



G•APEX

HEAT SHRINK TUBING AND ACCESSORIES

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台灣雲林應用材料股份有限公司

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Taiwan Yun Lin Applied Materials Co., Ltd.



企業簡介 Company Profile

For over 20 years, G-APEX has been focused on research and development the new materials and products in the fields of heat shrink, cold shrink tubing, and tapes. To solve the requirement of quality, safety, cost reduction, and services for the market. Providing solutions of electrical insulation and sealing protection applications for different industries.

Production: 50 million meters of monthly production capabilities of heat shrinkable tubing, the strongest product supplying abilities.

Technology: 21 patents and professional R&D team.

Certification: ISO9001、UL、ROHS、REACH、ISO10993、ISO14001、IATF16949, providing a reliable quality guarantee.

Services: Mass storage of products and our service staff in Taiwan, Japan, Thailand, Vietnam, and China, providing the fastest ship out and instant services.

Under our team structure, we're confident to fulfill all your inquiries.

G-APEX 20年來長期致力在熱縮套管、冷縮套管、膠帶領域研究開發新材料及產品，解決市場對品質、安全性、成本降低及服務的需求，提供了不同行業電氣絕緣及密封保護應用解決方案。

生產：熱縮套管月產能5千萬米，提供強大的供貨能力。

技術：21項專利技術及專業的工程研發團隊。

認證：ISO9001、UL、ROHS、REACH、ISO10993、ISO14001、IATF16949提供可靠的品質保證。

服務：台灣、日本、泰國、越南、中國各地提供大量產品庫存倉儲及服務人員，提供最快速的發貨及服務。在整體的團隊架構下，我們很自信可以完成對您的需求所託。



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- G5** 通用型熱縮套管
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Ultra thin wall, flame retardant heat shrink tubing
- G1** 無阻燃型熱縮套管
Non flame retardant heat shrink tubing
- G5-3X** 高收縮倍率熱縮套管
High shrink ratio heat shrink tubing
- G5-135** 135°C 阻燃型熱縮套管
135°C Flame retardant heat shrink tubing
- G5-YG** 接地標示用黃綠熱縮套管
Yellow & Green striped heat shrink tubing
- GA** 耐磨型PE熱縮套管
Abrasion-resistant PE heat shrink tubing
- YLPET** PET熱縮套管
PET heat shrink tubing
- DR** 150°C 耐油熱縮套管
150° Diesel resistant elastomeric heat shrinkable tubing

含膠型熱縮套管 ADHESIVE-LINED HEAT SHRINK TUBING

- AIS** 雙壁含膠型熱縮套管
Dual wall heat shrink tubing
- AIS-ES** 車用線束含膠熱縮套管
Adhesive heat shrinkable tubing for automotive
- AECM** 迷你電線防水封帽
Miniature waterproof cable end cap
- ATM** 通用型中壁含膠熱縮套管
Medium wall heat shrink tubing
- ATM-FR** 通用型中壁阻燃含膠熱縮套管
Flame retardant medium wall heat shrink tubing
- AOS** 柔軟型中壁含膠熱縮套管
Flexible medium wall heat shrink tubing
- ABS** 防水端子用熱縮套管
Watertight tube for terminals and crimp splices
- ASM** 通用型厚壁含膠熱縮套管
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- ASM-6X** 六倍收縮厚壁熱縮套管
Heavy wall high shrink ratio heat shrink tubing

耐高溫熱縮套管 HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

- HTK150** 柔軟型PVDF熱縮套管
Flexible PVDF heat shrinkable tubing
- KYNAR** 半硬型PVDF熱縮套管
Semi-rigid PVDF heat shrinkable tubing
- VITON** 氟橡膠熱縮套管
Fluoroelastomer heat shrinkable tubing
- FEP** 200°C FEP熱縮套管
200°C FEP heat shrinkable tubing
- PTFE** 260°C PTFE熱縮套管
260°C PTFE heat shrinkable tubing
- PFA** 260°C PFA熱縮套管
260°C PFA heat shrinkable tubing

醫療等級熱縮套管 MEDICAL-GRADE HEAT SHRINKABLE TUBING

- MTA** 醫療級半硬質PVDF熱縮套管
Medical grade semi-rigid PVDF heat shrinkable tubing
- MT2** 醫療級超薄型LDPE熱縮套管
Medical grade ultra thin wall LDPE heat shrinkable tubing
- MTC** 醫療級柔軟型PVDF熱縮套管
Medical grade flexible PVDF heat shrinkable tubing
- MTE** 醫療級LDPE熱縮套管
Medical grade LDPE heat shrinkable tubing
- MTF** 醫療級高柔軟性熱縮套管
Medical grade high flexibility heat shrinkable tubing

