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LION

Premium uPVC Profiles by SISCO ISPAT



TECHNICAL MANUAL OF  
GERMANTECH LION PROFILE

“Seal the Future, Frame the Beauty  
uPVC Solutions by GERMANTECH LION”



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## INTRODUCTION

Welcome to GERMANTECH LION, your partner in UPVC excellence. Discover how our innovative solutions redefine durability, energy efficiency, and aesthetics

"German Tech Lion is a leading company in the UPVC industry, specializing in innovative solutions that elevate the standards of quality and performance. With a commitment to excellence and we provide cutting-edge UPVC products for a wide range of applications . At German Tech Lion, we take pride in offering UPVC solutions that not only meet but exceed the expectations of our customers. We are dedicated to sustainability, durability, and delivering products that contribute to a greener, safer, and more comfortable future."



### **Quality Assurance**

At GERMANTECH LION, quality is our cornerstone. We adhere to the highest industry standards, ensuring that each UPVC product undergoes rigorous testing for durability, weather resistance, and thermal performance. Our commitment to quality guarantees a lasting investment in your home.

### **Customization Options**

Tailor your UPVC solutions to match your unique style. Choose from an array of colors, finishes, and styles to create doors and windows that complement your home's aesthetics seamlessly

### **Vision & Mission**

To be the forefront of UPVC technology, setting new standards in sustainable and stylish living. Delivering superior UPVC solutions that enhance comfort, security, and energy efficiency while minimizing environmental impact.

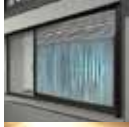
"Beyond Boundaries, Within Your Reach GERMANTECH LION  
Pioneering UPVC Excellence"

## PERFORMANCE AND FEATURES



### Environment-Friendly

"Choose sustainability with our eco-friendly UPVC solutions, reducing your carbon footprint."



### Sound Insulation

"Enjoy peace and tranquility with our UPVC windows that provide exceptional sound insulation."



### Heat Resistant

"Experience comfort year-round with UPVC windows that resist heat, keeping your home cool in summer and warm in winter."



### Water Resistant

"Our UPVC products are designed to withstand the elements, ensuring water resistance and durability."



### Air Tightness

"Seal in comfort and energy efficiency with our UPVC windows, offering superior air tightness."



### Safety

"Prioritize safety with our UPVC doors and windows, featuring advanced locking systems for enhanced security."



### Fire Resistant

"Ensure a secure environment with our fire-resistant UPVC solutions, providing an extra layer of safety for your home."

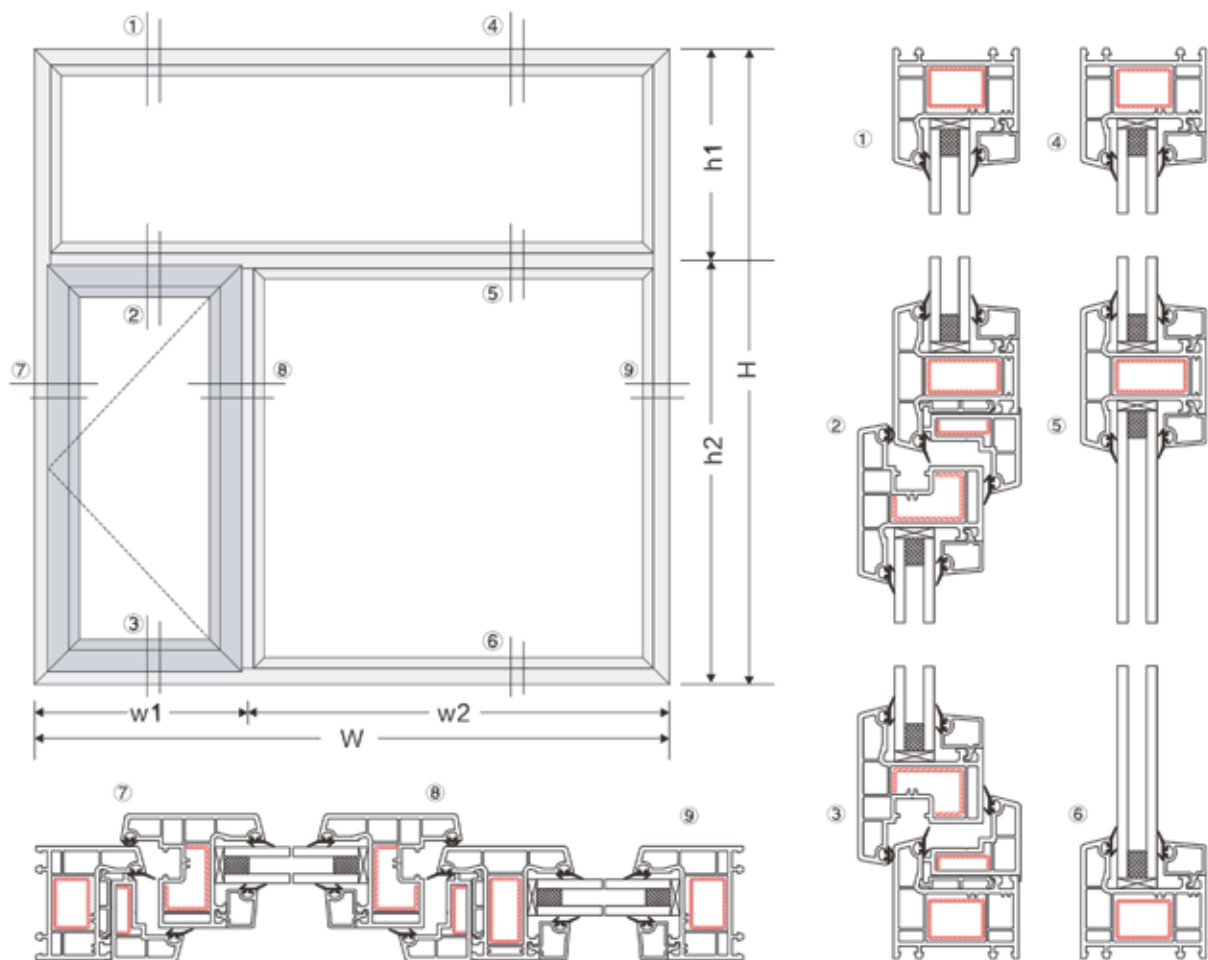


### Low Maintenance

"Experience hassle-free living with our low-maintenance UPVC products, designed for enduring beauty without the upkeep."



