



BHEL-EPD

ELECTRIC & PHOTOVOLTAIC DIVISION**BENGALURU – 560012, INDIA****Purchase Specification****Group : Photovoltaic Module**

SPEC. NO: PS-901-01-0002

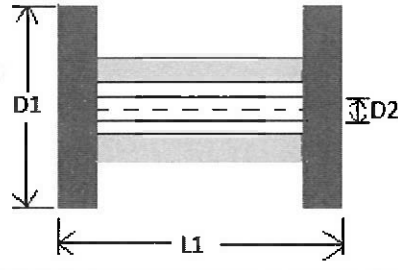
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STRING INTERCONNECT**1.0 TECHNICAL SPECIFICATION :**

1.1	Item	String Interconnect	
1.2	Material, Grade	Copper as per IS 191-2007 / EN 13602, Grade - Electrolytic tough pitched (ETP)	
1.3	Width	5.0 ± 0.2 mm	
1.4	Thickness	0.3 ± 0.03 mm (Basic copper Thickness)	
1.5	Composition	Copper purity 99.95% min.	
1.6	Conductivity (% IACS)	101%	
1.7	Elongation	> 25%	
1.8	Tensile strength (MPa)	150 ≤ TS ≤ 260	
1.9	Yield strength (N/mm ²)	< 140	
1.10	Surface finish	a) Coating - Coated with 60:40 Tin-lead Solder. - Coating thickness: 16 to 25 microns all around. - Uniform and bright coating, good adhesion all around. - Coating should be free of spots & blister. b) Edge - Natural rounded edges. c) Edge & Corners should be free of Burrs.	
1.11	Camber	≤ 5 mm / meter	
1.12	Typical spool dimension with type- "H" (all dimensions are in mm)		▪ Dia. D1 ≤ 270 ▪ Dia. 16 ≤ D2 ≤ 54 ▪ L1 ≤ 125
		The construction of spool should be strong enough for loading and operation.	

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COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.		2.0 WINDING OF INTERCONNECT : 2.1 The winding of interconnect in the spool shall be uniform & have good tension which shall retain till interconnect in a spool is completely used. 2.2 There shall not be any slackness, unwinding, overlapping, twisting & gap between the spool flanges & interconnect winding. 3.0 FUNCTIONAL REQUIREMENT : 3.1 Required for interconnecting string in PV module by soldering process. 4.0 PRECAUTION : 4.1 Wound interconnector on spool shall be free from dents, scratches, burrs and loose winding. 4.2 The Design of spools, winding and packing to ensure safe packing & avoid any possibility of handling / transit damages. 4.3 Coating shall be uniform and free from blister / peel-off. 5.0 PACKING CONDITIONS & MARKING : 5.1 To be supplied in spools of max. 5.0 to 16.0 Kg (Net Wt.) including Interconnector wt. 10.5 ± 5.5 Kg per spool. 5.2 The wounded spool shall be covered with anti-rust paper before vacuum packing. 5.3 Each spool to be vacuum sealed in air tight polythene covers and shall be placed in large box having partition / pouches for each of the spools. This shall avoid physical contact of individual spools. 5.4 Outer box shall be supplied along with wooden pallet firmly fixed to box for lifting & placement. 5.5 To be labelled on the packing consignment: a) Manufacturers Name b) Lot No c) Specification No. - BHEL / PS-901-01-0002 d) Cell interconnect - 5 BB (Tin-Lead 60:40) e) Dimension : 5.0 * 0.3 mm, Coating: 16 to 25 μ f) Date of Manufacture g) No of spools h) Weight i) Each Spool – on the spool ii) Packed Box – net of packed spools. 5.6 Details of the spool as per clause no. 5.5 to furnished for each spool in each lot.			
		ಕೊಂಪು ಕರೀರಿ: ಬಿಎಚ್‌ಇಎಲ್ ಹೌಸ್, ಸಿರಿಫೋರ್ತ್, ನವದೆಹಲಿ - 110049 पंजीकृत कार्यालय: बीएचईएल हाउस नई दिल्ली-110049, REGD.OFFICE : BHEL HOUSE SIRIFORT, NEW DELHI- 110049			

		 BHEL-EPD	ELECTRIC & PHOTOVOLTAIC DIVISION BENGALURU – 560012, INDIA Purchase Specification Group : Photovoltaic Module	SPEC. NO: PS-901-01-0002 <table border="1"> <tr> <td data-bbox="1059 293 1193 349">REV. 05</td> <td data-bbox="1193 293 1441 349">JOB NO.- STD.</td> </tr> <tr> <td data-bbox="1059 349 1278 412">PAGE 03 OF 03</td> <td data-bbox="1278 349 1441 412">DT 15.02.20</td> </tr> </table>	REV. 05	JOB NO.- STD.	PAGE 03 OF 03	DT 15.02.20
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		6.0 TESTS CERTIFICATE / REPORTS / COC: 6.1 Each lot must be accompanied with routine Test Certificate, for the parameters described in section 1.0, clause from 1.1 to 1.12.						
COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.		6.2 Certificate of Compliance (COC) for each point mention under section 2.0, clause from 2.1 to 2.2, section 3.0, clause 3.1, section 4.0, clause from 4.1 to 4.3, section 5.0, clause from 5.1 to 5.6 shall be provided along with each lot. 7.0 INSPECTION CRITERIA : 7.1 Visual Inspection, Dimensional & Properties evaluation 7.2 Single Sampling Plan as per ISO: 2859-1 / IS: 10673-1983, Special Inspection Level S-4, AQL 1.0 7.3 BHEL reserves the right for pre-dispatch inspection at vendor works by BHEL or BHEL nominated agency. 7.4 BHEL at its discretion may waive the pre-dispatch inspection at vendors work based on review of submitted vendor inspection reports. However, the vendor responsibility is not absolved till the material is finally inspected and accepted at BHEL. Rejections if any at BHEL, vendor is liable to replace with good quality materials at vendor cost confirming with this purchase specification. 7.5 Vendor to submit Manufacturing Quality Plan – MQP in BHEL prescribed format for review & approval on receipt of purchase order.						
		ಕರಂಜಿ ಕಛೇರಿ: ಬಿಎಚ್‌ಇಎಲ್ ಹೌಸ್, ಸಿರಿಫೋರ್ತ್, ನವ ದೆಹಲಿ-110049 पंजीकृत कार्यालय: बीएचइएल हाउस, नई दिल्ली-110049, REGD.OFFICE : BHEL HOUSE SIRIFORT NEW DELHI- 110049						