



**Garda**<sup>®</sup>  
Illuminated handrail



# Garda®

## Your first choice illuminated handrail solution; unrivalled in quality and performance

Garda is a bespoke, award-winning illuminated handrail system that combines style and performance to deliver high quality lighting for internal and external applications. With four LED modules available to provide a wide range of light levels and colour temperatures, plus a choice of symmetric and asymmetric distributions, Garda offers a versatile and virtually maintenance-free solution that can be tailored to the individual needs of your project.

**For quality that shines through, introduce Garda to your next scheme. Named 'Best on Market' by Lux**

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# Service

## Supporting you from concept to completion

When you specify a Garda handrail, you're in safe hands. With over 10 years' experience delivering illuminated handrail solutions across a wide variety of applications, DW Windsor can manage all aspects of your scheme, offering you complete peace of mind.





# A Full Turnkey Solution

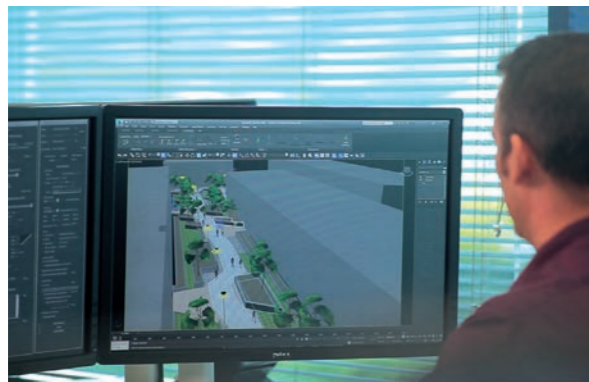
Aided by our expert team of designers, engineers and installers, we support your project at every step. We'll ask the right questions, at the right time to ensure your scheme is successfully delivered on time, and within budget.



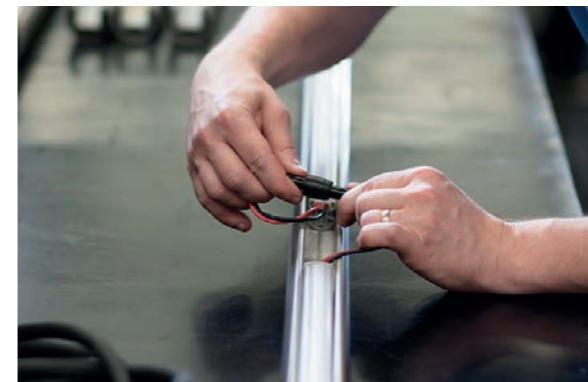
**Project Management**  
Acting as a single point of contact, your dedicated Project Manager will liaise with design, electrical and construction teams to ensure the smooth running of your project.



**In-depth Survey**  
Detailed site surveys are carried out for every Garda installation to fully understand the unique requirements of each location and establish exact dimensions for manufacture.



**Design and Visualisation**  
Our designers will create a bespoke Garda arrangement to meet your individual needs, providing a scheme visualisation, predicted luminance levels and planned mounting positions.



**Bespoke Manufacture**  
All Garda handrail systems are manufactured in Britain by our experienced in-house fabricators using the highest quality materials and components.

## Delivery and Installation

Working within the constraints of your building or structure, our specialist installation team will deliver and fit your chosen Garda solution to ensure the highest quality finish. Alternatively, if a project is time or cost sensitive, self-installation is now possible through Garda Kit.





# Profiles

## Quality that can be seen, felt and admired

All Garda handrails are hand-crafted from the highest grade materials, delivering beautiful solutions that you'll want to reach out and touch. Whether you're looking for elegance or have safety in mind, we have the right profile and finish for you.





## Stainless Steel

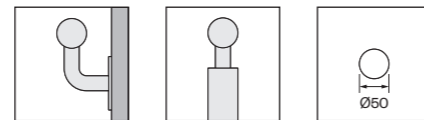
Selected for its excellent corrosion resistance and increased durability, our Seamless and Kit handrails are manufactured from premium grade 316 stainless steel and constructed using precision components for a superior fit and finish.



