



LUMA FLAT ROOFLIGHT FABRICATION GUIDE



CONTENTS

Exploded View	3
Cross Section - Double-Glazed System	4
Cross Section - Triple-Glazed System	5
Specification	6
Components	9
Tools and Equipment	12
Fabrication:	
Outer Frame	13
Base Profile	12
Glazing	20
Calculations	25

If in doubt at any stage

Please contact our Technical Support for additional support or advice.



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For purchasing products please telephone 01773 842222 and ask for Eurocell Sales Department.



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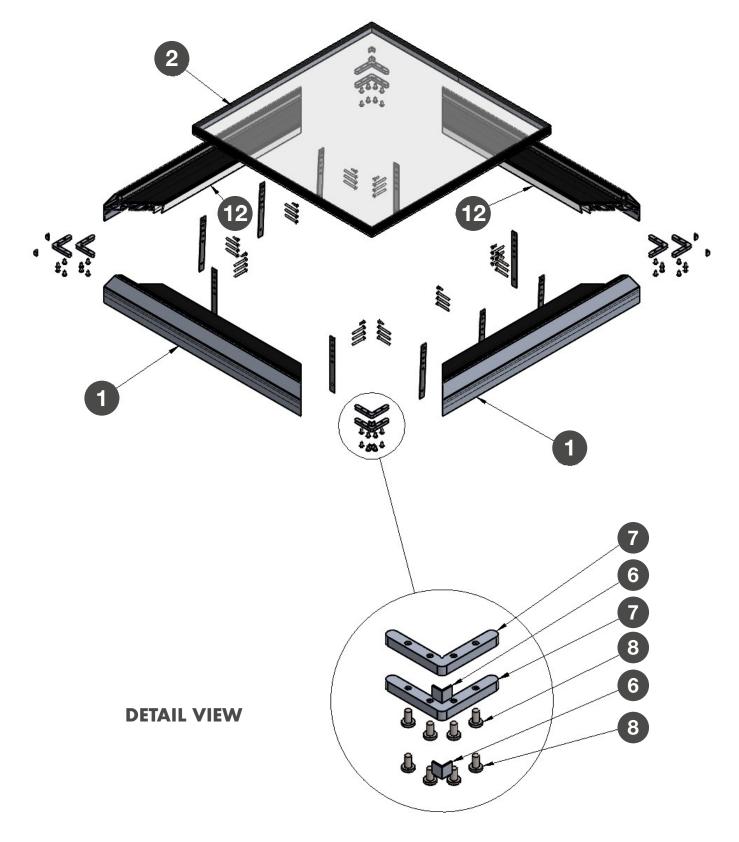
UPDATING OF PRODUCT MANUAL

To ensure that the product manual is kept up to date, all registered holders of the said manual will be supplied with current amendments immediately upon their release.

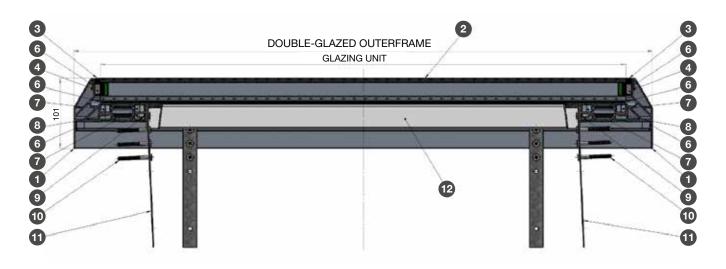
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EXPLODED VIEW



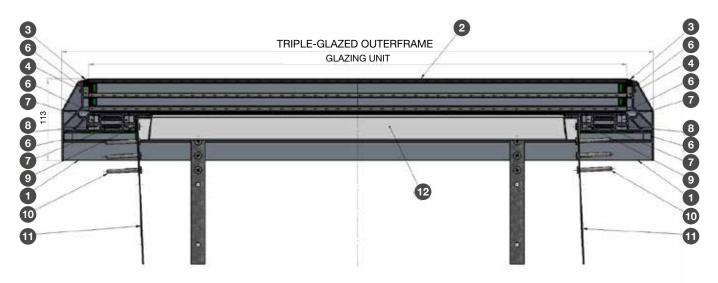
CROSS SECTION - DOUBLE-GLAZED



PARTS LIST

ITEM	PART No.	DESCRIPTION
1	FRL5501ABKM	FRL OUTER FRAME - DOUBLE-GLAZED - MATT BLACK
1	FRL5501AW	FRL OUTER FRAME - DOUBLE-GLAZED - WHITE
2	N/A	TRIPLE-GLAZED IGU
3	FRL5403BK	FORMOA 066 WEATHER SEAL
4	FRL5401GY	BACKING ROD – Ø10MM
5	FRL5402BK	STRUCTURAL GLAZING TAPE
6	FRL5504A	ANGLE CLEAT
7	FRL5503A	CORNER BRACKET
8	FRL5602	PAN HEAD SETSCREW M6 x 12MM
9	FRL5603	SELF DRILLING SCREW 4.8 x 16MM
10	FRL5604	WOODSCREW 5.0 x 50MM
11	FRL5601S	FIXING PLATE
12	ET12564	INTERNAL TRIM

