

**Part Number** CB-MTTM

**Header** CB-MTTM 2X/3X MIL Spec Heat Shrink Marker Sleeve, Halogen Free

**Description** Thermosleeve USA CB-MTTM

**Agency Approval & Compliance** UL, CUL, RoHS, SAE, MIL Spec, Flame Retardant, REACH, VW1

**Application**

**Shrink Ratio and Operating Temperature** 2:1, 3:1, -55°C~135°C

**Size**



**Size CB-MT(TM) 2X (continuous & card type)**

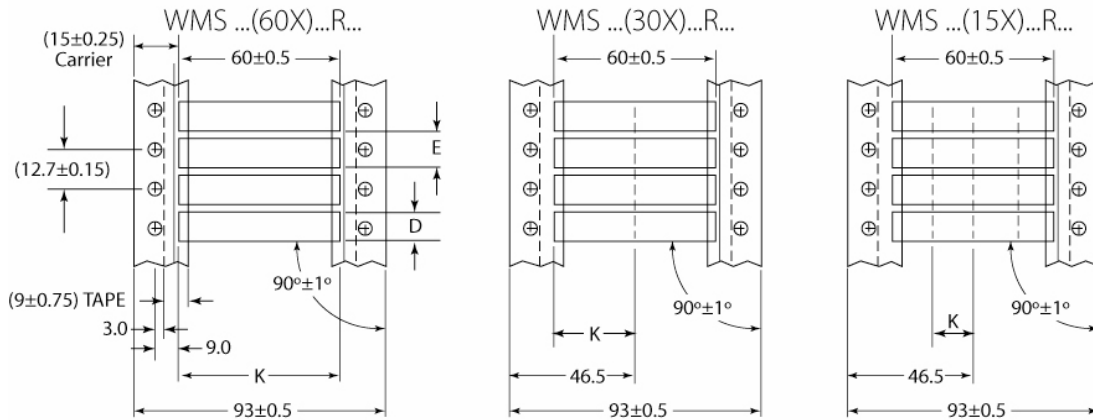
Size (Inch)	Size (mm)	As Supplied			After Recovery	
		Inside Diameter (D)	Wall thickness (T)	Outside Diameter Flat	Wall Thickness (t)	Inside Diameter (d)
3/32	Φ2.4	≥2.4	0.15±0.05	5.1±0.4	0.30±0.10	≤1.17
1/8	Φ3.2	≥3.2	0.15±0.05	6.7±0.4	0.30±0.10	≤1.58
3/16	Φ4.8	≥4.8	0.15±0.05	9.1±0.5	0.30±0.10	≤2.36
1/4	Φ6.4	≥6.4	0.15±0.05	11.5±0.5	0.30±0.10	≤3.18
3/8	Φ9.5	≥9.5	0.20±0.05	16.5±0.5	0.40±0.10	≤4.75
1/2	Φ12.7	≥12.7	0.20±0.05	21.7±0.50	0.40±0.10	≤6.36
3/4	Φ19.1	≥19.1	0.20±0.05	32.2±0.8	0.40±0.10	≤9.53
1	Φ25.4	≥25.4	0.20±0.05	42.0±0.8	0.40±0.10	≤12.7
1-1/2	Φ38.1	≥38.1	0.20±0.05	62.3±0.8	0.40±0.10	≤19.05
2	Φ50.8	≥50.8	0.25±0.05	82.0±0.8	0.50±0.10	≤25.4

**Size CB-MT(TM) 3X (continuous & card type)**

Size (Inch)	Size (mm)	As Supplied			After Recovery	
		Inside Diameter (D)	Wall thickness (T)	Outside Diameter Flat	Wall Thickness (t)	Inside Diameter (d)
3/32	Φ2.4	≥2.4	0.20±0.05	4.9±0.5	0.40±0.10	≤0.79
1/8	Φ3.2	≥3.2	0.20±0.05	6.1±0.5	0.40±0.10	≤1.07
3/16	Φ4.8	≥4.8	0.20±0.05	8.4±0.5	0.40±0.10	≤1.57
1/4	Φ6.4	≥6.4	0.20±0.05	11.2±0.8	0.40±0.10	≤2.11
3/8	Φ9.5	≥9.5	0.20±0.05	16.8±0.8	0.40±0.10	≤3.18
1/2	Φ12.7	≥12.7	0.20±0.05	21.8±1.0	0.40±0.10	≤4.22
3/4	Φ19.1	≥19.1	0.30±0.06	33.4±1.0	0.60±0.15	≤6.35

1	Φ25.4	≥25.4	0.30±0.06	42.4±1.5	0.60±0.15	≤8.46
1-1/2	Φ38.1	≥38.1	0.30±0.06	63.7±1.5	0.60±0.15	≤12.7
2	Φ50.8	≥50.8	0.30±0.06	82.2±1.5	0.60±0.15	≤16.9

### CARD TYPE (See Dimensions & Standards table below)



#### Prescore Dimensions & Standards (CARD TYPE)

Size	Tube Spacing mm (E)	Tube Length (K) – Full (mm)	Tube Length (K) – Half (mm)	Tube Length (K) – Quarter (mm)
Φ2.4 (2X, 3X)	11.0±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ3.2 (2X, 3X)	11.0±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ4.8 (2X, 3X)	13.6±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ6.4 (2X, 3X)	16.6±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ9.5 (2X, 3X)	21.6±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ12.7 (2X, 3X)	26.8±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ19.1 (2X, 3X)	38.2±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ25.4 (2X, 3X)	47.7±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ38.1 (2X, 3X)	69.0±0.5	60.0±0.5	30.0±0.5	15.00±0.25
Φ50.8 (2X, 3X)	87.7±0.5	60.0±0.5	30.0±0.5	15.00±0.25

## Typical Properties

Item	Specifications
<b>Physical performance</b>	
Shrink Temperature (°C)	
Temperature Range (°C)	-55°C~135°C
Tensile Strength (MPa)	≥10.3Mpa
Ultimate Elongation (%)	≥200%
Flexibility (-55°C, 4hrs)	No cracking
Heat shock	No cracking, dripping, flowing
Cold Shock	
Radial Shrinking Ratio (%)	
Longitudinal Change (%)	
<b>Print performance</b>	
UL 224	50 Rubber erasure, identification
MIL-M-81531-4.6.2	50 Rubber erasure, identification
MIL-STD-202	30 Rubber erasure, identification
<b>Electrical performance</b>	
Aging in Circulating-air Oven	
Dielectric Strength (kV/mm)	≥19.7KV/mm
Dielectric Voltage (V) AC	
Volume Resistivity (Ω.cm)	≥10 <sup>14</sup> Ω.cm
Flammability as per AMS-DTL-23053	Average burn time is <1
Fluid resistance (23°C, 24hrs)	Print identified
Tensile strength (M Pa)	≥6.5MPa
Ultimate elongation ratio(%)	≥100%
MIL-M-81531-4.6.2	20 rubber erasure, identification
Concentricity (%)	

**Availability** Ladder reels and cut pieces

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