

Hitachi Cable

Hitachi Cable (S) Pte. Ltd.

No.17 LOKYANG WAY, JURONG TOWN SINGAPORE 628634

SPEC No.
SP-EC 40122
Rev. 0




SPECIFICATION

FOR

LEAD FREE

UL RECOGNIZED MIXED CORE CABLE

(UL20276-SX LF (EC 40122) 15C)

WRITTEN	CHECKED	APPROVED
		

MADE IN SINGAPORE

1 Scope

This specification covers UL recognized mixed core cable using lead free insulating materials.

UL AWM style No.	20276
Rating	80°C, 30V

2 Applicable standard

2.1 UL 758 "Appliance Wiring Material"
 USE Internal and external interconnection of electronic equipment in class 2 circuits only.

3 Construction and Material**3.1 4PX26AWG Shielded Pair**

3.1.1 Conductor

3.1.1.1 Material	Tinned annealed copper wire (TA) stranded
3.1.1.2 Size	26AWG
3.1.1.3 Stranding	7/0.16 mm
3.1.1.4 Diameter	nom. 0.48 mm

3.1.2 Insulation

3.1.2.1 Material	Foamed Poly-olefines
3.1.2.2 Thickness	nom. 0.35 mm ave. 0.32 mm min. 0.28 mm
3.1.2.3 Dimension	1.18 ± 0.05 mm
3.1.2.4 Colour	see Table 1

3.1.3 Drain Wire

3.1.3.1 Material	Tinned annealed copper wire (TA) stranded
3.1.3.2 Size	26AWG
3.1.3.3 Stranding	7/0.16 mm
3.1.3.4 Diameter	nom. 0.48 mm

3.1.4 Twisting

3.1.4.1 Diameter	nom. 2.36 mm
3.1.4.2 Pair Combination	see Table 1

3.1.5 Shield tape

3.1.5.1 Material	Aluminum / polyester laminated tape (Aluminum surface facing inside)
3.1.5.2 Coverage	min. 100 %

3.1.6 Binder Tape

3.1.6.1 Material	Polyester tape
3.1.6.2 Diameter	nom. 2.44 mm

3.2 1PX26AWG Twisted Pair

3.2.1 Conductor

3.2.1.1 Material	Tinned annealed copper wire (TA) stranded
3.2.1.2 Size	26AWG
3.2.1.3 Stranding	7/0.16 mm
3.2.1.4 Diameter	nom. 0.48 mm