CROSS SECTION - TRIPLE-GLAZED



PARTS LIST

ITEM	PART No.	DESCRIPTION
1	FRL5502ABKM	FRL OUTER FRAME - TRIPLE-GLAZED - MATT BLACK
1	FRL5502AW	FRL OUTER FRAME - TRIPLE-GLAZED - WHITE
2	N/A	TRIPLE-GLAZED IGU
3	FRL5403BK	FORMOA 066 WEATHER SEAL
4	FRL5401GY	BACKING ROD – Ø10MM
5	FRL5402BK	STRUCTURAL GLAZING TAPE
6	FRL5504A	ANGLE CLEAT
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12	ET12564	INTERNAL TRIM

SPECIFICATION

FRAME SPECIFICATION

Thermally broken T5-6063 aluminium frame sections combine strength with lightweight construction.

Frame design includes internal drainage feature in case external weatherseal becomes compromised.

Marine grade powder coated surface finish to withstand harshest weather conditions. All powder coating to QUALICOAT standards and specifications which generally exceeds the BS EN 12206 specification for powder coating.

Standard Colours:

Black RAL 9005 CM White RAL 9003

(Special colours available on request, special colours are sprayed onto White profile)

PITCH RANGE

This document and information contained herein is based upon an installation pitch of 2.5°.

PLEASE NOTE: Luma units can be installed up to a maximum pitch of 10°. Please seek technical advice to confirm order sizes on any Luma units to be installed at a pitch angle greater than 2.5°.

MAXIMUM SIZE

Luma rooflights maximum sizes are restricted by glass maximum area of 2.5m² for double glazed and 2m² for triple glazed or maximum length of 3200m.

Maximum rectangular size Maximum square size Opening 3000mm x 650mm Opening 1440mm x 1440mm

							LENC	GTH ORDEP	SIZE						
		500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1650	1700
	500	0.406	0.469	0.533	0.597	0.661	0.724	0.788	0.852	0.915	0.979	1.043	1.106	1.138	1.170
	550	0.438	0.506	0.575	0.644	0.712	0.781	0.850	0.919	0.987	1.056	1.125	1.193	1.228	1.262
	600	0.469	0.543	0.617	0.691	0.764	0.838	0.912	0.985	1.059	1.133	1.206	1.280	1.317	1.354
SIDE	650	0.501	0.580	0.659	0.737	0.816	0.895	0.974	1.052	1.131	1.210	1.288	1.367	1.406	1.446
EST	700	0.533	0.617	0.701	0.784	0.868	0.952	1.035	1.119	1.203	1.286	1.370	1.454	1.496	1.538
MALI	750	0.565	0.654	0.742	0.831	0.920	1.009	1.097	1.186	1.275	1.363	1.452	1.541	1.585	1.629
IS SI	800	0.597	0.691	0.784	0.878	0.972	1.065	1.159	1.253	1.346	1.440	1.534	1.628	1.674	1.721
DEPTH ORDER SIZE (RECOMMEND WIDTH IS SMALLEST SIDE)	850	0.629	0.727	0.826	0.925	1.024	1.122	1.221	1.320	1.418	1.517	1.616	1.714	1.764	1.813
≥ Q	900	0.661	0.764	0.868	0.972	1.075	1.179	1.283	1.386	1.490	1.594	1.698	1.801	1.853	1.905
IMEN	950	0.692	0.801	0.910	1.019	1.127	1.236	1.345	1.453	1.562	1.671	1.779	1.888	1.942	1.997
CON	1000	0.724	0.838	0.952	1.065	1.179	1.293	1.406	1.520	1.634	1.748	1.861	1.975	2.032	2.089
E (RE	1050	0.756	0.875	0.994	1.112	1.231	1.350	1.468	1.587	1.706	1.824	1.943	2.062	2.121	2.181
SIZ 8	1100	0.788	0.912	1.035	1.159	1.283	1.406	1.530	1.654	1.778	1.901	2.025	2.149	2.211	2.272
RDEF	1150	0.820	0.949	1.077	1.206	1.335	1.463	1.592	1.721	1.849	1.978	2.107	2.236	2.300	2.364
Ρ	1200	0.852	0.985	1.119	1.253	1.386	1.520	1.654	1.788	1.921	2.055	2.189	2.322	2.389	2.456
DEP1	1250	0.884	1.022	1.161	1.300	1.438	1.577	1.716	1.854	1.993	2.132	2.271	2.409	2.479	2.548
	1300	0.915	1.059	1.203	1.346	1.490	1.634	1.778	1.921	2.065	2.209	2.352	2.496	2.568	2.640
	1350	0.947	1.096	1.245	1.393	1.542	1.691	1.839	1.988	2.137	2.286	2.434	2.583	2.657	2.732
	1400	0.979	1.133	1.286	1.440	1.594	1.748	1.901	2.055	2.209	2.362	2.516	2.670	2.747	2.823