冷縮套管 COLD SHRINK TUBING

- ANC** 硅矽橡膠冷縮套管
Cold shrink silicone rubber sleeve
- GNC** 硅矽橡膠冷縮套管
Cold shrink silicone rubber sleeve
- NS7** 硅矽橡膠握把冷縮套管
Cold shrink silicone rubber sleeve for handle
- NS8** EPDM橡膠握把保護冷縮套管
Cold shrink EPDM rubber sleeve for handle
- EEC** EPDM橡膠冷縮封帽
Cold shrink EPDM rubber end cap
- ENC** EPDM 橡膠冷縮套管
Cold shrink EPDM rubber sleeve
- DNC** 硅矽橡膠雙層冷縮套管
Dual layer cold shrink silicone rubber sleeve

編織網管 BRAIDED SLEEVING

- BS5000** 編織熱縮套管
Fabric heat shrinkable tubing
- BS1000** PET 半剛性捲式編織管
PET semi-rigid wrappable split braided sleeving
- BS3000** 汽車線束用捲式編織管
Wrap around braided sleeving for automotive wire assembly
- BSPET** PET 編織擴充管
PET expandable braided sleeving

電線連接用熱縮套管 ELECTRICAL INTERCONNECT HEAT SHRINKABLE TUBING

- GAST-R** 125°C 防水焊錫環熱縮中接管
125°C Solder sleeve wire splices
- GAST-B** 125°C 防水焊錫環熱縮中接管
125°C Solder sleeve wire splices
- GAST-RS** 125°C 防水焊錫環熱縮中接管
125°C Solder sleeve wire splices
- CRIMP** 防水熱縮中接管
Waterproof heat shrinkable crimp splices
- GAST-E** 防水焊錫環熱縮封帽
Solder grip closed end connector splices

高壓絕緣熱縮套管 HIGH VOLTAGE INSULATION HEAT SHRINK TUBING

- HB1** 高壓母排熱縮套管 (耐壓3.6kV)
Busbar insulating heat shrink tubing (Withstand voltage up to 3.6kV)
- HB2** 高壓母排熱縮套管 (耐壓24kV)
Busbar insulating heat shrink tubing (Withstand voltage up to 24kV)
- HB3** 高壓母排熱縮套管 (耐壓36kV)
Busbar insulating heat shrink tubing (Withstand voltage up to 36kV)

熱縮模塑套件 MOULDED SHAPES

- BOOT** 模縮套
Molded parts
- AEC** 電纜防水熱縮封帽
Heat shrinkable cable end cap

光纖用熱縮套管 FIBER OPTICAL HEAT SHRINKABLE TUBING

- ADW** 光纖接續盒專用防水熱縮套管
Heat shrinkable tubing for fiber optic splice closure
- FOSP** 光纖保護套管
Heat shrinkable fiber optic splice protector
- FOSP-K** 高溫光纖保護套管
High-temperature optical fiber protection sleeve

膠帶 TAPE

- WT800** 自融性防水膠帶
Rubber mastic tape
- WT200** 自融性防水膠帶
Rubber mastic tape
- WT300** 自融性絕緣填縫膠膏帶
Self-fusing insulation caulking mastic tape
- HBT** 耐電壓矽膠膠帶 (耐壓15~24kV)
High voltage silicone busbar insulation tape (Withstand voltage up to 15~24kV)

熱縮套管組合包 ASSORTMENT KIT

- K1-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K1-102** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K1-201** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K1-301** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K2-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K2-102** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K2-103** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K4-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K5-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K6-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K7-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K7-201** 熱縮套管組裝盒
Heat shrinkable tubing kit
- B2** 熱縮套管捲式包 (紙盒)
Tube and sleeve - mini box
- R2** 熱縮套管圓形泡殼包裝
Tube and sleeve - blister pack
- GR** 熱縮套管捲式包裝
Heat shrinkable tubing pack - mini spool pack