### Stainless Steel - Seamless

Featuring a continuous, uninterrupted aesthetic without visible breaks or joins, our seamless stainless steel handrails deliver elegance and flexibility.

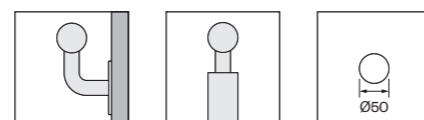
To ensure the highest quality finish is achieved for Seamless schemes, railing sections are cut, welded and machine brushed on-site by our expert installation team.



### Stainless Steel - Kit

This modular system is highly adaptable and perfectly suited to any scheme. Engineered to support self-installation, Garda Kit bypasses the need for welding on site.

Joints are concealed and changes of direction are easily accommodated thanks to fixed and variable corner sections.



## Aluminium

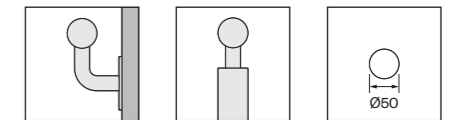
Whether it's to stand out or blend in, our aluminium Garda handrails offer a long-lasting, abrasion resistant solution that can be personalised to suit the individual requirements of your scheme.



### Painted Aluminium

For installations that require a hard-wearing, high-grade painted appearance, our standard aluminium handrails can be powder coated in any custom finish.

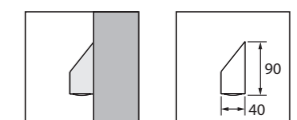
Prefabricated sections are assembled on-site, with visible joints kept to a minimum thanks to our precisely crafted brackets and cover plates.



### Garda Anti-Climb

Perfectly combining performance and safety, Garda Anti-Climb is the first-choice solution for safety-critical applications.

This innovative surface-mounted handrail system is designed to prevent anyone from using the product to climb a bridge or structure and cause injury. Also available as a cable carrying solution.





## Bespoke Finishes

All our aluminium handrails are polyester powder coated for ultimate durability. Choose from a wide range of finishes — including custom RAL colours and warm to touch coatings — to perfectly complement or contrast your project's architecture.





# Systems

Because every project is unique, so is our approach

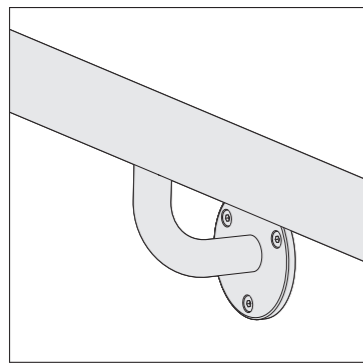
At DW Windsor, we recognise that no two schemes are alike, which is why we designed Garda to be as flexible as possible. With a wide range of mounting and infill options to choose from, we can design and deliver a unique solution for your next project.





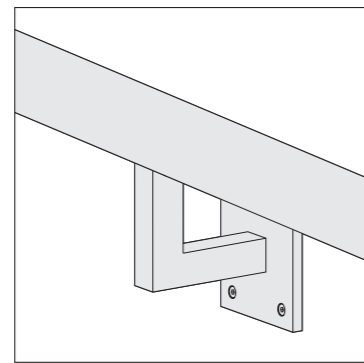
## Bespoke to You

To support the needs of each individual project for Garda, we developed a wide selection of components that when combined, offer a personalised solution perfectly suited to your unique requirements.



