SPECIFICATION

FOR

UL RECOGNIZED MULTI PAIR FLEXIBILITY CABLE

[P/N: UL2464 (FA) nPx25AWG(40/0.08TA) LF]

Prepared	Checked	Approved
N.V.NAM 02-3-2022 HCV/DE	N.M.CƯỜNG 03-3-2022 HCV/AM	M.SUZUKI 09-3-2022 HCV/GM

Hitachi Cable Vietnam Co., Ltd

Revision record

No.	Date	Rev.	Contents	Prepared by	Reviewed by	Approved by
1	Mar. 01st, 2022	Initial Issue	Initial Issue	Nam. NV	Cuong. NM	Suzuki. M
2	Mar. 02nd, 2022	01	Add 2P, 5P size Change insulation color of core	Nam. NV	Cuong. NM	Suzuki. M

1. **Scope**
   This specification covers UL recognized multi pair flexibility cable.
   Rating Temperature: 80°C
   Rating Voltage: 300V
   USE: Internal wiring or external interconnection of electronic equipment
2. **Applicable standard**
   UL758: Latest version
   UL AWM Style 2464
3. **Construction and Material**

Table 1: Construction and material

Description		Unit	Specification				
			2Px25AWG	3Px25AWG	4Px25AWG	5Px25AWG	6Px25AWG
Conductor	Material	-	Tinned annealed copper wire (TA) stranded				
	Size	AWG	25				
	Stranding	No./mm	40/0.08				
	Diameter (Nom.)	mm	0.58				
Insulation	Material	-	ETFE				
	Thickness (Nom.)	mm	0.20				
	Diameter (Nom.)	mm	0.98				
	Color & Identification	-	See table 2				
Twisting	Diameter (Nom.)		1.96				
Cabling	Binder tape	-	Paper tape				
	Diameter (Nom.)	mm	3.6	4.0	4.4	4.9	5.5
Jacket	Material	-	Heat resistant, Lead free PVC				
	Thickness (Nom.)	mm	1.05	1.00	1.05	1.05	0.95
	Diameter	mm	5.7 ± 0.5	6.0 ± 0.5	6.5 ± 0.5	7.0 ± 0.5	7.4 ± 0.5
	Color (color code)	-	Black (BK)				
Packing	Unit length	m	200			100	

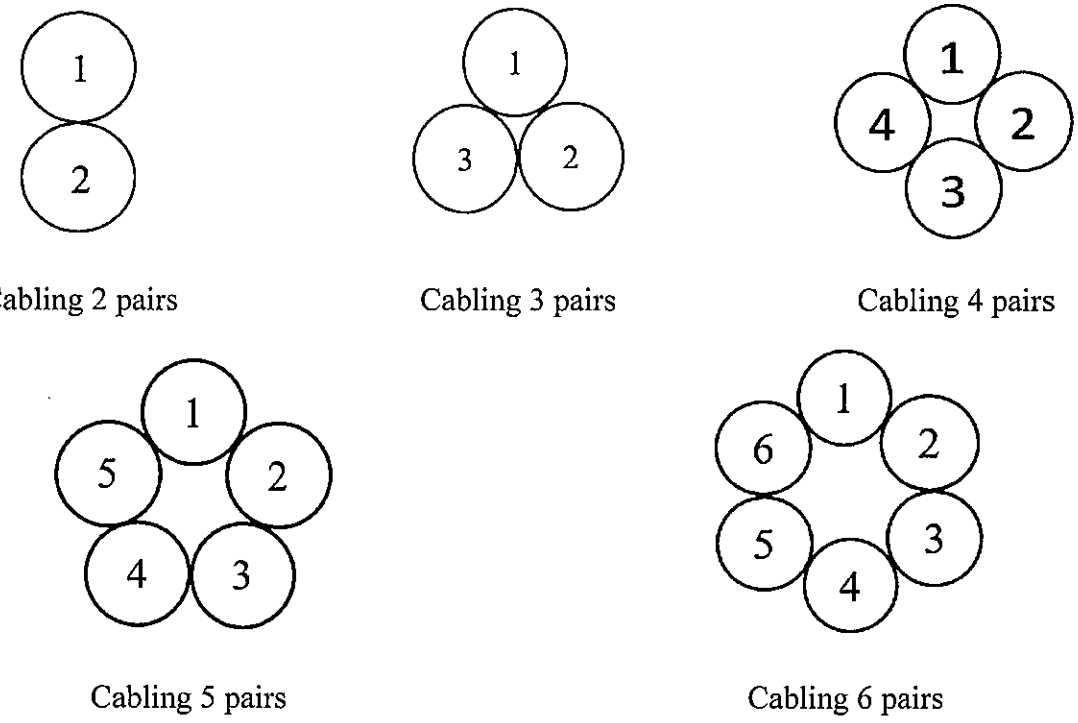
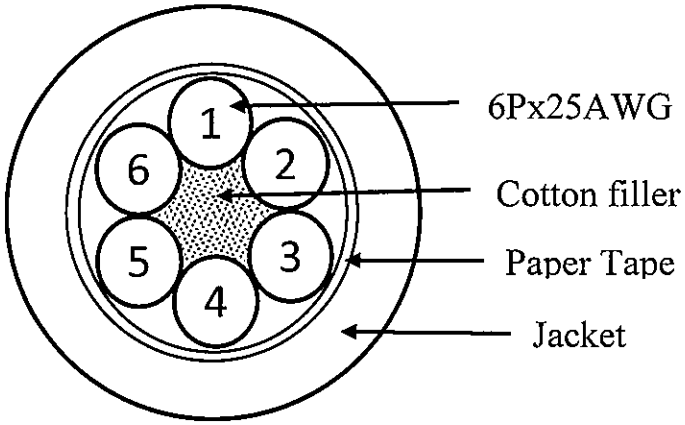