							LENG	GTH ORDER	SIZE					
		1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
	500	1.234	1.298	1.361	1.425	1.489	1.552	1.616	1.680	1.743	1.807	1.871	1.935	1.998
	550	1.331	1.399	1.468	1.537	1.606	1.674	1.743	1.812	1.880	1.949	2.018	2.086	2.155
_	600	1.428	1.501	1.575	1.649	1.722	1.796	1.870	1.943	2.017	2.091	2.165	2.238	2.312
SIDE	650	1.524	1.603	1.682	1.761	1.839	1.918	1.997	2.075	2.154	2.233	2.311	2.390	2.469
-EST	700	1.621	1.705	1.789	1.872	1.956	2.040	2.123	2.207	2.291	2.375	2.458	2.542	2.626
MALL	750	1.718	1.807	1.896	1.984	2.073	2.162	2.250	2.339	2.428	2.516	2.605	2.694	2.783
IS SI	800	1.815	1.909	2.002	2.096	2.190	2.283	2.377	2.471	2.565	2.658	2.752	2.846	2.939
IDTH	850	1.912	2.011	2.109	2.208	2.307	2.405	2.504	2.603	2.701	2.800	2.899	2.998	3.096
≥ P	900	2.009	2.112	2.216	2.320	2.423	2.527	2.631	2.735	2.838	2.942	3.046	3.149	3.253
IME	950	2.106	2.214	2.323	2.432	2.540	2.649	2.758	2.866	2.975	3.084	3.193	3.301	3.410
S S	1000	2.202	2.316	2.430	2.543	2.657	2.771	2.885	2.998	3.112	3.226	3.339	3.453	3.567
E (R	1050	2.299	2.418	2.537	2.655	2.774	2.893	3.011	3.130	3.249	3.368	3.486	3.605	3.724
SIS F	1100	2.396	2.520	2.643	2.767	2.891	3.015	3.138	3.262	3.386	3.509	3.633	3.757	3.880
RDEF	1150	2.493	2.622	2.750	2.879	3.008	3.136	3.265	3.394	3.523	3.651	3.780	3.909	4.037
DEPTH ORDER SIZE (RECOMMEND WIDTH IS SMALLEST SIDE)	1200	2.590	2.723	2.857	2.991	3.125	3.258	3.392	3.526	3.659	3.793	3.927	4.060	4.194
DEP	1250	2.687	2.825	2.964	3.103	3.241	3.380	3.519	3.658	3.796	3.935	4.074	4.212	4.351
	1300	2.783	2.927	3.071	3.215	3.358	3.502	3.646	3.789	3.933	4.077	4.220	4.364	4.508
	1350	2.880	3.029	3.178	3.326	3.475	3.624	3.773	3.921	4.070	4.219	4.367	4.516	4.665
	1400	2.977	3.131	3.285	3.438	3.592	3.746	3.899	4.053	4.207	4.360	4.514	4.668	4.822

GLAZED UNITS

Luma glazing units consist of toughened and laminated glazing panes allowing installation above 5 metres above floor level and swimming pools / hot tubs.

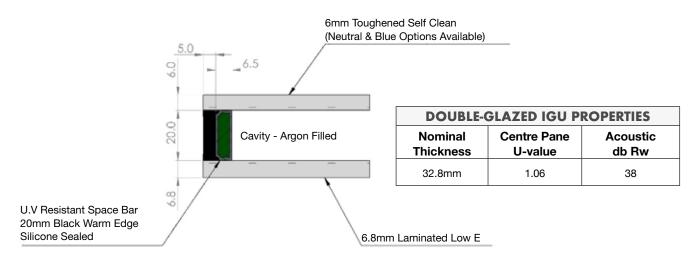
Manufacturing standards for Glazed Units



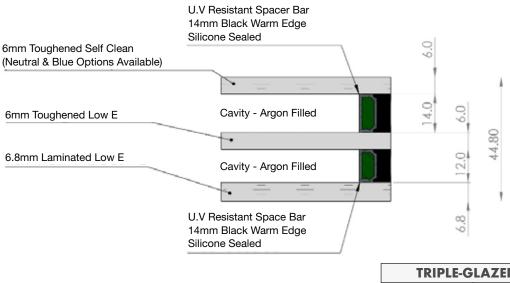
Toughened to BS EN 12150 Manufactured to BS EN 1279 Part 2 & 3

Easy Clean glass on all products as standard - keeps glass cleaner longer and minimises cleaning effort.

DOUBLE-GLAZED OPTION – 30KG/M²



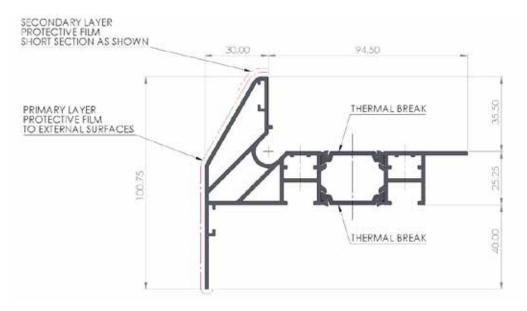
TRIPLE-GLAZED OPTION – 45KG/M²



TRIPLE-GLAZED IGU PROPERTIES						
Nominal Thickness	Centre Pane U-value	Acoustic db Rw				
44.8mm	0.62	40				