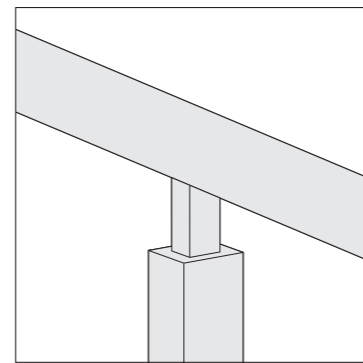
### Round Wall Brackets

Attaches handrail to vertical surfaces, round profile



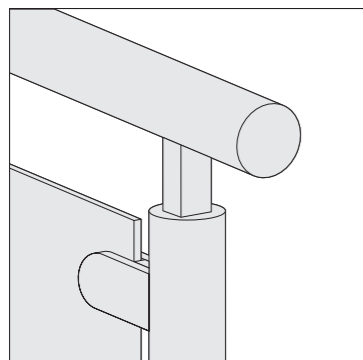
### Square Wall Brackets

Attaches handrail to vertical surfaces, square profile



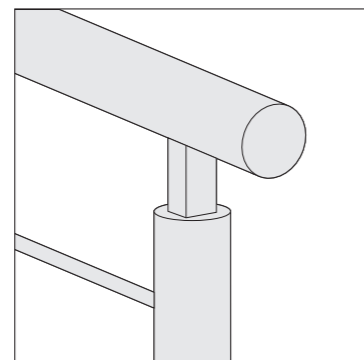
### Stanchions

Provides support, available in round or square profiles.



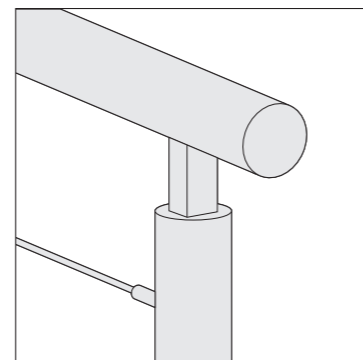
### Glass Infill

Part of a balustrade system, providing style and safety.



### Solid Rod Infill

Available in vertical or horizontal configurations.



### Tension Wire Infill

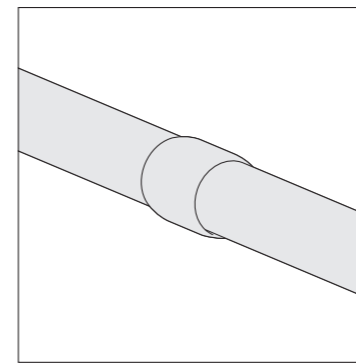
Part of a balustrade system, offers a minimal aesthetic.

## Truly Unique Solutions

Whilst most projects can be achieved using a variety of standard parts, we understand that some applications may require more. For these schemes, our designers will work with you to develop a completely custom solution to meet your specific needs.

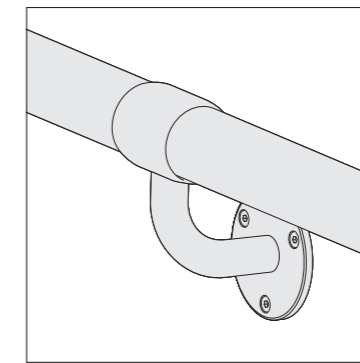
## Garda Kit

Garda Kit is the ideal solution for time sensitive installations. Designed for self-installation, the versatile system provides added flexibility on site and can be easily customised thanks to a number of additional components.



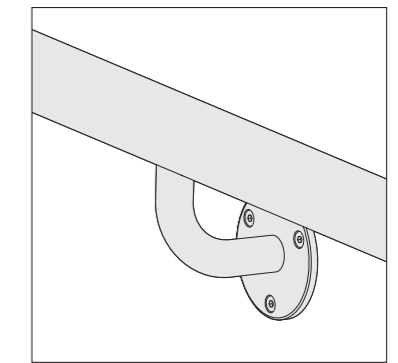
### Inline Splice

Connects one Garda handrail section to another.



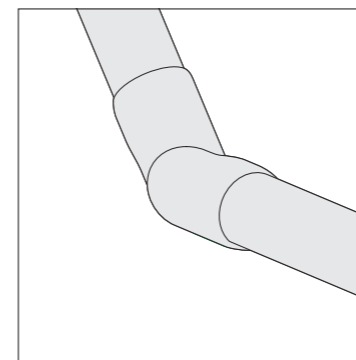
### Splice Wall Bracket

Joins two handrail sections whilst also providing a mounting point.



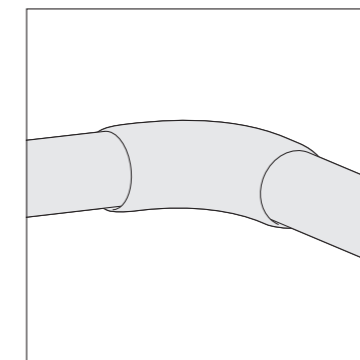
### Flexible Wall Bracket

Attaches at any point to provide a flush wall mounting point.