## BD 60 out-swing casement window technical drawing

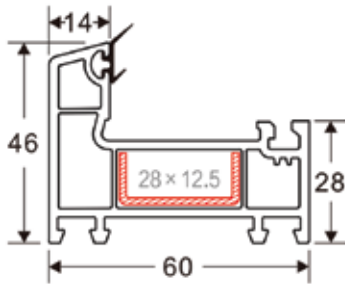




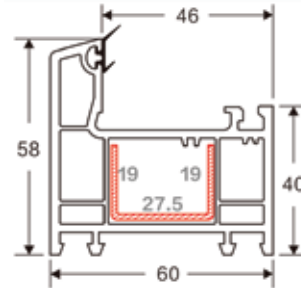


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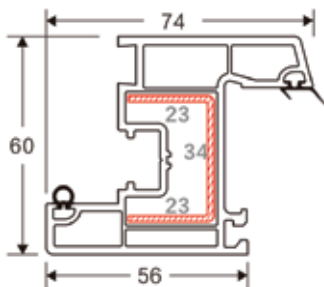
## 60 CASEMENT SERIES



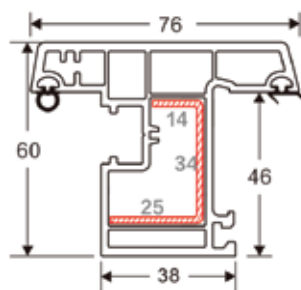
NAME : 60 small frame  
CODE : L-60XK  
WEIGHT (KG/M) : 0.88  
LENGTH (M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



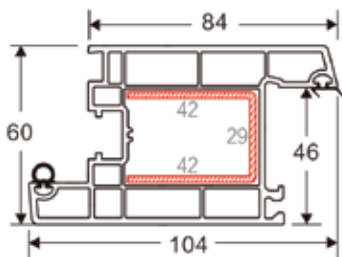
NAME : 60 frame D  
CODE : L-60PKD  
WEIGHT (KG/M) : 1.042  
LENGTH (M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



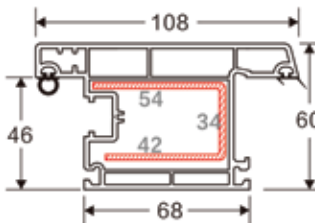
NAME : 60 in-swing window sash A  
CODE : L-60NKCSA  
WEIGHT (KG/M) : 1.2  
LENGTH (M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



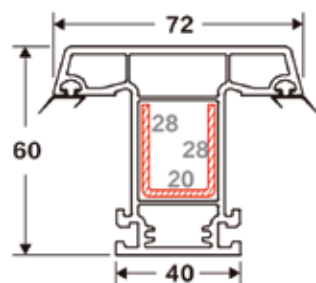
NAME : 60 out-swing window sash 2  
CODE : L-60WKCS2  
WEIGHT (KG/M) : 1.21  
LENGTH (M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



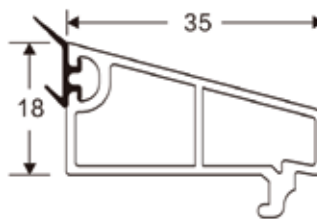
NAME : 60 in-swing door sash 2  
CODE : L-60NKMS2  
WEIGHT (KG/M) : 1.517  
LENGTH (M) : 5.9  
PCS/BAG : 4  
THICKNESS : 2.2



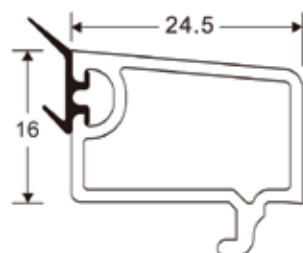
NAME : 60 out-swing door sash 2  
CODE : L-60WKMS2  
WEIGHT (KG/M) : 1.65  
LENGTH (M) : 5.9  
PCS/BAG : 4  
THICKNESS : 2.2



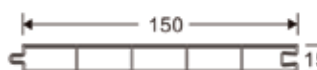
NAME : 60 mullion W  
CODE : L-60ZTW  
WEIGHT (KG/M) : 1.13  
LENGTH (M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



NAME : 60 single glazing bead A  
CODE : L-60DYA  
WEIGHT (KG/M) : 0.317  
LENGTH (M) : 5.9  
PCS/BAG : 20  
THICKNESS : 2.2

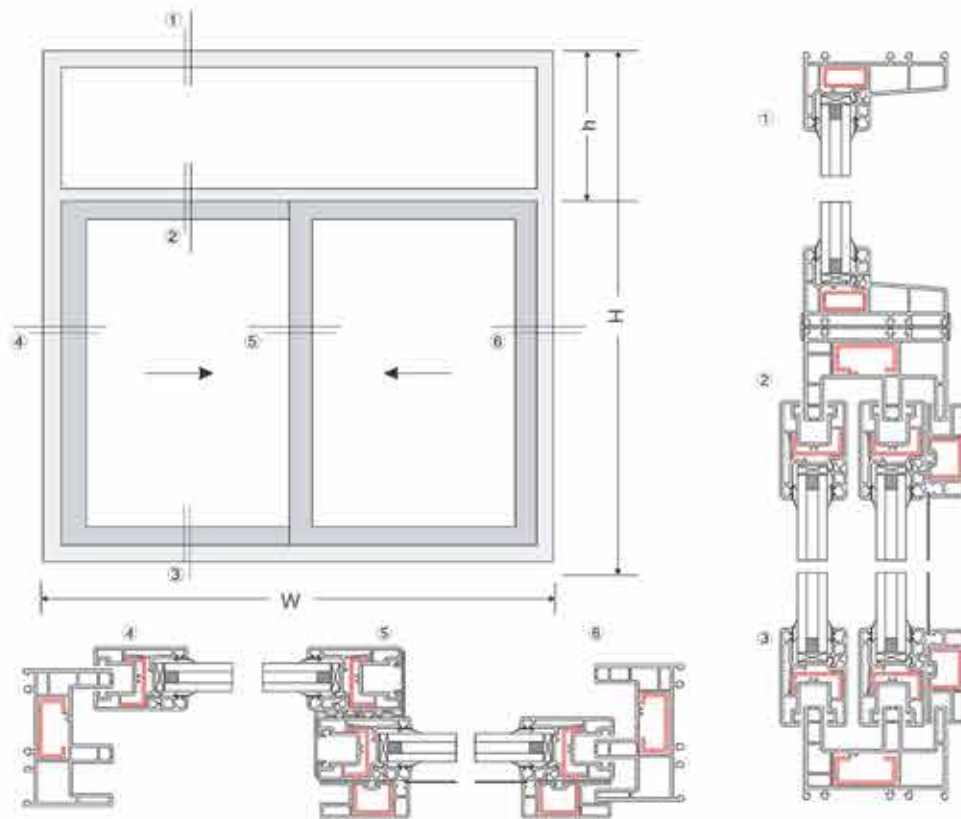


NAME : 60 double glazing bead A2  
CODE : L-60SYA2  
WEIGHT (KG/M) : 0.27  
LENGTH (M) : 5.9  
PCS/BAG : 20  
THICKNESS : 2.2

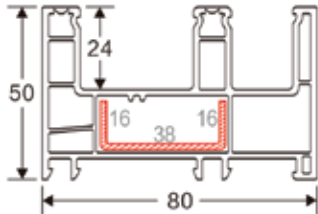


NAME : 150 door panel 2  
CODE : L-150MB2  
WEIGHT (KG/M) : 0.884  
LENGTH (M) : 5.9  
PCS/BAG : 10  
THICKNESS : 2.2

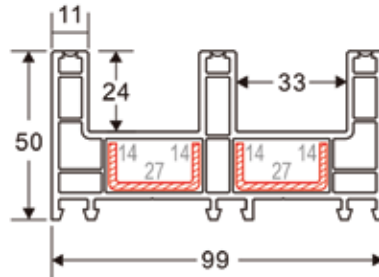
## L- 80 Sliding split type window technical drawing