號碼標識系統 MARKING SYSTEMS

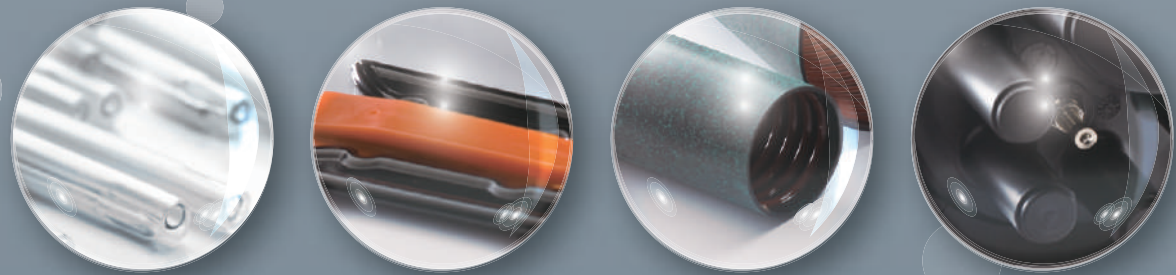
- 135°C TMS** 軌道式號碼標示印字熱縮套管
Heat shrink markers
- 125°C TMS** 軌道式號碼標示印字熱縮套管
Heat shrink markers
- 135°C CTMS** 捲式號碼標示印字熱縮套管
Heat shrink markers
- 125°C CTMS** 捲式號碼標示印字熱縮套管
Heat shrink markers
- MP** 貼紙簿
Pocket pack marker book
- MO** 號碼標誌器
Snap-on wire markers
- MH** PVC熱縮電線標示號碼圈
PVC Heat shrinkable wire marking number ring

工具 TOOL

- GHG** 微型熱風槍
Gas heat gun
- BSC** 熱裁切機
Hot knife device

FIBER OPTICAL HEAT SHRINKABLE TUBING

光纖用熱縮套管



FIBER OPTICAL HEAT SHRINKABLE TUBING

FIBER OPTICAL HEAT SHRINKABLE TUBING

ADW

Heat shrinkable tubing for fiber optic splice closure

光纖接續盒專用防水熱縮套管

● 應用 Applications

厚壁熱縮管，內部塗佈螺旋式聚醯胺熱熔膠，厚壁外層能提供可靠外在的保護，高性能熱熔膠能提供可靠的防水性能及防止接續盒內氣體的洩漏。

It's a heavy wall heat shrinkable tubing with inner spiral polyamide hot melt adhesive coated. The outer heavy wall can provide reliable external protection, and high-performance hot melt adhesive can provide dependable water-proof performance and prevents leakage of the gas inside the closure.

● 操作溫度範圍 Operating temperature range

- Continuous operating temperature: -55°C~110°C
- Minimum shrink temperature: 80°C
- Full recovery temperature: Above 120°C
- Discoloration temperature of temperature sensitive paint: 230°C

- 連續使用溫度：-55°C~110°C
- 最低收縮溫度：80°C
- 完全收縮溫度：120°C以上
- 變色漆變色溫度：230°C

● 特性 Characteristics

- 收縮率：3:1
- 防UV、防水
- 耐腐蝕性能
- Polyamide熱熔膠防止光纖接續盒氣體洩漏
- 特殊內部單端部無膠上膠方式，能確實牢固電纜定位
- 抗機械性損傷
- 外層變色漆方便熱縮操作指示
- Shrink ratio: 3:1
- UV and water resistance
- Corrosion resistance
- Polyamide hot melt adhesive prevents leakage of the gas inside the closure
- The special internal single-end non-adhesive glue applying method can exactly fix the cable on the position
- Mechanical damage resistance
- The outer temperature-sensitive paint is convenient for the instruction of heat shrink operation



Product Dimensions
產品規格

Part Number	As supplied 收縮前 (mm)	After recovered 收縮後 (mm)		Standard Length (mm)
產品型號	I.D. (min) 內徑(最小)	I.D. (max) 內徑(最大)	W.T. (min) 壁厚(最小)	標準長度
ADW033	33	8	3.2	200
ADW038	38	10.2	3.2	200
ADW040	40	12	4.1	200
ADW045	45	12	4.1	200
ADW075	75	22	4.1	200
ADW085	85	25	4.3	200
ADW105	105	30	4.3	200

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Tensile strength	≥10.3MPa	ASTM D2671	≥14 MPa
Elongation at break	≥200%	ASTM D2671	≥400%
Elongation at break after aging	≥100%	ASTM D2671 (150°C/168 hrs)	≥300%
Dielectric strength	≥19.7kV/mm	ASTM D2671	≥20kV/mm
Volume resistivity	≥10 ¹⁴ Ω · cm	ASTM D2671	≥10 ¹⁴ Ω · cm
Copper corrosion	No corrosion	ASTM D2671	No corrosion

Standard color: black
Special sizes are available on request.