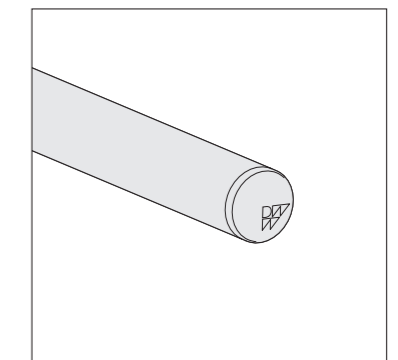
### Variable Corner Joint

Designed to easily accommodate changes in direction.



### Fixed Corner Joint

Links two Garda handrail sections together at a fixed 90° angle.



### End Cap

Stylish end cap to complete your Garda handrail installation.

## Innovative Fastening System

With Garda Kit, handrail sections are securely joined together using an innovative fastening system. Housed within the handrail, tube clamps allow sections to be connected without any visible fixing points.



# Modules

## Solutions tailored to your individual needs

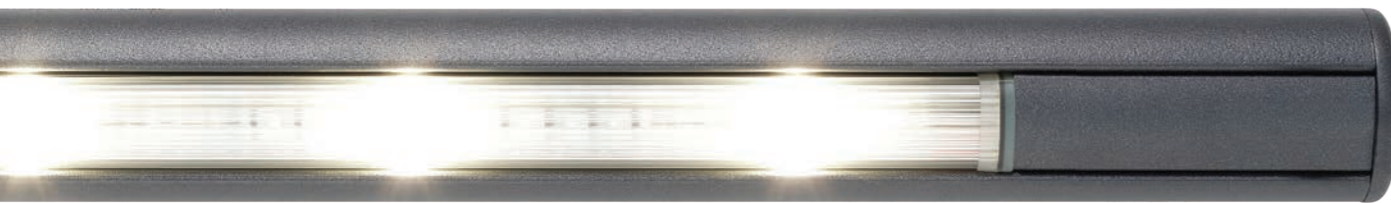
From buildings to bridges, stairwells to stations, Garda offers a safe lighting solution which provides guidance and support to pedestrians. Whether it's to drive footfall or create an impact, with multiple module options Garda can adapt to every setting.





# Garda Classic

Our most versatile module, Garda Classic offers both symmetric and asymmetric distributions in a variety of colour temperatures, making it suitable for a wide range of handrail applications.



Delivered Lumens	2700K (lm)	3000K (lm)	4000K (lm)
<b>Symmetric Module</b>			
300 mm	201	281	335
600 mm	402	563	670
900 mm	602	843	1004
1200 mm	803	1126	1338
<b>Asymmetric Module</b>			
300 mm	146	204	244
600 mm	293	410	489
900 mm	440	616	733
1200 mm	586	821	977

Power Ratings	48V AC (W)	48V DC (W)	24V AC (W)	24V DC (W)
<b>Module Size</b>				
300 mm	3.6	3.6	4.2	3.6
600 mm	7.2	7.2	8.3	7.2
900 mm	10.8	10.8	12.5	10.8
1200 mm	14.4	14.4	16.7	14.4