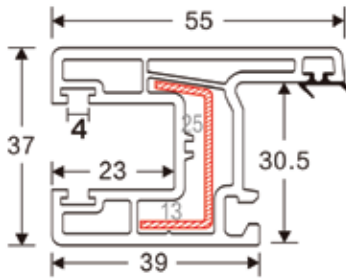
# 80/99 SLIDING SERIES



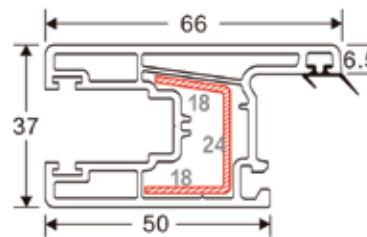
NAME : 80 sliding frame B2  
 CODE : L-TL80KB2  
 WEIGHT(KG/M) : 1.2  
 LENGTH(M) : 5.9  
 PCS/BAG : 6  
 THICKNESS :



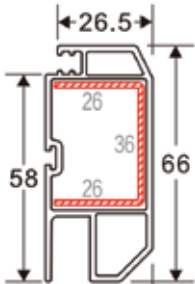
NAME : 99 sliding frame  
 CODE : L-99TLK  
 WEIGHT(KG/M) : 1.62  
 LENGTH(M) : 5.9  
 PCS/BAG : 6  
 THICKNESS :



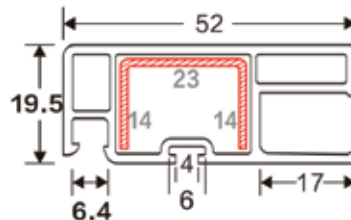
NAME : 80 sliding sash D  
 CODE : L-80T LSD  
 WEIGHT(KG/M) : 0.841  
 LENGTH(M) : 5.9  
 PCS/BAG : 8  
 THICKNESS :



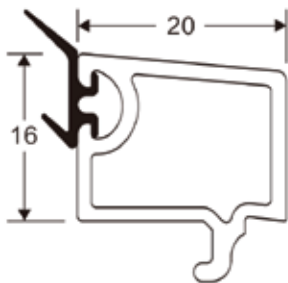
NAME : 80 big sliding sash B  
 CODE : L-80TLDSB  
 WEIGHT(KG/M) : 0.91  
 LENGTH(M) : 5.9  
 PCS/BAG : 8  
 THICKNESS :



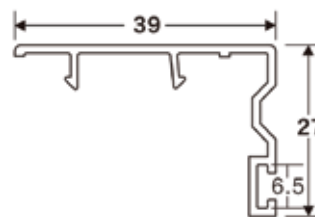
NAME : 66 Screen door sash  
 CODE : L-SSA3  
 WEIGHT(KG/M) : 0.635  
 LENGTH(M) : 5.9  
 PCS/BAG : 9  
 THICKNESS : 1.7



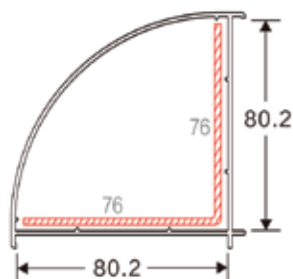
NAME : Screen sash A2  
 CODE : L-52SS2  
 WEIGHT(KG/M) : 0.492  
 LENGTH(M) : 5.9  
 PCS/BAG : 15  
 THICKNESS :



NAME : 80 glazing bead B  
 CODE : 80DYB  
 WEIGHT(KG/M) : 0.22  
 LENGTH(M) : 5.9  
 PCS/BAG : 30  
 THICKNESS :

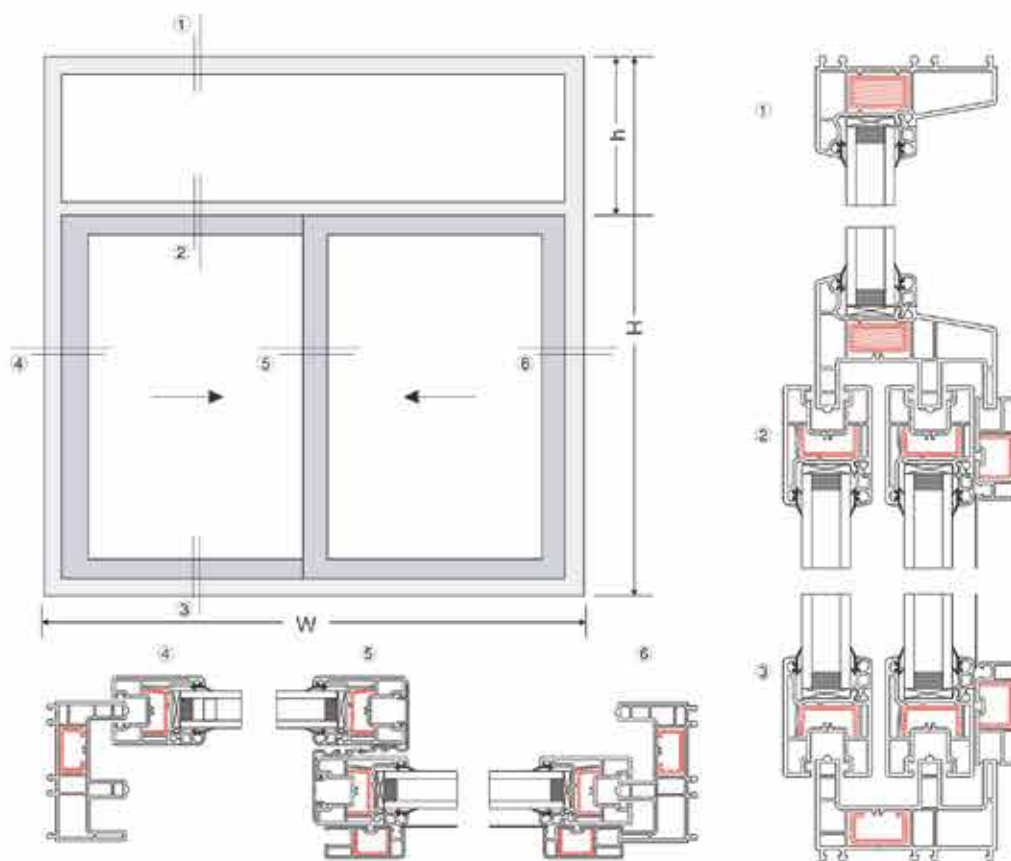


NAME : 80 SLIDING SASH  
 CODE : L-80FG  
 WEIGHT(KG/M) : 0.18  
 LENGTH(M) : 5.9  
 PCS/BAG : 30  
 THICKNESS :



NAME : 80 bay corner adaptor 1  
 CODE : I-80zJ1  
 WEIGHT(KG/M) : 0.78  
 LENGTH(M) : 5.9  
 PCS/BAG : 4  
 THICKNESS : 1.6

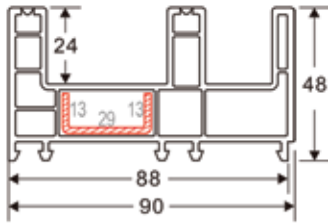
## L- 92 Sliding window technical drawing



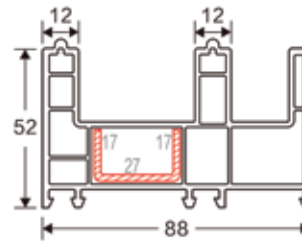


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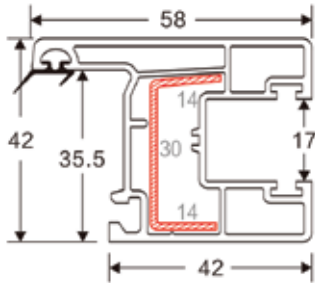
## 88/90 SLIDING SERIES