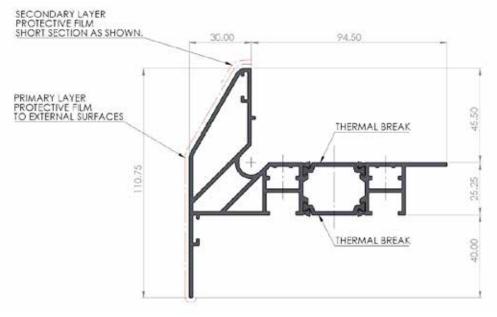
COMPONENTS

ITEM 1 (DOUBLE-GLAZED)



Item	Part No.	Description	Length
1	FRL5501ABKM	FRL OUTER FRAME - DOUBLE-GLAZED - MATT BLACK	6.5M
1	FRL5501AW	FRL OUTER FRAME - DOUBLE-GLAZED - WHITE	6.5M

ITEM 1 (TRIPLE-GLAZED)



Item	Part No.	Description	Length
1	FRL5502ABKM	FRL OUTER FRAME - TRIPLE-GLAZED - MATT BLACK	6.5M
1	FRL5502AW	FRL OUTER FRAME - TRIPLE-GLAZED - WHITE	6.5M

ITEM 2

Formoa® 066 Black is a 3-in-1 Sealant Adhesive (Grabs, Bonds & Seals). Unique adhesion on virtually any material, without the need for any mechanical fixings. Formoa® 066 primary function is for bonding, but it is also more than capable as a sealant too with proven compatibility for use with self-cleaning glass systems. This self-cleaning glass sealant must be used when installing a Eurocell self-cleaning glass system for a professional finish.

Item	Part No.	Description	Pack QTY
2	FRL5403BK	FORMOA 066 WEATHER SEAL 290ml	1

ITEM 3

FRL5401GY is a closed cell polyethylene (PE) circular foam suitable for providing a backer to sealant joints, avoiding three-sided adhesion. FRL5401GY is rot-proof and chemically neutral and is used as a foam backing rod behind the sealant joint, for quality sealant work. When positioned correctly it ensures correct joint dimensions.

Item	Part No.	Description	Pack QTY
3	FRL5401GY	BACKING ROD – Ø10MM 1150M	1 ROLL

ITEM 4

FRL5402BK is a high-quality structural glazing spacer tape. It is coated on both sides with high tack acrylic adhesive with blue filmic liner for easy release. It has an open cell structure to allow curing of structural silicones on all sides of the joint.

Item	Part No.	Description	Pack QTY
4	FRL5402BK	STRUCTURAL GLAZING TAPE 85mm x 3mm – 15M	1 ROLL

ITEM 5

Item	Part No.	Part No. Description			
5	FRL5504A	ANGLE CLEAT	8		

ITEM 6

Item	tem Part No. Description		Pack QTY	
6	FRL5503A	CORNER BRACKET	8	











ITEM 7

ITEM 8

ITEM 9





	Item Part No. Description 7 FRL5602 PAN HEAD SETSCREW M6 x 12MM		Description	Pack QTY	
			100		
	8	8 FRL5603 SELF DRILLING SCREW 4.8 x 16MM		100	
	9	FRL5604	WOODSCREW 5.0 × 50MM	100	

ITEM 10



Item	n Part No.	Description	Pack QTY
10	FRL55601S	FIXING PLATE	16

ITEM 11

Item	Item Part No. Description		Pack QTY
11	ET12654	INTERNAL TRIM 5M	1

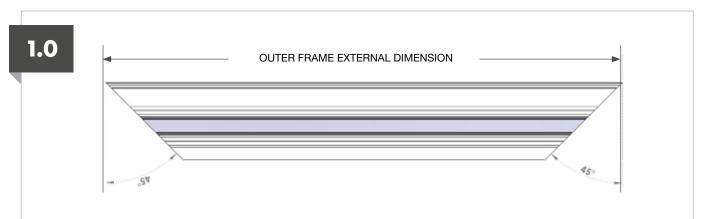


TOOLS & EQUIPMENT

PART No.	DESCRIPTION	
N/A	Power Drill	
N/A	Ø7.0mm HSS DRILL BIT	
N/A	Ø8.0mm HSS DRILL BIT	
N/A	Power Driver	
SGPOWER	Caulking Gun	
ESJ17001	FRL Corner Cleat Drill Jig	
ESJ17004	FRL IGU Assembly Guide Pack	5
N/A	Hand Roller – 100mm	-
STA033719	Tape Measure	
STA210122	Retractable Knife	8
N/A	Combination Square	
N/A	Frame Clamp	

FABRICATION

OUTER FRAME



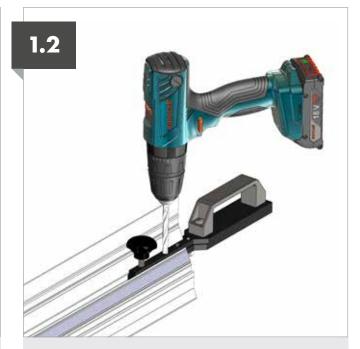
Cut four sections of FRL Outer Frame profiles to length incorporating 45° mitre faces to each end.

QTY	LOCATION	DEDUCTION	TOLERANCE
2	HEAD/BASE	L = (ORDER LENGTH) + 209mm	+/- 1.0mm
2	SIDE JAMBS	L = (ORDER HEIGHT) + 209mm	+/- 1.0mm

Deburr where necessary to ensure clean face to face joint.