標準顏色：黑色
其他尺寸可依客戶需求另行訂製

Branch off clip 分岐夾



Hot melt glue blocks 熱熔膠塊



FIBER OPTICAL HEAT SHRINKABLE TUBING

FOSP

Heat shrinkable fiber optic splice protector
光纖保護套管

G•APEX



Product Dimensions
產品規格

應用 Applications

由加強型的304不銹鋼棒或陶瓷棒，熱熔管和交聯的聚烯烴組成。可以在光纖熔接處提供良好的機械強度保護，保證良好的光學傳送性能。

The product consists of a reinforced 304 stainless steel rod or a ceramic rod, a hot fusion tube and a cross-linked polyolefin tubing. It can provide good mechanical strength protection at the optical fiber fusion splice and ensures good optical transmission performance.

操作溫度範圍 Operating temperature range

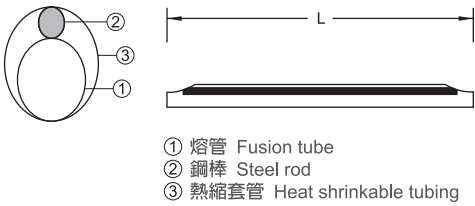
- Continuous operating temperature: -45°C~100°C
- Minimum shrink temperature: 70°C
- Full recovery temperature: Above 120°C

- 連續使用溫度：-45°C~100°C
- 最低收縮溫度：70°C
- 完全收縮溫度：120°C以上

特性 Characteristics

- 具有很好的防潮和保護性能
- 透明的套管方便在收縮前更容易的熔接
- 可以很方便地使用，並避免在安裝過程中對光纖的損壞
- Excellent moisture resistance and protection performance
- Transparent sleeve makes the fusion easier before shrinkage
- Can be used conveniently and avoid damage to the optical fiber during installation

Larger Sleeves 大型							
Part Number	OD after recovery (mm)	Nominal Sleeve Length (mm)	Fusion tube 熔管 (mm)		Steel rod 鋼棒 (mm)		Packing 包裝
產品型號	收縮後外徑	套管長度	I.D. 內徑	Length 長度	OD 外徑	Length 長度	PCS / BAG
FOSP -61	3.0±0.1	61	1.5	61	1.5	56	100
FOSP -45	3.0±0.1	45	1.5	45	1.5	41	100
FOSP -23	3.0±0.1	23	1.5	23	1.5	18	100
Standard Sleeves 中型							
Part Number	OD after recovery (mm)	Nominal Sleeve Length (mm)	Fusion tube 熔管 (mm)		Steel rod 鋼棒 (mm)		Packing 包裝
產品型號	收縮後外徑	套管長度	I.D. 內徑	Length 長度	OD 外徑	Length 長度	PCS / BAG
FOSP- 61M	2.6±0.1	61	1.3	61	1.2	56	100
FOSP- 45M	2.6±0.1	45	1.3	45	1.2	41	100
FOSP- 40M	2.6±0.1	40	1.3	40	1.2	36	100
FOSP- 30M	2.6±0.1	30	1.3	30	1.2	26	100
FOSP- 25M	2.6±0.1	25	1.3	25	1.2	21	100
Mini Sleeves 小型							
Part Number	OD after recovery (mm)	Nominal Sleeve Length (mm)	Fusion tube 熔管 (mm)		Steel rod 鋼棒 (mm)		Packing 包裝
產品型號	收縮後外徑	套管長度	I.D. 內徑	Length 長度	OD 外徑	Length 長度	PCS / BAG
FOSP-40T-S	1.5±0.1	40	0.5	40	0.7	39.5	100
FOSP-60T	2.0±0.1	60	0.5	60	1.0	56	100
FOSP-40T	2.0±0.1	40	0.5	40	1.0	36	100
FOSP-60A	2.4±0.1	60	1.4	60	1.0	56	100
FOSP-40A	2.4±0.1	40	1.4	40	1.0	36	100
Micro Sleeves 微型							
Part Number	OD after recovery (mm)	Nominal Sleeve Length (mm)	Fusion tube 熔管 (mm)		Steel rod 鋼棒 (mm)		Packing 包裝
產品型號	收縮後外徑	套管長度	I.D. 內徑	Length 長度	OD 外徑	Length 長度	PCS / BAG
FOSP- 40S	1.4±0.1	40	0.5	40	0.5	39.5	100
FOSP- 25S	1.4±0.1	25	0.5	25	0.5	24.5	100
FOSP- 18S	1.4±0.1	18	0.5	18	0.5	17	100
FOSP- 15S	1.4±0.1	15	0.5	15	0.5	15	100
FOSP- 10S	1.4±0.1	10	0.5	10	0.5	10	100