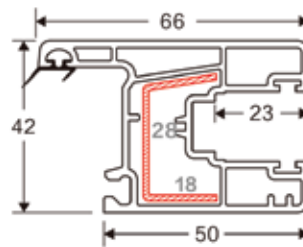
NAME : 90 sliding frame  
CODE : L- 90TLK  
WEIGHT(KG/M) : 1.34  
LENGTH(M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



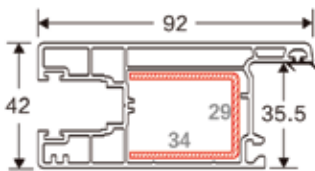
NAME : 88 Sliding frame D2  
CODE : L- TL88KD2  
WEIGHT(KG/M) : 1.367  
LENGTH(M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



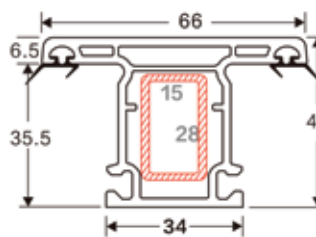
NAME : 88 sliding sash D  
CODE : L- 88TLSD  
WEIGHT(KG/M) : 0.84  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.0



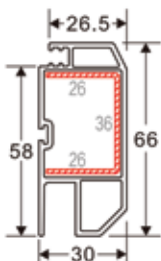
NAME : 88 sliding sash A2  
CODE : L- 88TLA2  
WEIGHT(KG/M) : 1.042  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.2



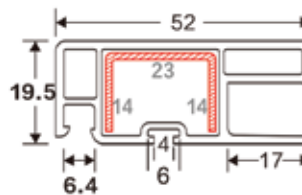
NAME : 60 sli sding door sash 2  
CODE : L- 60TLMS2  
WEIGHT(KG/M) : 1.4  
LENGTH(M) : 5.9  
PCS/BAG : 4  
THICKNESS : 2.5



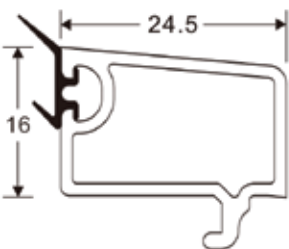
NAME : 42 sash mullion 2  
CODE : L- 42S2T2  
WEIGHT(KG/M) : 0.84  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.2



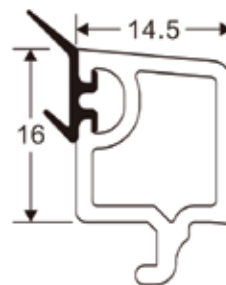
NAME : 66 Screen door sash  
CODE : L-SSA3  
WEIGHT(KG/M) : 0.635  
LENGTH(M) : 5.9  
PCS/BAG : 9  
THICKNESS : 1.7



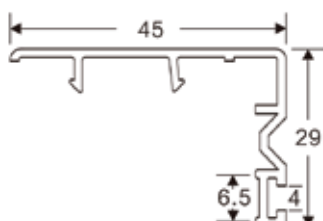
NAME : Screen sash A2  
CODE : L- 52SS2  
WEIGHT(KG/M) : 0.492  
LENGTH(M) : 5.9  
PCS/BAG : 15  
THICKNESS : 1.7



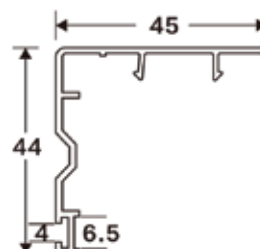
NAME : 88 glazing bead A2  
CODE : L- 88DYA2  
WEIGHT(KG/M) : 0.27  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :



NAME : 88 double glazing bead A  
CODE : L- 88SYA  
WEIGHT(KG/M) : 0.18  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



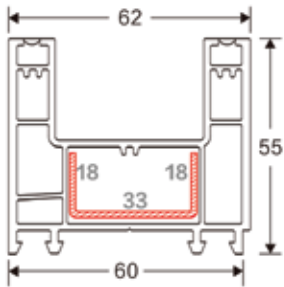
NAME : 88 Sliding sash cover  
CODE : L-88FG  
WEIGHT(KG/M) : 0.227  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



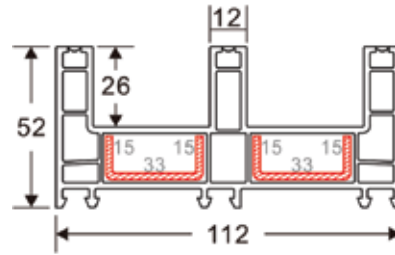
NAME : 60Sliding door sash cover  
CODE : L- TLMSFG  
WEIGHT(KG/M) : 0.217  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :



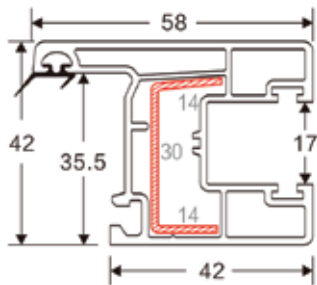
## 60/112 SLIDING SERIES



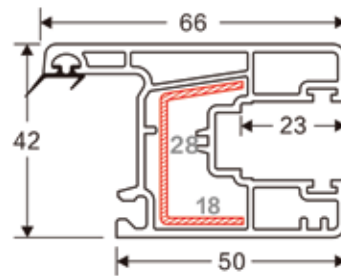
NAME : 60 double sliding frame A  
CODE : L-60LGKA  
WEIGHT(KG/M) : 1.098  
LENGTH(M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



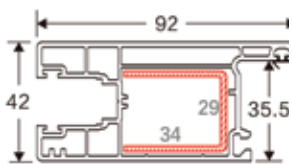
NAME : 112 sliding frame B  
CODE : L-TL112KB  
WEIGHT(KG/M) : 1.7  
LENGTH(M) : 5.9  
PCS/BAG : 4  
THICKNESS : 2.2



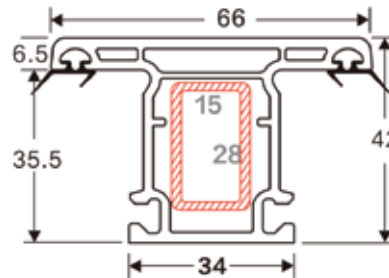
NAME : 88 sliding sash D  
CODE : L-88TLSD  
WEIGHT(KG/M) : 0.84  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.0



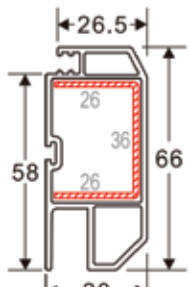
NAME : 88 sliding sash A2  
CODE : L-88TLA2  
WEIGHT(KG/M) : 1.042  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.2



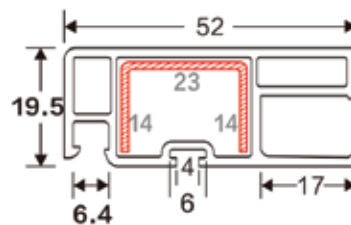
NAME : 60 sliding door sash 2  
CODE : L-60TLMS2  
WEIGHT(KG/M) : 1.4  
LENGTH(M) : 5.9  
PCS/BAG : 4  
THICKNESS : 2.5



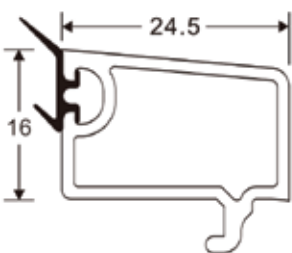
NAME : 42 sash mullion 2  
CODE : L-42SZT2  
WEIGHT(KG/M) : 0.84  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.2