## Typical Applications

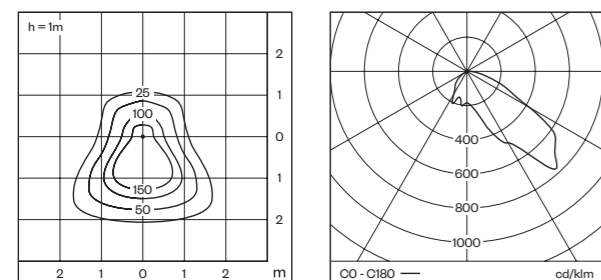
- Stairwells
- Bridges
- Architectural

## Light Details

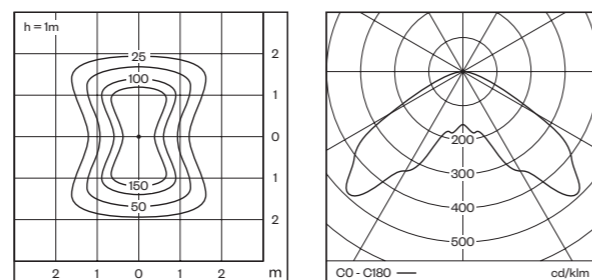


Flexible module option available

### Asymmetric Module



### Symmetric Module



# Garda Pro

Our performance solution, Garda Pro is designed for schemes that require increased module spacings or higher light levels and uniformity. Garda Pro distributes light over a wider area, making it ideally suited to single-sided schemes.



Delivered Lumens	3000K (lm)	4000K (lm)
<b>Asymmetric Module</b>		
120 mm	122	131
300 mm	449	489
600 mm	894	972
900 mm	1349	1467
1200 mm	1800	1956

Power Ratings	48V AC (W)	48V DC (W)	24V AC (W)	24V DC (W)
<b>Module Size</b>				
120 mm	-	1.5	-	1.5
300 mm	-	4.4	-	4.4
600 mm	-	8.8	-	8.8
900 mm	-	13.2	-	13.2
1200 mm	-	17.6	-	17.6

## Typical Applications

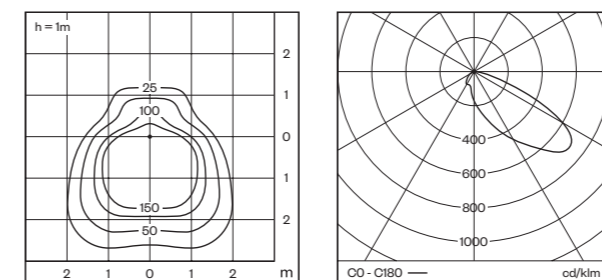
- Overpasses
- Ramps & Walkways
- Footpaths

## Light Details



Flexible module option available

### Asymmetric Module





# Garda Comfort

Designed for applications with a focus on appearance, Garda Comfort offers a continuous, homogeneous light source with no visible LEDs. Advanced optics provide a highly diffused symmetrical distribution for maximum visual comfort.



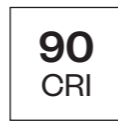
Delivered Lumens	2700K (lm)	3000K (lm)	4000K (lm)
<b>Symmetric Module</b>			
300mm	294	300	320
600mm	647	654	703
900mm	995	1005	1081
1200mm	1352	1367	1470

Power Ratings	48V AC (W)	48V DC (W)	24V AC (W)	24V DC (W)
<b>Module Size</b>				
300mm	-	-	-	3.8
600mm	-	-	-	9.2
900mm	-	-	-	14.3
1200mm	-	-	-	21.0