Part Number	Nominal Sleeve Length (mm)	Fusion tube Height*Width	Ceramic rods 陶瓷棒		
產品型號	套管長度	熱熔管 高*寬	Length 長度 (mm)	Width 寬度 (mm)	Height 高度 (mm)
FOSP-4RD Single ceramic	41.5±0.5	1.3*2.0	40±0.5	3.0±0.1	1.5±0.1
FOSP-4RS Dual ceramic	41.5±0.5	1.0*2.2	40±0.5	3.0±0.1	1.5±0.1
FOSP-6RD Single ceramic	41.5±0.5	1.4*2.7	40±0.5	3.0±0.1	1.5±0.1
FOSP-6RS Dual ceramic	41.5±0.5	1.2*2.8	40±0.5	3.0±0.1	1.5±0.1
FOSP-8RD Single ceramic	41.5±0.5	2.0*3.6	40±0.5	4.0±0.1	2.0±0.1
FOSP-8RS Dual ceramic	41.5±0.5	1.7*3.6	40±0.5	4.0±0.1	2.0±0.1
FOSP-12RD Single ceramic	41.5±0.5	2.5*3.8	40±0.5	4.0±0.1	2.0±0.1
FOSP-12RS Dual ceramic	41.5±0.5	1.8*3.8	40±0.5	4.0±0.1	2.0±0.1

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Longitudinal change	-5%~5%	ASTM D2671	Pass
Tensile strength	≥10.3MPa	ASTM D2671	≥18MPa
Elongation at break	≥200%	ASTM D2671	≥300%
Dielectric strength	≥19.7kV/mm	ASTM D2671	25kV/mm

Standard color : clear
標準顏色：透明



FIBER OPTICAL HEAT SHRINKABLE TUBING

FOSP-K

High-temperature optical fiber protection sleeve
高溫光纖保護套管



Product Dimensions
產品規格

應用 Applications

FOSP-K是由304不銹鋼、PVDF熱融管及PVDF熱縮管三種不同材質組件組合而成，可以在150°C的環境下長期使用，應用在汽車光學雷達及其他在高溫環境下的光纖接點保護，提供光纖熔接處良好的機械強度保護。

FOSP-K is composed of 304 stainless steel, PVDF hot-melt tube, and PVDF heat-shrinkable tube three different material components. It can be in an environment of 150°C for long-term use. It is used in automotive optical radar and other optical fiber connection point protection in high-temperature environments. Providing good mechanical strength protection for fiber splicing.

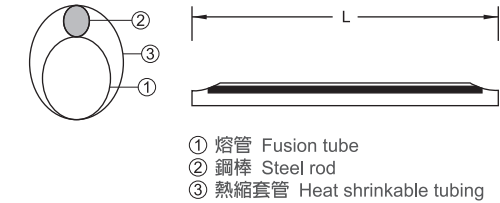
操作溫度範圍 Operating temperature range

- Continuous operating temperature: -40°C~150°C
- 連續使用溫度：-40°C~150°C

特性 Characteristics

- 具有很好的防潮和保護性能
- 透明的套管方便在收縮前更容易的熔接
- 可以很方便地使用，並避免在安裝過程中對光纖的損壞
- 優異的阻燃性
- 優異的電氣、耐化學性能
- Excellent moisture resistance and protection performance
- Transparent sleeve makes the fusion easier before shrinkage
- Can be used conveniently and avoid damage to the optical fiber during installation
- Excellent flame retardance
- Excellent electrical and chemical performance

Part Number	OD after recovery (mm)	Nominal Sleeve Length (mm)	Fusion tube 熔管 (mm)		Steel rod 鋼棒 (mm)		Packing 包裝
產品型號	收縮後外徑	套管長度	I.D. 內徑	Length 長度	OD 外徑	Length 長度	PCS / BAG
FOSP-K20S3	1.4±0.1	20	0.5	20	0.5	19	100
FOSP-K25TS	1.7±0.1	25	1.2	25	0.7	24	100



Technical Data

Property	Test Method	Typical Value
Longitudinal change	ASTM D2671	±5%
Tensile strength	ASTM D2671	≥25MPa
Elongation at break	ASTM D2671	≥300%

Standard color : clear
Special sizes and cut pieces are available on request.