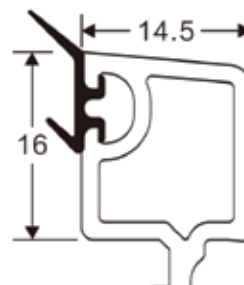
NAME : 66 Screen sash  
CODE : SSA3  
WEIGHT(KG/M) : 0.635  
LENGTH(M) : 5.9  
PCS/BAG : 9  
THICKNESS : 1.7



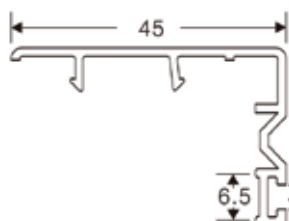
NAME : Screen sash A2  
CODE : 52SS2  
WEIGHT(KG/M) : 0.492  
LENGTH(M) : 5.9  
PCS/BAG : 15  
THICKNESS : 1.7



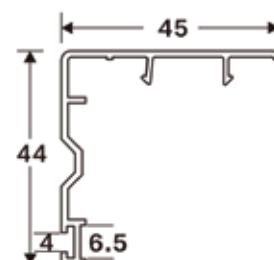
NAME : 88 glazing bead A2  
CODE : 88DYA2  
WEIGHT(KG/M) : 0.27  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



NAME : 88 double glazing bead A  
CODE : 88SYA  
WEIGHT(KG/M) : 0.18  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



NAME : 88 sliding sash cover  
CODE : L-88FG  
WEIGHT(KG/M) : 0.227  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



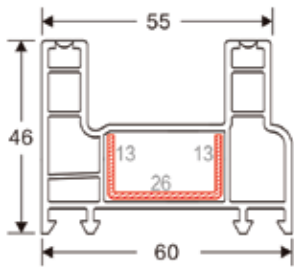
NAME : 60 sliding doors sash cover  
CODE : L-60TLMSFG  
WEIGHT(KG/M) : 0.217  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :



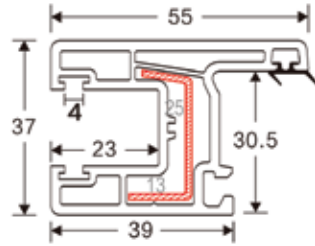


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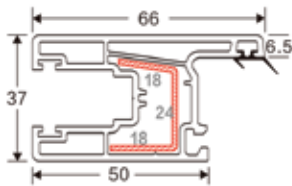
## 55 SMALL SERIES



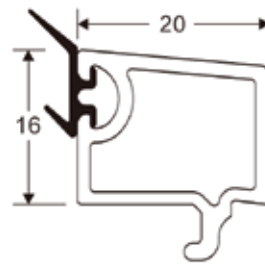
NAME : 60 double sliding frame B  
CODE : L- 60LGKB  
WEIGHT(KG/M) : 0.834  
LENGTH(M) : 5.9  
PCS/BAG : 6  
THICKNESS : 1.8



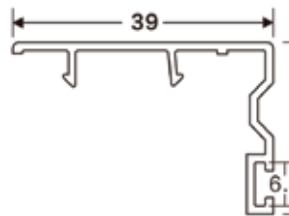
NAME : 80 Sliding sash D  
CODE : L- 80TLSD  
WEIGHT(KG/M) : 0.841  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.3



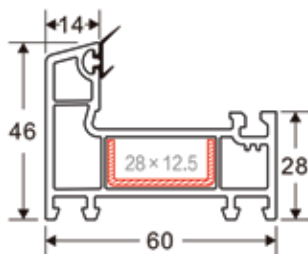
NAME : 80 big sliding sash B  
CODE : L- 80TLDSB  
WEIGHT(KG/M) : 0.91  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS : 2.0



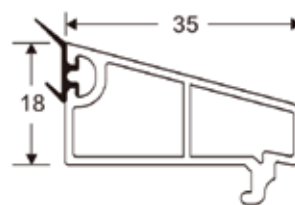
NAME : 80 glazing bead B  
CODE : L-80DYB  
WEIGHT(KG/M) : 0.22  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



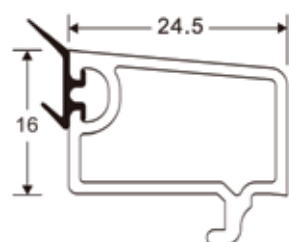
NAME : 80 sliding sash cover  
CODE : L-80FG  
WEIGHT(KG/M) : 0.18  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



NAME : 60 small frame  
CODE : L- 60XK  
WEIGHT(KG/M) : 0.88  
LENGTH(M) : 5.9  
PCS/BAG : 6  
THICKNESS : 2.2



NAME : 60 single glazing bead A  
CODE : L- 60DYA  
WEIGHT(KG/M) : 0.317  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS : 1.6



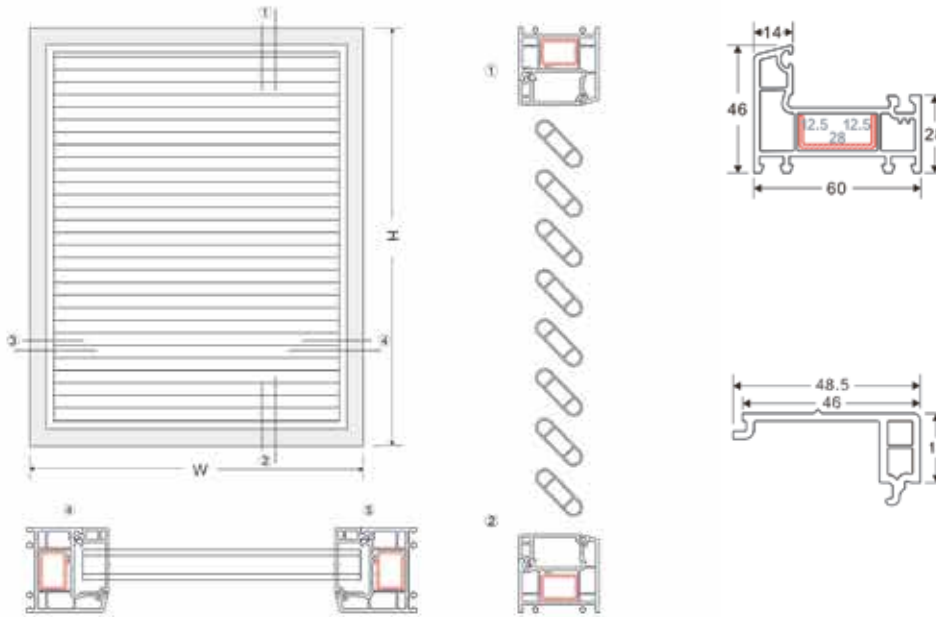
NAME : 60 double glazing bead A2  
CODE : L- 60SYA2  
WEIGHT(KG/M) : 0.27  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :