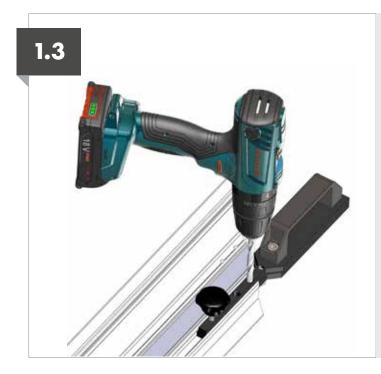
Check all measurements and angle cut faces are correct and in accordance with cutting list



Invert outer frame section and locate FRL Corner Cleat Drill Jig into position one ensuring angle faces fully connect and secure in place with tension screw.

Drill two Ø7.0mm clearance holes through single aluminium wall only.

Remove FRL Corner Cleat Jig.



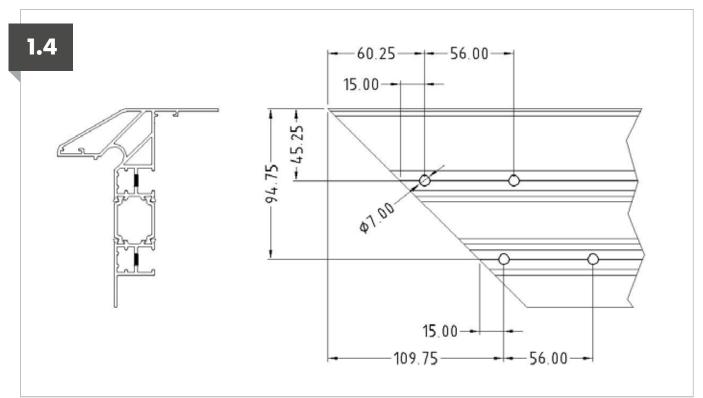
Locate FRL Corner Cleat Drill Jig into position two ensuring angle faces fully connect and secure in place with tension screw

Drill two Ø7.0mm clearance holes through single horizontal flange only.

Remove FRL Corner Cleat Jig.

Deburr where necessary and remove all swarf.

Repeat above process to all mitred ends of outer frame sections.



Below shows Outer Frame corner cleat hole positions.

BASE PROFILE

2.0

Locate the base profile and identify by applying label to protective tape on external surface so it is clearly visible

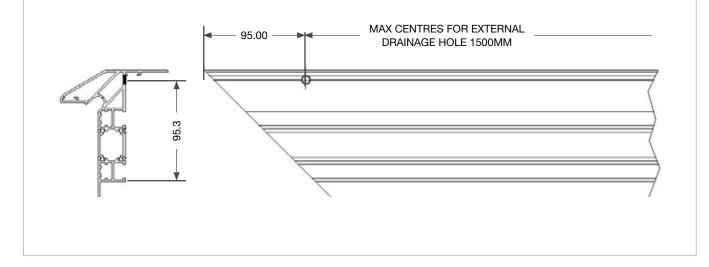


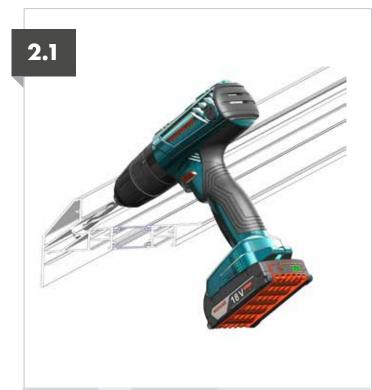
Luma Base/Drainage Section

On the head and base outer frame, using the v grove as a positional guide, drill Ø8.0mm drainage holes at 95mm away from both ends on the underside of profile through a single aluminium wall only.

If the distance between both holes exceeds 1500mm then add further intermediate holes, ensuring maximum 1500mm centres.

Deburr where necessary and remove all swarf.

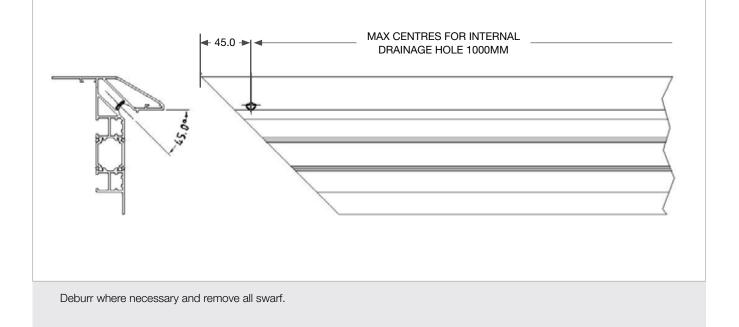




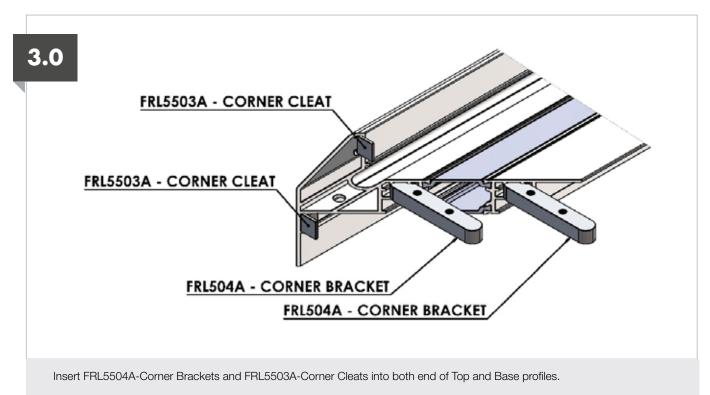
On the head and base outer frame, using the v grove as a positional guide, drill Ø8.0mm drainage holes at 45mm away from both ends on the upperside of profile through a single aluminium wall only.