Fig. 1: Layout of cabling

Example for 6Px25AWG



(*) Suitable fillers may be applied to make a circular cross section.

Fig. 2: Cross-section of cable

4. Marking

The completed cable shall be printed following marking format on the surface throughout entire length by regular interval.

AWM E41447-HCV STYLE 2464 80C VW-1 HITACHI LF

Note: Making format subject to change without notice according with safety revision

5. Properties

No.	Test Item	Test Detail	Standard	Test		
				Routine	Type	Approval
1	Dielectric strength	A.C.2000V/1min; No breakdown	Specification	Yes	X	Yes
2	Jacket tensile strength (unaged)	Min 10.3 MPa	UL	X	Yes	Yes
3	Jacket tensile strength (aged)(*)	Min 70% (aged at 113±2°C, 168 hours)	UL	X	Yes	Yes
4	Jacket elongation (unaged)	Min 100 %	UL	X	Yes	Yes
5	Jacket elongation (aged)(*)	Min 45% (aged at 113±2°C, 168 hours)	UL	X	Yes	Yes
6	Heat shock for jacket	No crack (at 121±1°C, 1 hour)	UL	X	Yes	Yes
7	Cold bend for jacket	No crack (at -10±2°C, 4 hours)	UL	X	Yes	Yes
8	Deformation for jacket	Max. 50% (**)(19.61N at 121±1°C)	UL	X	Yes	Yes
9	Conductor resistance	Max. 105 Ω/km at 20°C	Specification	X	Yes	Yes
10	Insulation resistance	Min 1000 MΩ-km (20°C)	Specification	X	Yes	Yes
11	Flame test	VW-1	UL	X	Yes	Yes

(*) % of the unaged specimen.

(**) % of decrease in thickness

6. Packing

6.1 Packing

Each product shall be packed in coil for transportation, and unit length: see Table 1.

6.2 Marking on the Package

Each package shall be tagged to show the following information with UL stamp.

(1) UL Style No.
(2) Conductor size
(3) No of conductor
(4) Color
(5) Lot No.
(6) Length
(7) Use
(8) File No.
(9) Rating temperature
(10) Rating voltage
(11) Date of manufacturing
(12) Insulation thickness and material
(13) Jacket thickness and material
(14) Name of manufacturer

7. Order form

UL2464	(FA)	(SPV1746)	6Px25AWG(40/0.08TA)	LF	BK	C100
1	2	3	4	5	6	7

1	UL2464	Description (UL Style No.)
2	FA	Factory Automation
3	SPV1746	Specification No. SPV-02-1746
4	6Px25AWG(40/0.08TA)	No of core, conductor size & stranding
5	LF	Lead free
6	BK	Jacket Color (Black)
7	C100	Packing style and unit length, "C" for coil in m

8. Control of chemical subtances

Control of Chemical Substances in this product shall be controlled as below.
10 substances of RoHS Directive
(1) Applicable standard and statute
Directive 2011/65/EU of the European Parliament and of the Council on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment)
(2) The maximum concentration values for certain hazardous substances.

No	Chemical Substances	Concentration value
1	Cadmium and Cadmium Compounds	Less than 100 ppm
2	Hexavalent Chromium Compounds	Less than 1000ppm
3	Lead and Lead Compounds	Less than 1000ppm
4	Mercury and Mercury Compounds	Less than 1000ppm
5	Polybrominated Biphenyls (PBBs)	Less than 1000ppm
6	Polybrominated Diphenyl ethers (PBDEs)	Less than 1000ppm
7	Bis (2-ethylhexyl) phthalate (DEHP) * 1 (CAS No.117-81-7)	Less than 1000ppm
8	Benzyl butyl phthalate (BBP) * 1(CAS No. 85-68-7)	Less than 1000ppm
9	Dibutyl phthalate (DBP) (CAS No. 84-74-2) * 1	Less than 1000ppm
10	Diisobutyl phthalate (DIBP) * 1 (CAS No. 84-69-5)	Less than 1000ppm

**1 :COMMISSION DELEGATED DIRECTIVE (EU) 2015/863*

Table 2: Color & Identification

Pair no.	Color	
	1st core	2nd core
1	Black	White
2	Red	Green
3	Yellow	Brown
4	Blue	Gray
5	Orange	Violet
6	Pink	Natural