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## LOUVRE SERIES

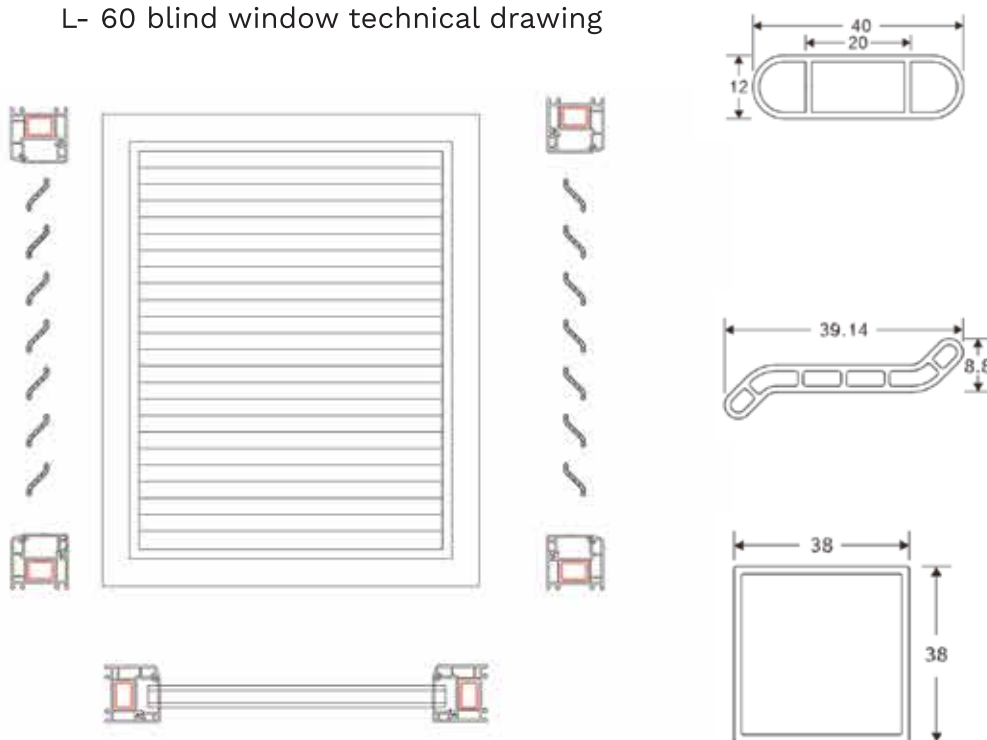
L- 60 blind window technical drawing



NAME : 60 small frame  
CODE : L-60XK  
WEIGHT(KG/M) :0.85(no gasket)  
LENGTH(M) : 5.9  
PCS/BAG : 6  
THICKNESS :2.2

NAME : Shutter glazing bead  
CODE : L-BYCZYTT  
WEIGHT(KG/M) :0.26  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :

L- 60 blind window technical drawing



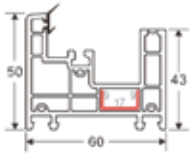
NAME : Blind louver  
CODE : L-BYCLP  
WEIGHT(KG/M) :0.217  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :

NAME : 38 blind louver  
CODE : L-38BYP  
WEIGHT(KG/M) :0.159  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :

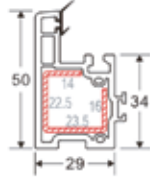
NAME : 38 square pipe  
CODE : L-38FG  
WEIGHT(KG/M) :0.409  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS :



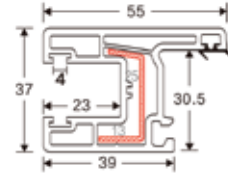
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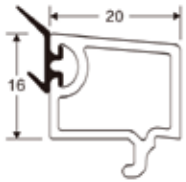
NAME : 60 casement/  
sliding frame  
CODE : L- 60PKTLK  
WEIGHT(KG/M) :1.15  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :2.3



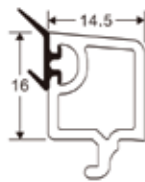
NAME : 60 casement/  
sliding mullion  
CODE : L- 60KTLZT  
WEIGHT(KG/M) : 0.695  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :2.3



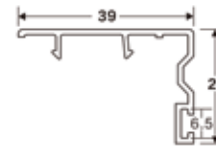
NAME : 80 sliding sash D  
CODE : L- 80TLSD  
WEIGHT(KG/M) : 0.841  
LENGTH(M) : 5.9  
PCS/BAG : 8  
THICKNESS :2.3



NAME : 60 glazing bead B  
CODE : L-80DYB  
WEIGHT(KG/M) : 0.22  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :

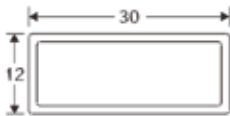


NAME : 88 double glazing  
bead A  
CODE : L-88SYA  
WEIGHT(KG/M) : 0.18  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



NAME : 80 sliding  
sash cover  
CODE : L-80fg  
WEIGHT(KG/M) : 0.18  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :

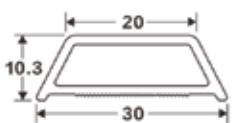
## ACCESSORIES



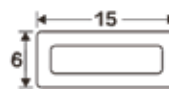
NAME : 30grill  
CODE : L-30ZST  
WEIGHT(KG/M) :0.16  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :1.2



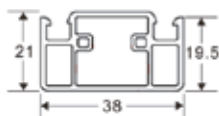
NAME : 20 grill  
CODE : L-20ZST  
WEIGHT(KG/M) : 0.12  
LENGTH(M) : 5.9  
PCS/BAG : 20  
THICKNESS :1.2



NAME : 30 grill outlay  
CODE : L-30WZZST  
WEIGHT(KG/M) :0.16  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



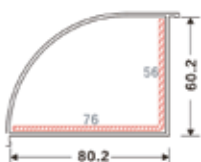
NAME : 15 grill  
CODE : L-15ZST  
WEIGHT(KG/M) :0.09  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :



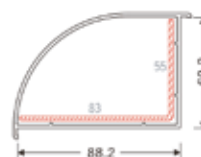
NAME : Screen sash mullion  
CODE : L-SSZT  
WEIGHT(KG/M) :0.36  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :1.4



NAME : 80 bay  
corner adaptor 1  
CODE : L-80ZJ1  
WEIGHT(KG/M) :0.78  
LENGTH(M) : 5.9  
PCS/BAG : 4  
THICKNESS :1.6



NAME : 80-60 bay  
corner adaptor  
CODE : L- 80Z60ZJ  
WEIGHT(KG/M) :0.78  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :1.8



NAME : 80-60 bay  
corner adaptor  
CODE : L-88Z60ZJ  
WEIGHT(KG/M) :0.89  
LENGTH(M) : 5.9  
PCS/BAG : 30  
THICKNESS :1.8