If the distance between both holes exceeds 1000mm then add further intermediate holes, ensuring maximum 1000mm centres.

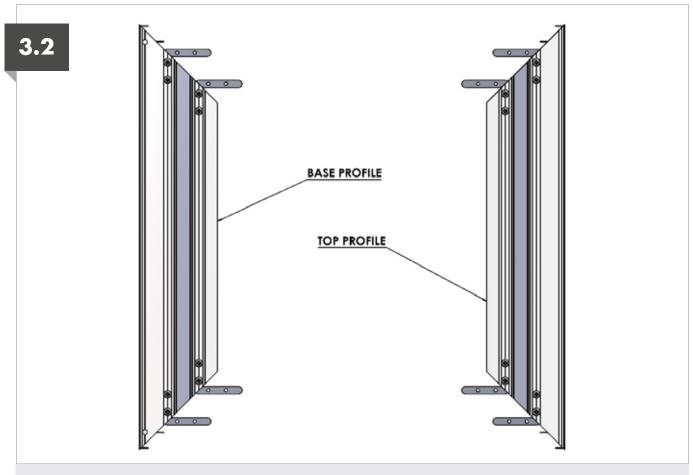
Ensure any intermediate holes are positioned a minimum of 75mm away from drainage holes on the underside.



LOCATE TOP AND BASE PROFILES

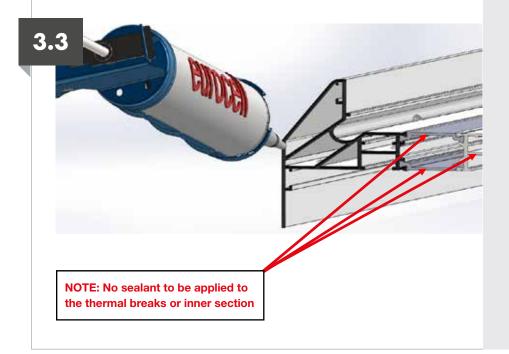




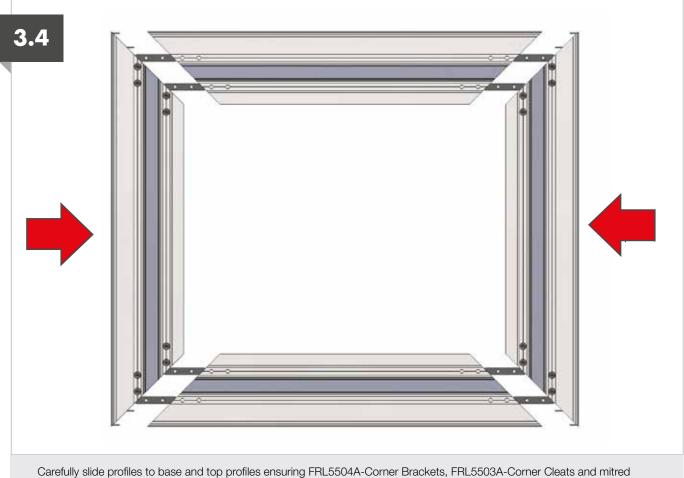


At this stage, except for drainage holes, the Base and Top profiles should be the same. Locate side profiles.

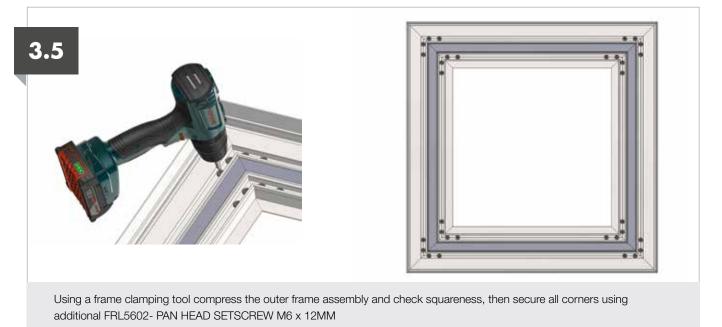
Clean and de-grease all cut angled faces.



Carefully apply Forgeway Formoa 066 Black sealant to mitred faces of outer section only of side profiles.



faces are fully and accurately engaged.