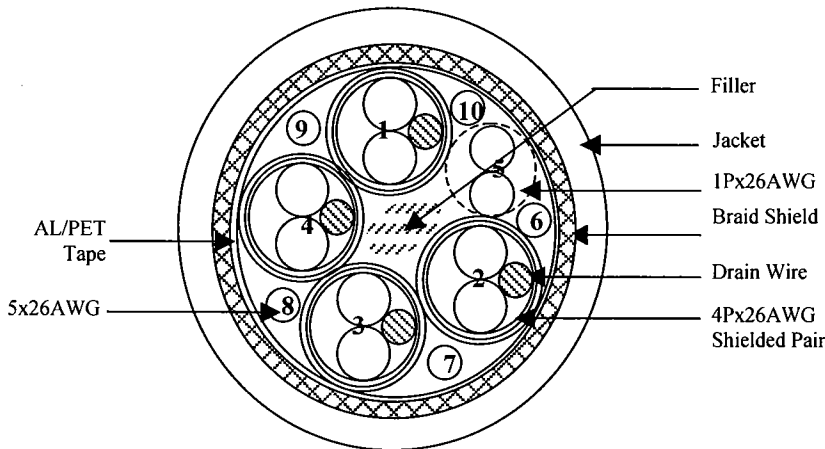
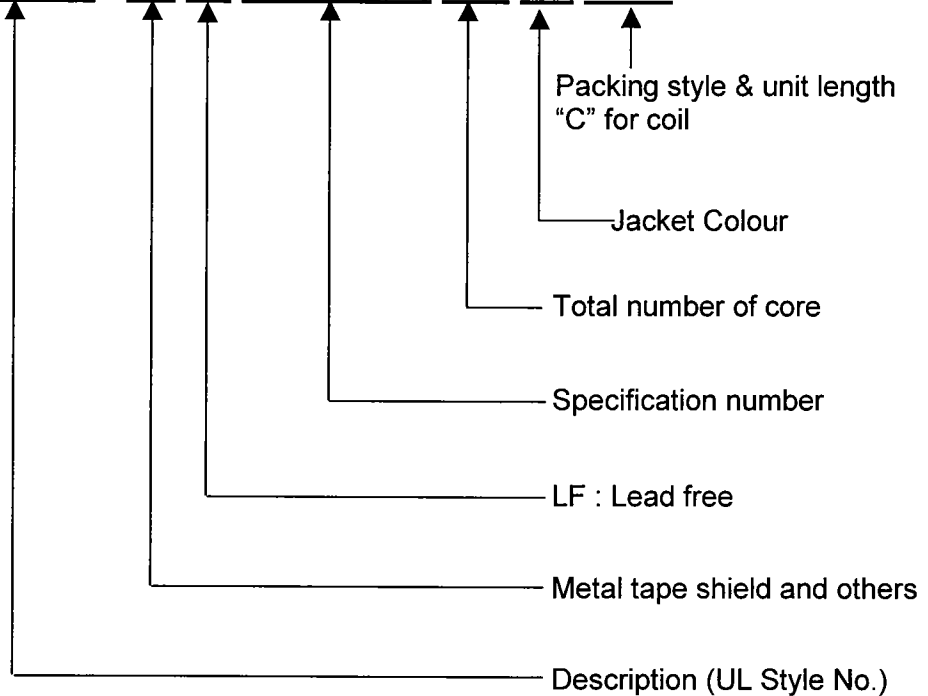
3.2.2	Insulation	
3.2.2.1	Material	Heat resistant, Lead Free PVC
3.2.2.2	Thickness	nom. 0.25 mm ave. 0.23 mm min. 0.20 mm
3.2.2.3	Dimension	0.98 ± 0.03 mm
3.2.2.4	Colour	see Table 2
3.2.3	Twisting	
3.2.3.1	Diameter	nom. 1.96 mm
3.3	5X26AWG Insulated Core	
3.3.1	Conductor	
3.3.1.1	Material	Tinned annealed copper wire (TA) stranded
3.3.1.2	Size	26AWG
3.3.1.3	Stranding	7/0.16 mm
3.3.1.4	Diameter	nom 0.48 mm
3.3.2	Insulation	
3.3.2.1	Material	Heat resistant, Lead free PVC
3.3.2.2	Thickness	nom. 0.25 mm ave. 0.23 mm min. 0.20 mm
3.3.2.3	Dimension	0.98 ± 0.03 mm
3.3.2.4	Colour	see Table 3
3.4	Cabling	
3.4.1	Diameter	nom. 6.30 mm
3.5	Shielding	
3.5.1	First layer – tape shield	
3.5.1.1	Material	Aluminum/polyester laminated tape
3.5.1.2	Coverage	min. 100 %
3.5.2	Second layer – braid shield	
3.5.2.1	Material	Tinned annealed copper wire (TA)
3.5.2.2	Shield Wire Diameter	nom. 0.12 mm
3.5.2.3	Coverage	min. 85 %
3.5.2.4	Diameter	nom. 7.00 mm
3.6	Jacket	
3.6.1	Material	Heat resistant, lead free PVC
3.6.2	Thickness	nom. 0.81 mm ave. 0.76 mm min. 0.61 mm
3.6.3	Diameter	8.60 ± 0.5 mm
3.6.4	Colour	Black (Colour code : BK)
4	Properties	
4.1	Conductor resistance	max. 142 Ω/km at 20°C
4.2	Insulation resistance	min. 10 MΩ-km at 20°C, 500V-DC
4.3	Dielectric strength	A.C. 350V/1min.
4.4	Impedance	100 ± 10 Ω (at TDR)*1

Note: *1 – Differential Mode

- 5 Packing**
 - 5.1 Unit length 100 m
 - 5.2 Packing Coil
- 6 Approved data**
 - 6.1 UL file No. E41447
- 7 Environmental Harmful Substance Compliance**
EHSL02019 – Certificate of Compliance for Environmental Harmful Substance*

8 Product description

ex.) UL20276 -SX LF (EC 40122) 15C BK C100



<UL Marking>
 UL AWM E41447-HCS STYLE 20276 LF 80C VW-1 HITACHI
 OR
 UL AWM E41447-HCS STYLE 20276 80C VW-1 HITACHI LF

Fig. 1 Cross-section of cable

* To be submitted upon request

Table 1 26AWG Shielded Pairs

Pair No.	1st Core	2nd Core
1	White	Blue
2	White	Green
3	White	Red
4	White	Brown

Table 2 26AWG Twisted Pair

Pair No.	1st Core	2nd Core
5	Red	Yellow

Table 3 26AWG Insulated Cores

Core No.	Colour
6	Orange
7	Light Grey
8	Black
9	Blue
10	Green