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## LION PROFILE COLORS



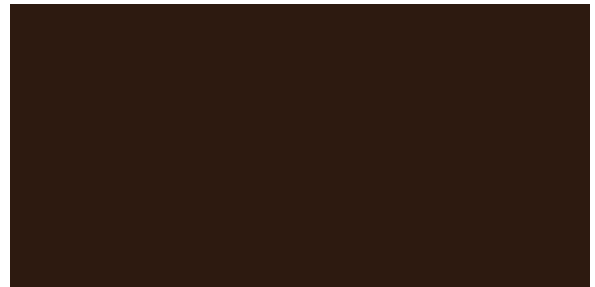
MILK WHITE



LION COFFEE



LION BLACK



LION BROWN



GOLDEN OAK



COFFEE



WALNUT



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No. 2018(C)08008

CUSTOMER: Henan Beldi Plastic Industry CO.,LTD

SAMPLES FOR TESTING

Name: PVC-U Profiles for Windows and Doors

Manufacturer: Henan Beldi Plastic Industry CO.,LTD

Specification: 65 casement window frame

Brand: LION

Appearance: White

DATE OF RECEIPT: 2018-09-19

ISSUE DATE: 2018-09-20

THIS REPORT COMPRISES 5 PAGES

DIRECTOR: 李树岩

CHECK: 朱云芳



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TESTING RESULTS

No. 2018(C)08008

No.	Test Items	Requirements	Results	Test methods
1	Appearance	The color of the visible surface should be consistent. The surfaces shall be smooth, flat and without obvious pitting, impurities. The section of the profile should be clean and no burrs. Non-obvious shrinkage marks caused by the process are allowed.	Pass	GB/T 8814-2017
2	Dimensions Tolerance, mm	Thickness	+0.26	GB/T 8814-2017
		Overall width	+0.17	GB/T 8814-2017
3	Wall thickness of main profile (Class B), mm	The sight surface	≥2.5	GB/T 8814-2017
		The non-sight surface	≥2.2	GB/T 8814-2017
4	Deviation from straightness of main profiles, mm	≤1	0.24	GB/T 8814-2017

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TESTING RESULTS

No. 2018(C)08008

(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test methods
5	Linear weight of the main profiles, %	≥95	96.8	GB/T 8814-2017
6	Heat reversion, %	≤2.0	1.42	GB/T 8814-2017
7	The difference in heat reversion between those sight surfaces, %	≤0.4	0.28	GB/T 8814-2017
8	Behavior after heating at 150°C	No air bubble, crack, stain	Pass	GB/T 8814-2017
9	Resistance to impact by falling weight (-10°C), pcs	≤1 (grade II)	0	GB/T 8814-2017
10	Density (method A), kg/m <sup>3</sup>	≤1530	1430	GB/T 1033.1-2008
11	Vicat softening temperature (B <sub>50</sub> ), °C	≥78	78.0	GB/T 1633-2000
12	Tensile stress at yield, MPa	≥37	37.6	GB/T 1040.2-2006
13	Tensile strain at break, %	≥100	169	GB/T 1040.2-2006
14	Flexure modulus, MPa	≥2209	2247	GB/T 9341-2008

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TESTING RESULTS

No. 2018(C)08008

(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test methods	
15	Weldability, MPa	Mean value	≥35	96.4	GB/T 8814-2017
		Minimum value	≥30	91.5	GB/T 8814-2017
16	Heat transfer coefficient, W/(m <sup>2</sup> ·K)	Grade 1	≤2.0	1.5	GB/T 8884-2008 Appendix F
		Grade 2	≤1.6		
		Grade 3	≤1.0		
17	Short term welding coefficient, %	≥9.8	0.81	JG/T 263-2010	
18	Limit of heavy metals, mg/kg	Pb	≤1000	ND	GB/T 26125-2011
		Cd	≤100	ND	GB/T 26125-2011
		Cr (VI)	≤1000	ND	GB/T 26125-2011
		Hg	≤1000	ND	GB/T 26125-2011
19	Diphenyl phthalate (2-ethyl) acetic acid, mg/kg	≤1000	ND	GB/T 29786-2013	
20	Vinyl chloride monomer, mg/kg	≤5	ND	GB/T 4615-2013	

CONCLUSIONS: The samples of the product referred to in this report have been tested according to the standard GB/T 8814-2017 "Unplasticized polyvinyl chloride (PVC-U) profiles for the doors and windows". The tested items meet the requirements of this standard. The wall thickness of main profile meet the requirement of class B; the resistance to impact by falling weight is of grade II; and the thermal insulation performance meet the requirement of grade 2.

Test: 丁树岩 孙泉 邢进





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TESTING RESULTS

No. 2018(C)09008

(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test methods
5	Linear weight of the main profiles, %	≥95	98.8	GB/T 8814-2017
6	Heat reversion, %	≤2.0	1.42	GB/T 8814-2017
7	The difference in heat reversion between these sight surfaces, %	≤0.4	0.28	GB/T 8814-2017
8	Behavior after heating at 150°C	No air bubble, crack, stain	Pass	GB/T 8814-2017
9	Resistance to impact by falling weight (-10°C), pcs	≤1 (grade II)	0	GB/T 8814-2017
10	Density (method A), kg/m <sup>3</sup>	≤1530	1430	GB/T 1033.1-2008
11	Vicat softening temperature (Bo), °C	≥78	78.0	GB/T 1633-2008
12	Tensile stress at yield, MPa	≥37	37.6	GB/T 1040.2-2006
13	Tensile stain at break, %	≥100	109	GB/T 1040.2-2006
14	Flexure modulus, MPa	≥2200	2.24×10 <sup>4</sup>	GB/T 9341-2008

(CONTINUED ON THE NEXT PAGE)

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TESTING RESULTS

No. 2018(C)09008

(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test methods	
15	Weldability, MPa	Mean value	≥35	96.4	GB/T 8814-2017
		Minimum value	≥20	91.5	GB/T 8814-2017
16	Heat transfer coefficient, W/(m <sup>2</sup> ·K)	Grade 1	≤2.0	1.5	GB/T 8884-2008 Appendix F
		Grade 2	≤1.6		
		Grade 3	≤1.0		
17	Short term welding coefficient, %	≥0.8	0.81	JG/T 263-2010	
18	Limit of heavy metals, mg/kg	Pb	≤1000	ND	GB/T 26125-2011
		Cd	≤100	ND	GB/T 26125-2011
		Cr(VI)	≤1000	ND	GB/T 26125-2011
		Hg	≤1000	ND	GB/T 26125-2011
19	Diphenyl phthalate (2-ethyl) acetic acid, mg/kg	≤1000	ND	GB/T 29786-2013	
20	Vinyl chloride monomer, mg/kg	≤5	ND	GB/T 4015-2013	

CONCLUSIONS: The samples of the product referred to in this report have been tested according to the standard GB/T 8814-2017 "Unplasticized polyvinyl chloride (PVC-U) profiles for the doors and windows". The tested items meet the requirements of this standard. The wall thickness of main profile meet the requirement of class B; the resistance to impact by falling weight is of grade II; and the thermal insulation performance meet the requirement of grade 2.

Test: 丁树岩 孙泉 邵进



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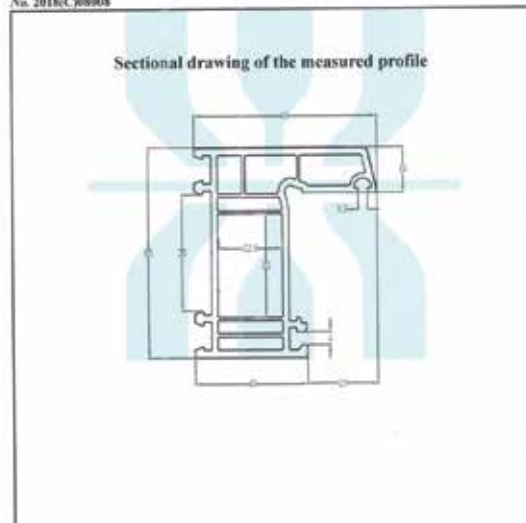


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Attached Table I

No. 2018(C)09008



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Attached Table II

1. Classification of wall thickness of main profiles

	Class A	Class B
Sight surface / mm	≥2.8	≥2.5
Non-sight surface / mm	≥2.5	≥2.2

2. Classification of resistance to impact by falling mass of main profiles

Grade	I	II	III
	Falling mass / g	1000	
Falling height / mm	1000	1500	
Temperature / °C	-10		
			-20

Note: In particular climatic conditions (e.g. the average temperature of the coldest months below -10 °C), the brittle failure of the profiles should be taken into full consideration. The products which are of grade II or grade III in resistance to impact by falling weight are recommended when designing.