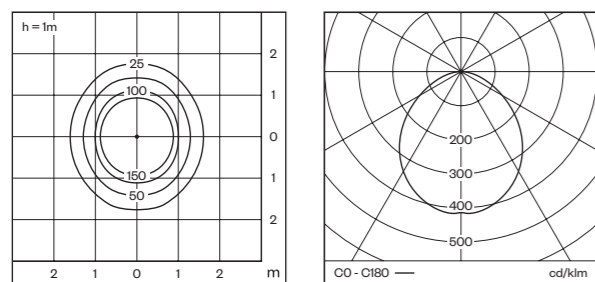
## Typical Applications

- Public Realm
- Residential
- Commercial

## Light Details

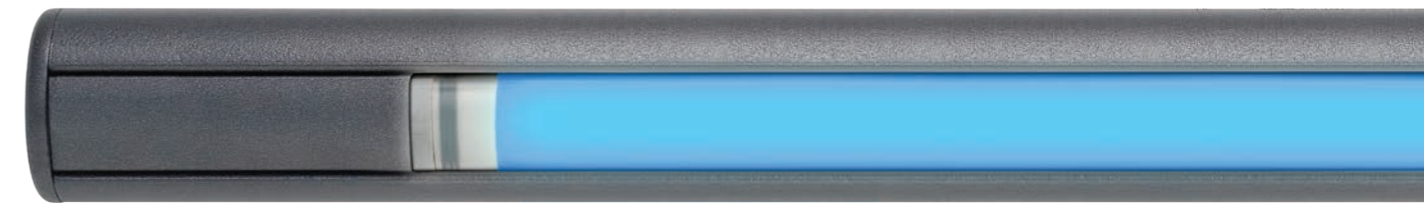


Symmetric Module



# Garda RGBW

Garda RGBW provides functional white light with the option to quickly add vibrant colours to your scheme. Similar in appearance to the Garda Comfort module, Garda RGBW provides flexibility and the ability to enhance locations through colour.



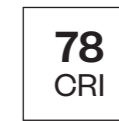
Delivered Lumens	4000K (lm)
<b>Symmetric Module</b>	
300mm	66
600mm	164
900mm	262
1200mm	361

Power Ratings	48V AC (W)	48V DC (W)	24V AC (W)	24V DC (W)
<b>RGB All On</b>				
300mm	-	-	-	3.8
600mm	-	-	-	9.5
900mm	-	-	-	15.2
1200mm	-	-	-	20.9
<b>4000K Only</b>				
300mm	-	-	-	1.3
600mm	-	-	-	3.2
900mm	-	-	-	5.1
1200mm	-	-	-	7.0

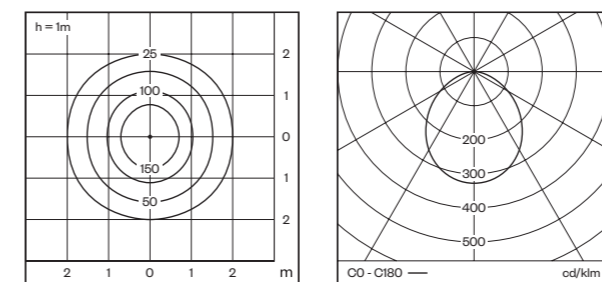
## Typical Applications

- Architectural
- Entertainment
- Retail

## Light Details



Symmetric Module (RGB All On)







## River Ettrick, Selkirk

“A robust product that sits comfortably within the riverside environment and provides an energy efficient and environmentally friendly solution with minimal future maintenance.”

Scottish Borders Council

Full case study available on our website:  
[dwwindsor.com/projects](http://dwwindsor.com/projects)





## St James's Place, Cirencester

### Seamless light

This non-standard structural application involved mounting Garda directly to glass, with a tight 1.4m radius on the landings; achieved using our flexible LED modules.

Full case study available on our website:  
[dwwindsor.com/projects](http://dwwindsor.com/projects)





## Teddington Lock Footbridge, London

“Our challenge – reduce the amount of light pollution onto the river while achieving good lighting levels and uniformity. We trusted DW Windsor, who have experience with the Bat Conservation Trust, to design a solution that focused the light onto the deck of the bridge and eliminate dark patches.”

London Borough of Richmond

Full case study available on our website:  
[dwwindsor.com/projects](http://dwwindsor.com/projects)



## Maritime Centre of Excellence, Southampton

Emergency lighting but not  
as you know it

Concealed battery packs provide  
3-hour emergency lighting in this  
bespoke scheme. Garda further  
complements the already beautiful,  
maritime-themed staircase.

Full case study available on our website:  
[dwwindsor.com/projects](http://dwwindsor.com/projects)







## Wembley Royal Steps, London

“Our aim was to transform and simplify the experience of everyone using the Wembley Park estate and Stadium. It was crucial that the steps were safe and welcoming. Garda met all our expectations; secure, inviting and robust lighting, whilst also being visually appealing for visitors and the local community.”