標準顏色：透明
其他尺寸，裁切，可依客戶需求另行訂製
©



Cross Reference Number For G-APEX Heat Shrinkable Tubing

	Raychem	SUMITUBE	DSG-Canusa	LG	3M	Alpha
G1	CGPE-105	C	CPX 51	GSHS-1605		
G5	VERSAFIT V2	F32. F2Z	CPX 876	GSHS-1625	CP-221	FIT221V
G5-CB	VERSAFIT V4	F34. F4Z	DERAY ITW	GSHS-1625T		
GA		A				
G5-135	RNF-100	A2. B2	CPX-100	GSHS-1635F	FP-301	FIT221
G5-YG	DCPT 2:1	B2(YG)	CPX 201	GSHS-1635F-YG	GYS	FIT260
G5135-3X	RNF-3000	B2(3X)	CPX 300	GSHS-3635	SFTW-203	FIT321V
AIS	ATUM. DWP-125	W3B2. W3F2	CPA 300	GSHS-3635W	EPS-300	FIT321
AIS-ES	ES-2000	SA2F	SPLICEMELT125	GSHS-4635WS	EPS-4000	FIT421
ACS200	RBK-ILS125					
ATM	MWTM. SST-M	SCD. SCM2	CFM	PMWT	MDT. IMCSN	
ASM-6X	HRHT	SCH	CFHR			FIT621
ANF		IRRAX SCM2			IMCS	
ASM	WCSM.SST		CFW/RHW	PHWT	ITCSN	FIT700
ABS		W3D		GSHS-1625BS		
DR	DR-25	R120	DERAY V25	DRET	PSTH	FIT601
HTK150	RT-375	K2	KYF190	GSHS-1650F	MFP	
KYNAR	RW-175. KYNAR	K	KY175	GSHS-1675	KYNAR	FIT350
VITON	VITON. RW200	FE3. KH200	VT220		VTN200	FIT650
FEP	FEP	FEP			FEP	FIT400
PTFE	TFE	TFE	CTFE250		TFE	FIT500
MTA	MT1000					
MT2/MTE	MT2000					
MTC	MT3000					
MTF	MT-5000/MT5500					
TMS	TMS-SCE					FIT-PRINT
CTMS	TTMS					
HB1	LVIT			LG-BBLV		
HB2	BPTM	SBI300	CBTM	LG-BBHV	BBI	
HB3	BBIT	SBI350	CBTH	LG-BBHT	BBI	
AEC	SSC. ESC		CCAP		ICEC. SKE	FITCAP
AECM	ES CAPS	SA3 CAP	SPLICEMELT CAP 125			
BOOT	Molded parts					BOOTS

Cross Reference Number For G-APEX Heat Shrinkable Tubing

[illegible]

METRIC/INCH CONVERSION CHART

Inches英寸	mm公釐	Inches英寸	mm公釐
1/64	0.40	1/2	12.70
1/32	0.79	33/64	13.10
3/64	1.19	17/32	13.49
1/16	1.59	35/64	13.89
5/64	1.98	9/16	14.29
3/32	2.38	37/64	14.68
7/64	2.78	19/32	15.08
1/8	3.18	39/64	15.48
9/64	3.57	5/8	15.88
5/32	3.97	41/64	16.27
11/64	4.37	21/32	16.67
3/16	4.76	11/16	17.46
13/64	5.16	23/32	18.26
7/32	5.56	3/4	19.05
15/64	5.95	25/32	19.84
1/4	6.35	13/16	20.64
17/64	6.75	7/8	22.23
9/32	7.14	29/32	23.02
19/64	7.54	15/16	23.81
5/16	7.94	61/64	24.21
21/64	8.33	31/32	24.61
11/32	8.73	63/64	25.00
23/64	9.13	1	25.40
3/8	9.53	1-1/4	32.00
25/64	9.92	1-1/2	38.10
13/32	10.32	1-3/4	44.50
27/64	10.72	2	50.80
7/16	11.11	2-1/2	63.50
29/64	11.51	3	76.20
15/32	11.91	3-1/2	88.90
31/64	12.30	4	101.60

Notes