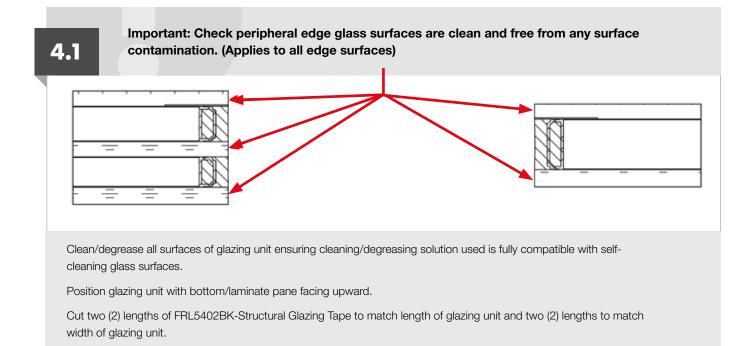
Clean away any excess sealant from corners.

GLAZING

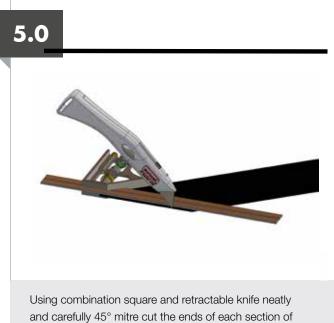
	TOLERANCE
GLAZING LENGTH = (ORDER LENGTH) + 137mm GLAZING HEIGHT= (ORDER HEIGHT) + 137mm	+/- 1.0mm +/- 1.0mm
لم ا	SURVEY / ORDER SIZE LOCATION

Now Luma outer frame is fully assembled clean and degrease inner aperture prior to inserting glazing unit.

Locate glazing unit and visually check for any damage and measure to ensure overall dimensions comply with dimensions specified in work pack.



APPLYING GLAZING TAPE



Using combination square and retractable knite neatly and carefully 45° mitre cut the ends of each section of FRL5402BK-Structural Glazing Tape before applying to glazing unit.



Ensuring glazing unit is positioned with bottom/laminate pane facing upward, take each section of FRL5402BK-Structural Glazing Tape remove lower section of adhesive backing film and position on corresponding edge of the glazing unit taking care to all edges and mitred corners are in-line and match.

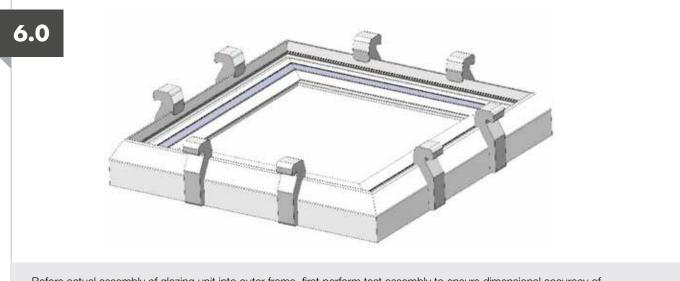


Use hand roller to ensure FRL5402BK-Structural Glazing Tape is fully adhered to glazing unit and all air pockets between contact surfaces are disbursed.



Locate ESJ17004-FRL IGU Assembly Guides and position on assembled Luma outer frame before inserting glazing unit – minimum two (2) guides per side.

ASSEMBLY GLAZING UNIT



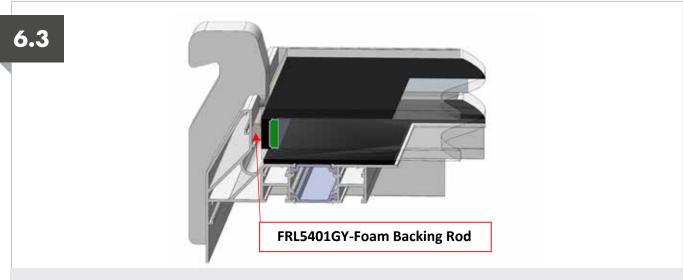
Before actual assembly of glazing unit into outer frame, first perform test assembly to ensure dimensional accuracy of assembled outer frame and glazing unit.



For test assembly carefully invert glazing unit to ensure self-clean glass pane is facing upward upper and laminate surface containing FRL5402BK-Structural Glazing Tape is facing downward.

Carefully lower and locate glazing unit into outer frame utilising ESJ17004-FRL IGU Assembly Guides to centralise glazing unit in the outer frame. glazing unit form outer frame and remove outer section of adhesive backing film from all sections of FRL5402BK-Structural Glazing Tape and carefully lower and locate glazing unit into outer frame again, utilising ESJ17004-FRL IGU Assembly Guides to centralise glazing unit in the outer frame.

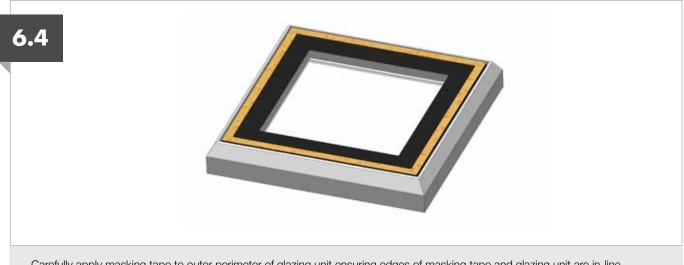
When glazing unit is securely in position, remove all ESJ17004-FRL IGU Assembly Guides.



Locate FRL5401GY-Foam Backing Rod and carefully compress and introduce into the internal void between the glazing unit and the outer frame on all four (4) sides.