LDA Design

Full case study available on our website:  
[dwwindsor.com/projects](http://dwwindsor.com/projects)





## Malthouse Bridge, Bury St Edmunds

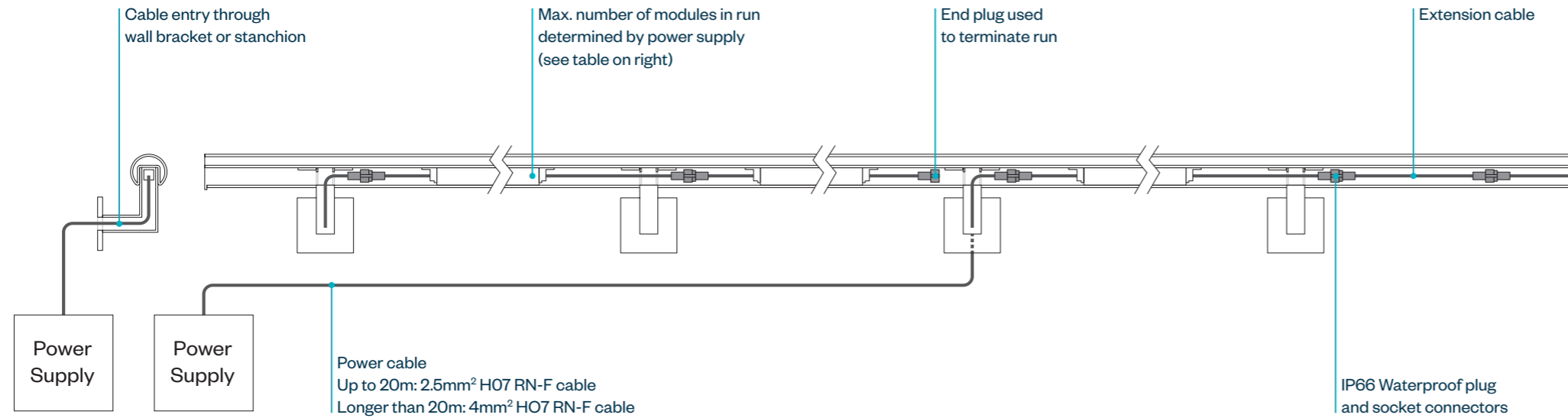
### Performance with Safety in Mind

For safety-critical projects where there is a requirement for functional walkway lighting, consider Garda Anti-Climb; our patented, surface-mounted, linear handrail lighting system. Also available as a cable carrying solution.

To find out more, visit:  
[dwwindsor.com/garda/anti-climb](http://dwwindsor.com/garda/anti-climb)



# Electrical Connections



## Standard Power Enclosures

All electrical cabling below ground maintains IP68 integrity. Additional equipment associated with different control options, such as emergency batteries can normally be housed within the enclosure.

<b>Dimensions</b>	300mm (h) x 300mm (w) x 150mm (d)
<b>IP rating</b>	IP66
<b>Input</b>	1 x IP68 Ø20mm gland to accept 2.5mm <sup>2</sup> 3 Core as standard
<b>Output</b>	Up to 4 fused circuits with IP68 glands - 1.5mm <sup>2</sup> to 6mm <sup>2</sup> 2 Core

Minimum of 150mm required either side of bracket / stanchion for electrical connection and cover plate

Cable feed brackets / stanchions for easy access

## Maximum LED Modules Per Circuit

<b>Garda Classic</b>	<b>300 (mm)</b>	<b>600 (mm)</b>	<b>900 (mm)</b>	<b>1200 (mm)</b>
<b>48V AC Supply</b>				
100 VA	16	8	5	4
160 VA	26	13	8	6
250 VA	42	21	14	10
400 VA	68	34	22	17
<b>48V DC Supply</b>				
52 W	11	5	3	2
100 W	21	10	7	5
150 W	32	16	10	8
300 W	64	32	21	16

<b>Garda Pro</b>	<b>120 (mm)</b>	<b>300 (mm)</b>	<b>600 (mm)</b>	<b>900 (mm)</b>	<b>1200 (mm)</b>
<b>48V DC Supply</b>					
52 W	33	11	5	3	2
100 W	63	21	10	7	5
150 W	96	32	16	10	8
300 W	192	64	32	21	16

<b>Garda Comfort</b>	<b>300 (mm)</b>	<b>600 (mm)</b>	<b>900 (mm)</b>	<b>1200 (mm)</b>
<b>24V DC Supply</b>				
100 W	20	9	5	4

