

1/2	1. Material Name	Copper Strip		Established	1994. 6. 17	Revised	2011. 01. 21	Grade	1st grade
	2. Applicable Range	This material is applied to the outer conductor of high-frequency band coaxial cable.							
	3. Material Classification	Copper Strip classified by C1020 material series in JIS H3100 or ASTM B152, Annealed Alloy							
Page	4. Test Item	Default Degree	Unit	Specified Value			Reference Value	Test Condition	Test Method
LSC(21) - C1 - 11 -0018	1) Dimension	Light	mm	Thickness	Width	Length	Weight (kg)	Normal Temperature	Strip dimension can be measured by Vernier Caliper (less than 0.05mm unit) or Micrometer (Ball Type, less than 0.001mm unit)
				0.15	45.5	3320	201		
				0.16	26	2900	107		
					36	2900	148		
					41	2900	169		
					45.5	3320	215		
					79.5	3545	401		
				0.18	80	2386	272		
					40.5	4350	282		
				0.20	40.5	2960	192		
					41	2900	211		
				0.22	45.5	3320	269		
					80	3545	504		
					35	2900	199		
					43	2900	244		
					46	3320	299		
				0.25	62	2285	277		
					81	2386	378		
				0.30	62	2285	315		
					118	2300	724		
0.38	150	1200	480						
	116	2300	712						
0.40	150	1200	608						
	57	2280	462						
Thickness ± 0.007, Width ± 0.1, Length -0, +20 m Specific Gravity of Copper : 8.89 g/cm ³ (Reference Value) There should not be connection mark on strip roll.									
1994. 6. 17 2011. 01. 21	2) Tensile Strength	Heavy	kgf/mm ²	20 ≤				Prepare the 100mm strip sample and mark the standard length 50mm before tensile strength measurement	KSB 0802 regulation (Method of tensile test for metallic materials)
	3) Elongation	Heavy	%	35 ≤				Prepare the 100mm strip sample and mark the standard length 50mm before elongation measurement	KSB 0802 regulation (Method of tensile test for metallic materials)
	4) Hardness (Reference)	Heavy	-	HV 45 ~ 55				-	JIS Z 2244 regulation (Vickers Hardness Test - Test Method)
	5) Electric Conductivity	Heavy	%	100				Strip sample should be more than 350mm in length.	KSD 0240 regulation (Measuring methods for electrical resistivity and conductivity of non-ferrous materials)
Revised	6) Elements Purity	Heavy	%	Cu : Minimum 99.96, O ₂ : Maximum 0.01				-	KSD 1651 (General rules for chemical analysis of copper and copper alloys)
	7) Material Aspect	Heavy	-	Strip exterior should be even and bright, and there exists no fault and toxic substance. Proper process to prevent strip discoloration in transportation and warehousing should be performed. There should not be damages on strip cutting plane. Feature of strip winding should be uniform and precise.				-	-
LS Cable Ltd.	8) Strip Discoloration	Heavy	-	Discoloration assurance must be achieved from the date of warehousing for 6 months, and chrominance(ΔE=15) should not exceed the regulated value.				-	Chrominance can be measured by specified colorimeter, if strip discoloration is observed. Chrominance ΔE=(ΔL* + Δa* + Δb*) (L: white, a:red, b:blue)
	9) Operational Requirements	Heavy	-	Before product manufacture, foreign substance (solid or liquid) on strip surface is not permissible. Impurity and disproportion between copper particles are not permissible. Strip should be greatly applicable to TIG welding process. Damage or abnormality after corrugation process for outer-conductor is not acceptable. Strip should not be twisted when unrolling. There should not be bends or pleats on the direction of width. Strip should not be torn or cracked on product manufacture process.				-	-
	10) VSWR & Thickness Uniformity on Strip Line	Heavy	-	Periodicity of strip thickness in longitudinal direction should not take place, and dimension specification has to be observed in all strip section. VSWR (30~2,400MHz) mathematically transformed from data of strip thickness results is regulated below 1.10				-	Supplier should check and record the prediction of VSWR through the FFT (Fast Fourier Transform) which is tool of conversion to frequency from time(longitudinal direction of the strip). Supplier should submit the FFT result, if not they accept LS result.
	11) Strip Curve	Heavy	mm	Strip Width	Maximum Curve			Adhere 1000mm copper strip to flat ground and measure the depth of curved strip arc	KSD 5201 (Copper and copper alloy sheets, plates and strips)
				6 ≤ Width ≤ 9	12				
				9 < Width ≤ 13	10				
				13 < Width ≤ 25	7				
				25 < Width ≤ 50	5				
				50 < Width ≤ 100	4				
				100 < Width ≤ 700	3				