Use ESJ17004-FRL IGU Assembly Guide to set FRL5401GY-Foam Backing Rod to the required depth of 8mm from top edge of outer frame along the perimeter of the void.

When FRL5401GY-Foam Backing Rod has been successfully introduced to all voids remove ESJ17004-FRL IGU Assembly Guide and prepare for introduction of FRL5403BK-Weather Seal.



Carefully apply masking tape to outer perimeter of glazing unit ensuring edges of masking tape and glazing unit are in-line.



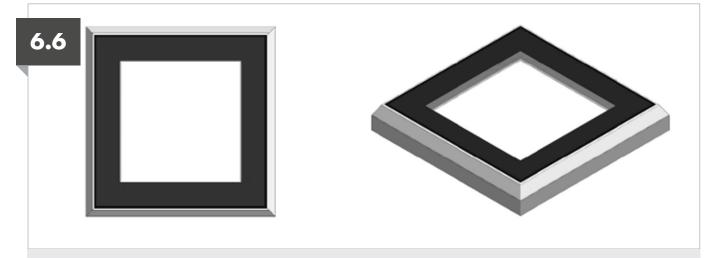
Any overlaps of masking tape to glass edge should be trimmed back to glass edge to ensure a continuous and even edge finish.

Proceed to apply FRL5403BK-Weather Seal to the internal void between the glazing unit and the outer frame on all four (4) sides.

Carefully apply the sealant in a smooth and even application movement slightly over filling the void to allow finishing.

When application of FRL5403BK-Weather Seal is complete remove any excess sealant with a silicone scrapper tool to ensure a smooth, even and continuous finish to all four (4) sides.

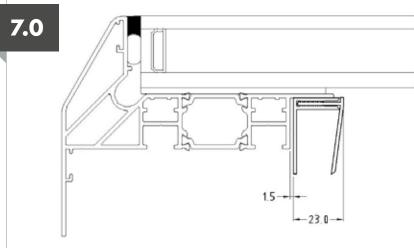
Leave sealant to stand for approximately 15 minutes before removing masking tape and secondary layer of protective tape on outer frame to leave a clean, neat and continuous seal finish



Completed units should be left in a stable and level position for seventy-two (72) hours to ensure necessary curing of weather seal.

On completion of curing period, finished units can be packaged, labelled, and prepared for delivery.

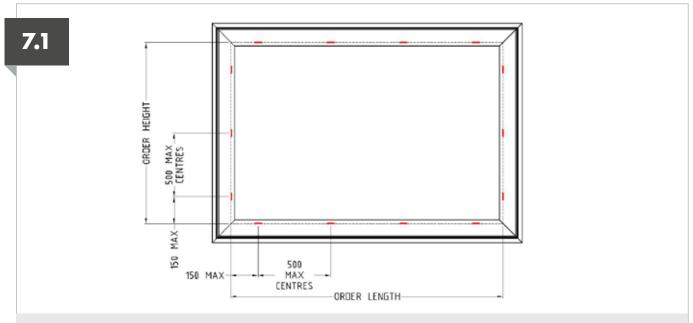
CALCULATIONS



ET12564 Internal trim cutting constants shown below.

As ET12564 is a two part component, ET12564-F represents the F section and ET12564-M represents the male clip in section.

QTY	LOCATION	PART No.	DEDUCTION	PREP LEFT	PREP RIGHT	TOLERANCE
2	HEAD/BASE	ET12564-F	L = (ORDER LENGTH) - 3mm	SQUARE	SQUARE	+/- 1.0mm
2	HEAD/BASE	ET12564-M	L = (ORDER LENGTH) - 45mm	SQUARE	SQUARE	+/- 1.0mm
2	SIDE JAMBS	ET12564-F	L = (ORDER HEIGHT) - 49mm	SQUARE	SQUARE	+/- 1.0mm
2	SIDE JAMBS	ET12564-M	L = (ORDER HEIGHT) - 49mm	SQUARE	SQUARE	+/- 1.0mm



Fixing strap and fixing screws quantity calculations show below

Example. 1500mm – (2 x 150mm) = 1200mm, 1200mm/500mm = 2.4, therefore round down to 3 then add 2 giving total of 5 fixing plates for the calculated edge.

QTY	LOCATION	PART No.	DEDUCTION	PREP LEFT	PREP RIGHT	TOLERANCE
2	HEAD/BASE	ET12564-F	L = (ORDER LENGTH) - 3mm	SQUARE	SQUARE	+/- 1.0mm
2	HEAD/BASE	ET12564-M	L = (ORDER LENGTH) - 45mm	SQUARE	SQUARE	+/- 1.0mm
2	SIDE JAMBS	ET12564-F	L = (ORDER HEIGHT) - 49mm	SQUARE	SQUARE	+/- 1.0mm
2	SIDE JAMBS	ET12564-M	L = (ORDER HEIGHT) - 49mm	SQUARE	SQUARE	+/- 1.0mm



For further information, contact the Eurocell Technical Team on **01773 842100**. Visit **eurocell.co.uk** to find installation guides and videos for Eurocell products.





Product specification is subject to change without notification. Please also note that colours shown are illustrative only, as the printing process does not allow 100% accurate colours to be reproduced.