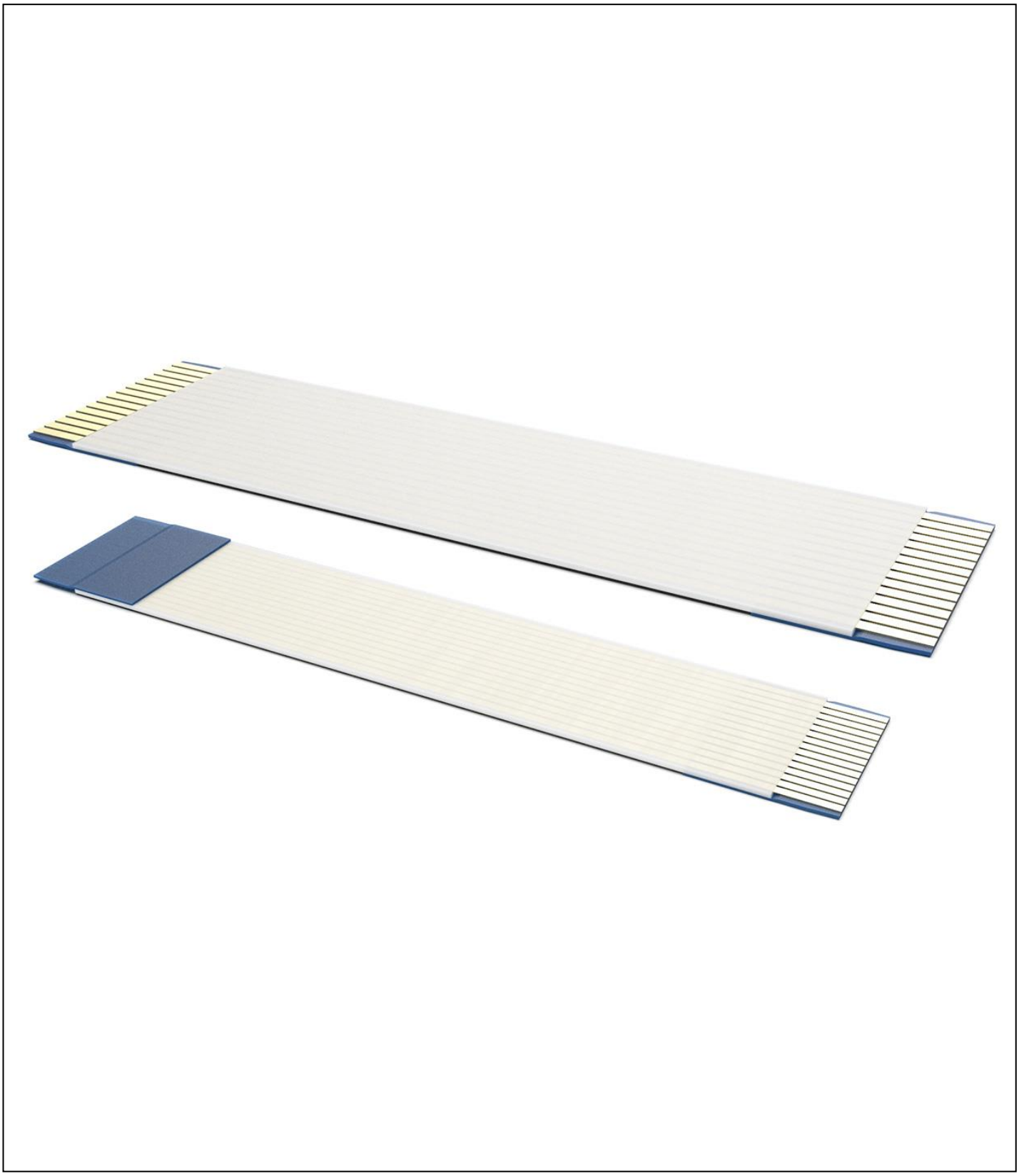
PRODUCT SPECIFICATION

Part Number	Flat Flex Cables			**Rev**	A	**Date**	07/07/23
Product Description	FFC general product specification					**Page**	1
Doc Number	FFC_PS	**Prepared**	YR	**Checked**	KL	**Approved**	PH



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1. SCOPE

This specification covers tolerances and characteristics of standard Flat Flex Cables, applicable to FFC Cable drawing rev.B or later.

2. GENERAL TOLERANCES

No.	Description	Size (mm)	FFC pitch & tolerance (mm)	
			0.5	1.0
1	Overall Length (L)	≤50	±1.5	
		51 – 100	±2	
		101 – 300	±3	
		301 – 800	±5	
		>800	±1%	
2	Conductor Thickness	0.035	±0.005	
		0.05	±0.005	
		0.1	±0.01	
3	Conductor Width	0.3	±0.03	
		0.65	±0.03	
4	Pitch	0.5	±0.05	
		1.0		±0.05
5	Cable Width (W)	0.5	±0.08	
		1.0		±0.1
6	Exposed Conductor Length	≤6	±1	
7	Support Strip Length	4 – 6	±1	
		6 – 7	±1.5	
		>8	±2	

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3. CHARACTERISTICS

	Item	Test Condition	Requirement
Electrical	Conductor Resistance (0.5mm pitch)	JIS-C-3102 (at 20°C)	2.2Ω/m Max.
	Conductor Resistance (1.0mm pitch)		1.1Ω/m Max.
	Insulation Resistance	Apply 500Vdc for 1 min	1000MΩ Min
	Rated Current (0.5mm pitch)	-	0.5A
	Rated Current (1.0mm pitch)	-	1.0A
	Dielectric Strength	500Vac, 0.5mA, 1 min, adjacent conductors in air 1000Vac, 0.5mA, 1 min, adjacent conductors in water	No breakdown
	Continuity	DC3V tester	No open circuit with each conductor, no short circuit to adjacent conductors
	Rated Voltage and Temperature	UL 758	60V, +80°C or +105°C depending on UL style
Physical	Operating Temperature	Fixed wiring	-40°C to +80°C or +105°C depending on UL style
	Flammability	UL 758 VW-1	Pass
	Resistance to Heat	+85°C or +110°C (depending on UL style) for 96hrs	No negative impact on insulation resistance or dielectric strength
	Resistance to Humidity	+40°C, 95% RH for 96hrs	No negative impact on insulation resistance or dielectric strength

	Temperature and Humidity Cycling	-40°C (0% RH) → +25°C (65% RH) → +85°C (95% RH) → +25°C (65% RH), 5 cycles	No negative impact on insulation resistance or dielectric strength
	Flex Life (Folding Test)	600g weight, 0.5mm R, 180°, 60 cycles/min	100 cycles Min.
	Flex Life (Reciprocating Test)	10mm R, 180mm stroke, 70 cycles/min	100,000 cycles Min.
	Abrasion	Ø0.5mm, 600g, 60 cycles/min	100,000 cycles Min.
	Insulation Elongation	JIS-K-6732	70% Min.
	Insulation Tensile Strength		3.5kg/mm² Min.
	Adhesive Strength	Between conductor and insulator	0.2kg/cm Min.
		Between insulator and insulator	0.6kg/cm Min.
		Between support strip and insulator	0.2kg/cm Min.
	Durability	Insertion and withdrawal	30 cycles Min.

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Revision details:

Revision	Information	Page	Release Date
0.1	Initial draft	-	23/06/2023
0.2	Revised draft	-	05/07/2023
A	Formal release	-	07/07/2023