3. Classification of thermal insulating properties of main profiles

Grade	1	2	3
Thermal transmittance Kf / [W/(m <sup>2</sup> ·K)]	≤2.0	≤1.6	≤1.0



**GERMANTECH LION - DETAILED WEIGHT TABLE**

<b>SERIES NAME</b>	<b>PROFILE CODE</b>	<b>PROFILE DESCRIPTION</b>	<b>Kg/Mt</b>	<b>Mt/Length</b>	<b>Kg/Length</b>	<b>Lengths/Pack</b>	<b>Kg/Pack</b>
<b>60 CASEMENT SERIES</b>	L-60XK	60 Small Frame	0.880	5.9	5.19	6	31.15
	L-60PKD	60 Frame D	1.042	5.9	6.15	6	36.89
	L-60NKCSA	60 In Swing Window Sash A	1.200	5.9	7.08	6	42.48
	L-60WKCS2	60 Out Swing Window Sash 2	1.210	5.9	7.14	6	42.83
	L-60NKMS2	60 In Swing Door Sash 2	1.517	5.9	8.95	4	35.80
	L-60WKMS2	60 Out Swing Door Sash 2	1.650	5.9	9.74	4	38.94
	L-60ZTW	60 Mullion W	1.130	5.9	6.67	6	40.00
	L-60DYA	60 Single Glazing Bead A	0.317	5.9	1.87	20	37.41
	L-60SYA2	60 Double Glazing Bead A2	0.270	5.9	1.59	20	31.86
	L-150MB2	150 Door Panel 2	0.884	5.9	5.22	10	52.16
<b>80 SLIDING SERIES</b>	L-TL80KB2	80 Sliding Frame B2	1.200	5.9	7.08	6	42.48
	L-99TLK	99 SLIDING FRAME	1.620	5.9	9.56	6	57.35
	L-80TLSD	80 Sliding Sash D- 55MM	0.841	5.9	4.96	8	39.70
	L-80TLDSB	80 BIG SLIDING SASH B- 66MM	0.910	5.9	5.37	8	42.95
	L-52SS2	Screen Sash A2- 52mm	0.492	5.9	2.90	15	43.54
	L-80FG	80 Sliding Sash Cover	0.180	5.9	1.06	30	31.86
	L-80DYB	80 Glazing Bead B	0.220	5.9	1.30	30	38.94
	L-80ZJ1	80 Bay Corner Adaptor 1	0.780	5.9	4.60	4	18.41
	L-SSA3	66 Screen Door Sash-66mm	0.635	5.9	3.75	9	33.72
<b>60/112 Sliding Series</b>	L-60LGKA	60 Double Sliding Frame A	1.098	5.9	6.48	6	38.87
	L-TL112KB	112 Sliding Frame B	1.700	5.9	10.03	4	40.12
	L-88TLSD	88 Sliding Sash D- 58mm	0.840	5.9	4.96	8	39.65
	L-88TLA2	88 Sliding Sash A2- 66mm	1.042	5.9	6.15	8	49.18
	L-60TLMS2	60 Sliding Door Sash 2- 92mm	1.400	5.9	8.26	4	33.04
	L-42SZT2	42 Sash Mullion 2	0.840	5.9	4.96	8	39.65
	L-52SS2	Screen Sash A2- 52mm	0.492	5.9	2.90	15	43.54
	L-SSA3	66 Screen Door Sash-66mm	0.635	5.9	3.75	9	33.72
	L-88FG	88 Sliding Sash Cover	0.227	5.9	1.34	30	40.18
	L-60TLMSFG	60 Sliding Door Sash Cover	0.217	5.9	1.28	20	25.61
	L-88SYA	88 Double Glazing Bead A	0.180	5.9	1.06	30	31.86
	L-88DYA2	88 GLAZING BEAD A2	0.270	5.9	1.59	20	31.86



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## GERMANTECH LION - DETAILED WEIGHT TABLE

SERIES NAME	PROFILE CODE	PROFILE DESCRIPTION	Kg/Mt	Mt/Length	Kg/Length	Lengths/Pack	Kg/Pack
<b>88/90 Sliding Series</b>	L-90TLK	90 Sliding Frame	1.340	5.9	7.91	6	47.44
	L-TL88KD2	88 SLIDING FRAME D2 (With Track)	1.367	5.9	8.07	6	48.39
	L-88TLSD	88 Sliding Sash D- 58mm	0.840	5.9	4.96	8	39.65
	L-88TLSA2	88 Sliding Sash A2- 66mm	1.042	5.9	6.15	8	49.18
	L-60TLMS2	60 Sliding Door Sash 2-92mm	1.400	5.9	8.26	4	33.04
	L-42SZT2	42 Sash Mullion 2	0.840	5.9	4.96	8	39.65
	L-52SS2	Screen Sash A2- 52mm	0.492	5.9	2.90	15	43.54
	L-SSA3	66 Screen Door Sash-66mm	0.635	5.9	3.75	9	33.72
	L-88FG	88 Sliding Sash Cover	0.227	5.9	1.34	30	40.18
	L-88SYA	88 Double Glazing Bead A	0.180	5.9	1.06	30	31.86
	L-88DYA2	88 GLAZING BEAD A2	0.270	5.9	1.59	20	31.86
<b>55 Small Series</b>	L-60LGKB	60 Double Sliding Frame B	0.834	5.9	4.92	6	29.52
	L-80TLSD	80 Sliding Sash D- 55MM	0.841	5.9	4.96	8	39.70
	L-80TLDSB	80 BIG SLIDING SASH B- 66MM	0.910	5.9	5.37	8	42.95
	L-80DYB	80 Glazing Bead B	0.220	5.9	1.30	30	38.94
	L-80FG	80 Sliding Sash Cover	0.180	5.9	1.06	30	31.86
	L-60XK	60 Small Frame	0.880	5.9	5.19	6	31.15
	L-60DYA	60 Single Glazing Bead A	0.317	5.9	1.87	20	37.41
	L-60SYA2	60 Double Glazing Bead A2	0.270	5.9	1.59	20	31.86
<b>60 BLIND WINDOW SERIES</b>	L-60XK W/OUT	60 Small Frame (Without Gasket)	0.850	5.9	5.02	6	30.09
	L-BYCZYYT	Shutter Glazing Bead	0.260	5.9	1.53	20	30.68
	L-BYCLP	Blind Louver	0.217	5.9	1.28	20	25.61
	L-38BYP	38 Blind Louver	0.159	5.9	0.94	30	28.14
	L-38FG	38 Square Pipe	0.409	5.9	2.41	8	19.30
<b>OTHER ACCESSORIES</b>	L-30ZST	30 GRILL	0.160	5.9	0.94	20	18.88
	L-20ZST	20 GRILL	0.120	5.9	0.71	20	14.16
	L-30WZZST	30 GRILL OUTLAY	0.160	5.9	0.94	30	28.32
	L-15ZST	15ZST	0.090	5.9	0.53	30	15.93

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