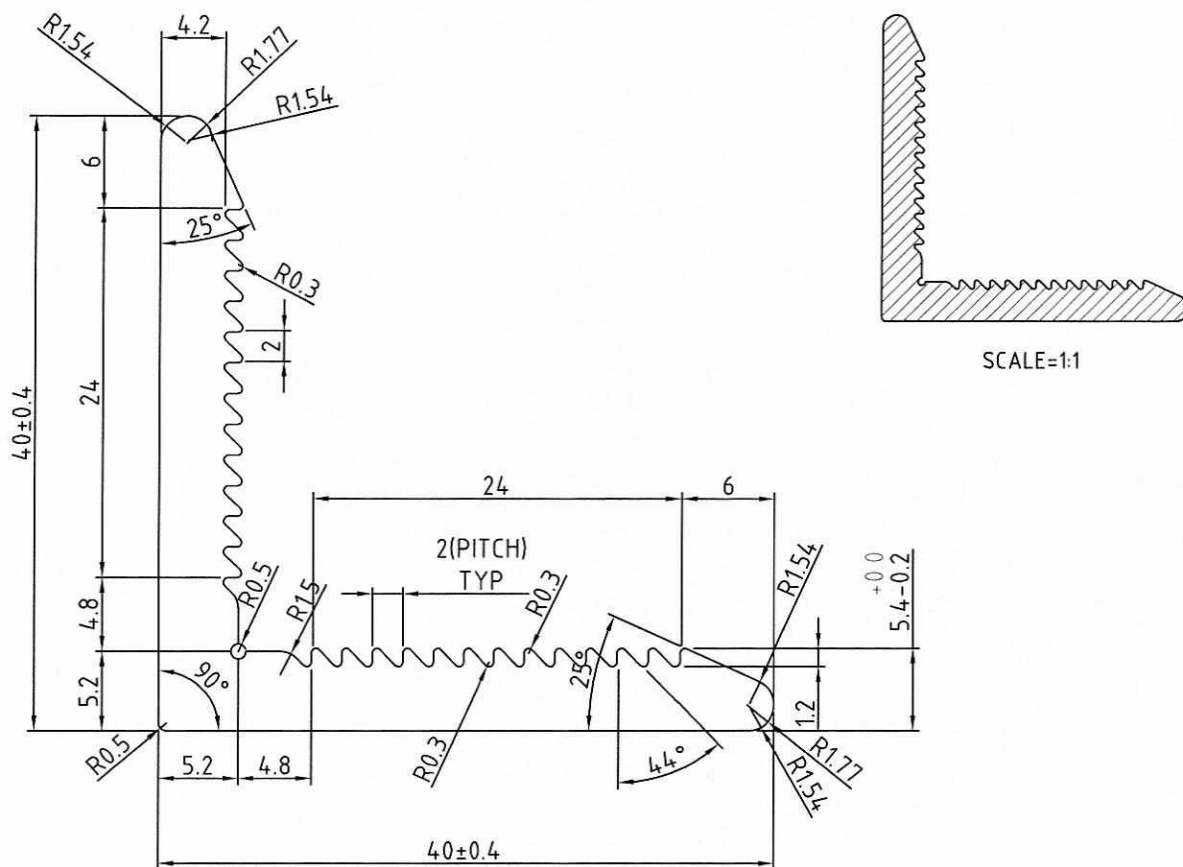
REMARKS	ITEM NO.	DESCRIPTION	STD.	MATERIAL CODE	A	UNIT
				MATERIAL SPECN.	C	QUANTITY

	BHARAT HEAVY ELECTRICALS LIMITED. ELECTRPROCELAINS DIVISION, BENGALURU		NAME	SIGN.	DATE	No. OF VAR
		DRN	NAR	Sd/-	300816	
		CKD	NAR	Sd/-	300816	
		APPD	CNP	Sd/-	300816	

DEPT. SC&PV	FOR UNSPECIFIED TOLERANCES REFER ED 0230499		SCALE 2 : 1	WEIGHT (kg)	REF. TO ASSY. DRG.	ITEM NO.	No. OF ITEM
CODE							

TITLE	DRAWING NO.	REV.
250 W PV MODULE MAIN EXTRUSION	4 988 04 001 10	00
	SHEET NO. 01	NO. OF SHEETS 01

REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION					
		CHECKED			CHECKED						
		APPROVED			APPROVED						
			00			STATUS OF DRAWING					
			FIRST ISSUE			DISTRIBUTION OF PRINTS					



MATERIAL : ALUMINIUM ALLOY - 63400 WP AS PER IS:733 (OR) 6063-T6.

- NOTE :**
1. DIMENSIONAL TOLERANCES FOR EXTRUDED ALUMINIUM AS PER IS:3965.
 2. HEAT TREATMENT CONDITION : WP (OR) T6.
 3. ESTIMATED WEIGHT Kg/m = 0.956.
 4. ROUND OF ALL SHARP CORNERS WITH 0.25 mm.
 5. VENDOR EXTRUSION DRAWING TO BE APPROVED BY BHEL.

REMARKS	ITEM NO.	DESCRIPTION	STD.	MATERIAL CODE	A	UNIT	UNIT Wt.(Kg)
				MATERIAL SPECN.	C		QUANTITY

		BHARAT HEAVY ELECTRICALS LIMITED. ELECTROPROCELAINS DIVISION, BANGALORE			DRN	NAME	SIGN.	DATE	No. OF VAR
						NAR	Sd/-	250816	
					CKD	NAR	Sd/-	300816	
					APPD	SR	Sd/-	300816	
DEPT. SPV	FOR UNSPECIFIED TOLERANCES REFER ED 0230499			SCALE 2 : 1	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	No. OF ITEM	
CODE 100									
TITLE CORNER BLOCK EXTRUSION					DRAWING NO.				REV. 00
					4 988 04 002 10				
					SHEET NO. 01		NO. OF SHEETS 01		