<b>Garda RGBW</b>	<b>300 (mm)</b>	<b>600 (mm)</b>	<b>900 (mm)</b>	<b>1200 (mm)</b>
<b>24V DC Supply</b>				
52 W	16	6	4	3
100 W	32	13	8	5
150 W	48	19	12	8



# Specification Guide

## Garda Product Codes

					Code	Example
<b>Product</b>						
Garda					GAR	GAR
<b>Module Option</b>						
	Classic - Symmetric				S	P
		Classic - Asymmetric			A	
			Pro		P	
				Comfort	C	
<b>Colour Temp</b>						
	2700K	2700K		2700K	2K	3K
	3000K	3000K	3000K	3000K	3K	
	4000K	4000K	4000K	4000K	4K	
				RGB	RGB	
				RGBW	RGBW	
<b>Module Size</b>						
			120		10	600
	300	300	300	300	30	
	600	600	600	600	60	
	900	900	900	900	90	
	1200	1200	1200	1200	12	
				Continuous	CON	
<b>Material</b>						
Stainless Steel Handrail - Seamless					SS	SS
Stainless Steel Handrail - Kit					SK	
Aluminium Handrail					AL	
Aluminium Anti-Climb					AC	
<b>Finish</b>						
Brushed Stainless Steel (Satin 240grit)					0	0
Painted (Please state RAL)					1	
Warm to Touch (Please state RAL)					2	
<b>Mounting</b>						
Wall Mounted					W	G
Glass Mounted					G	
Stanchion Mounted (Root)					R	
Stanchion Mounted (Flange)					F	
<b>Loading</b>						
None						3.0
0.74kn/M					0.74	
1.5kn/M					1.5	
3.0kn/M					3.0	
<b>Infill</b>						
None						GL
Wire					WI	
Bar					BA	
Glass					GL	
<b>Electrical Specification</b>						
Emergency					E	D
DALI					D	
Dual Circuits					DC	
Example Code: GAR P 3K 600 SS 0 G 3.0 GL D						

## Here to Help

We understand that specifications can be overwhelming which is why our team of Garda experts is always here to help. Together, we will refine and produce the handrail that is perfect for you.

Not sure where to start? Contact us at [garda@dwwindsor.co.uk](mailto:garda@dwwindsor.co.uk)

## Notes

- Module size is dependent on lighting design and design layout and may change
- Loadings are requested but not confirmed as being achievable until spacings are known
- Number of power supplies is determined by load, electrical specification and available power supply locations
- Standard brackets and stanchions are round tube - any other design will need to be instructed





## IP66 | IK10 | CLASS III

### Features

- Suitable for both interior and exterior applications
- Precise control, delivering light only where needed
- Designed and manufactured in the UK
- Fully managed service, including dedicated project manager

### Profiles

- Garda
- Garda Kit
- Garda Anti-Climb

### Modules

- Garda Classic (Asymmetric or Symmetric)
- Garda Pro (Asymmetric)
- Garda Comfort (Symmetric)
- Garda RGBW (Symmetric)

### L90 Lifetime Prediction

- In excess of 100,000 hours

### Colour Temperature

- 2700K (Classic and Comfort modules)
- 3000K
- 4000K
- RGBW

### Colour Rendering Index

- 80Ra (Classic module)
- 70Ra (Pro module)
- 90Ra (Comfort module)
- 78Ra (RGBW modules)

### Finishes

- Brushed stainless steel
- Powder coated aluminium

### Control

- Variable resistance dimming
- 1-10V dimming
- DALI dimming
- DMX (via DALI converter)

### Protection

- Class III SELV supply (extra low voltage)
- IP66 LED modules
- IK10 impact resistance
- Anti-tamper pin head bolts in cover plates
- Surge protection
- Short circuit protection

### Emergency

- Integrated emergency 3-hour battery backup available
- Dual circuit

### Electrical

- 48V AC (Classic modules)
- 48V DC (Classic and Pro modules)
- 24V AC (Classic modules)
- 24V DC (RGBW modules)

### Construction

- Stainless steel or aluminium body
- Polycarbonate module glazing

