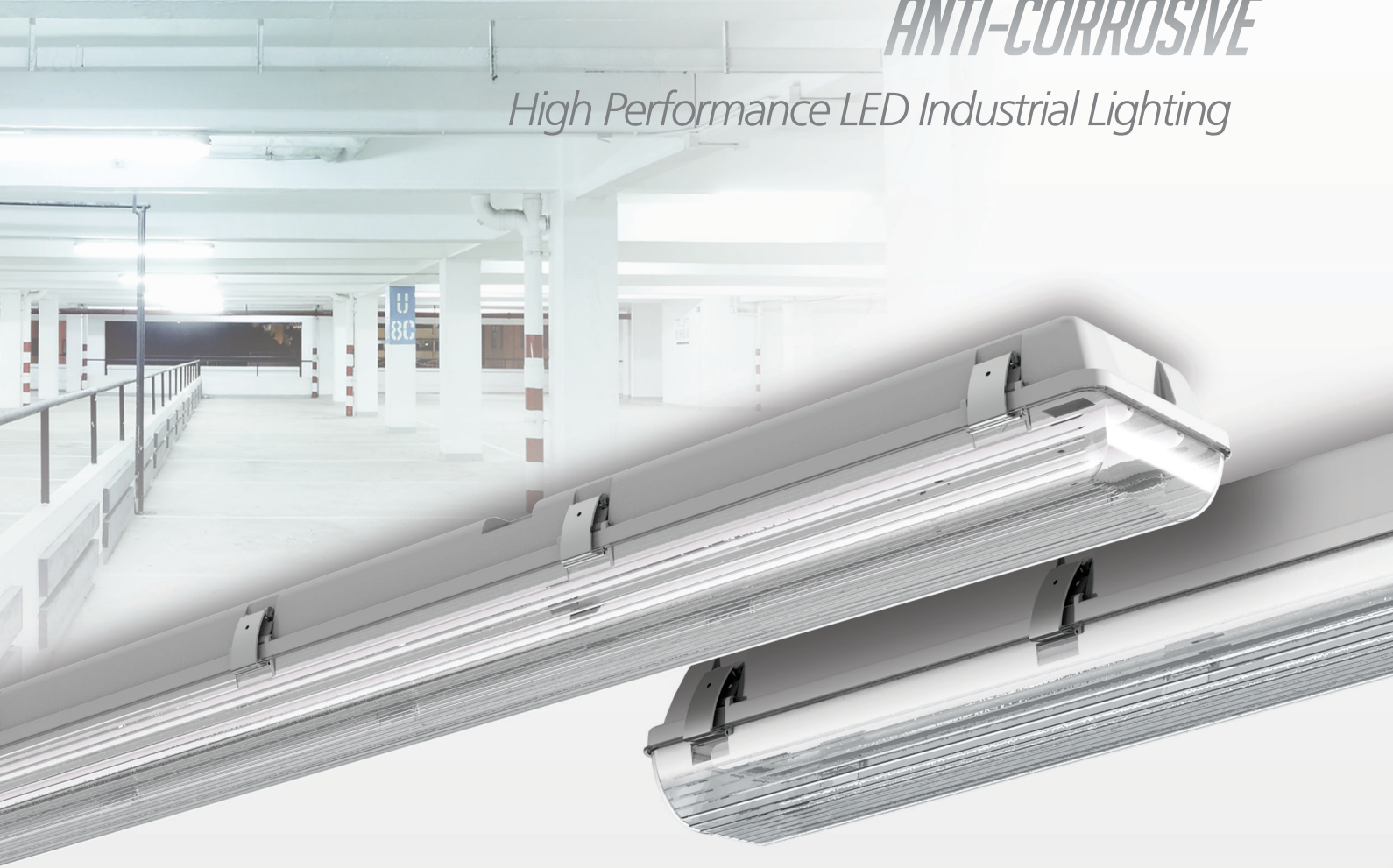


JCC **TOUGHLED**TM

ANTI-CORROSIVE

High Performance LED Industrial Lighting



Where **LED** technology meets **durability**

- Up to 30% energy saving
- Zero maintenance, no need to relamp
- High efficiency up to 92 lpcW
- Quick & easy installation

ADVANCED LED LIGHTING

*Extended warranty requires registration at jcc.co.uk

5
YEAR
EXTENDED
WARRANTY*

JCC **TOUGHLED**TM ANTI-CORROSIVE

**Zero maintenance –
no corrosion, no need to relamp**



*ToughLEDTM is maintenance free and
is backed by our trusted **5 year
extended warranty****

- ToughLEDTM uses advanced LED technology that outperforms fluorescent and extends the life of the product, eliminating maintenance costs and reducing energy usage
- ToughLEDTM features a polycarbonate base and diffuser construction for shock and impact resistance with a fully sealed, continuous gasket to prevent water ingress and corrosion
- The complete range of sizes and outputs is designed to replace single and twin, 5 and 6ft fluorescent. ToughLEDTM is ideal for commercial, industrial and leisure applications, including car parks, corridors and factories



ADVANCED LED LIGHTING

*Extended warranty requires registration at jcc.co.uk

Performance & efficiency that exceeds Linear Fluorescent



The use of highly efficient LEDs means that ToughLED™ is able to produce a light output that exceeds traditional fluorescent tubes, while using up to 30% less energy.

Wide beam light distribution/inner diffuser ✓

ToughLED™ has a dual diffuser system providing light distribution that is directly comparable to traditional fluorescent

- The LEDs are protected by a thin, inner layer designed to reduce glare but maximise efficiency
- The rugged polycarbonate outer casing provides a super-wide beam angle.

With similar dimensions to fluorescent fittings, ToughLED™ can easily be used as a direct like-for-like replacement. This means that the number of fittings and their spacing doesn't have to change, but areas appear brighter and more evenly lit, while also helping to significantly reduce electricity costs.

A true 'fit & forget' solution with no costly lamp replacement throughout the life of the fitting, installing ToughLED™ will also drastically reduce maintenance and lamp disposal costs.

With over 90 lumens per circuit Watt, ToughLED™ is fully compliant with all building regulations. Its outstanding levels of efficiency also significantly contribute towards the reduction in a building's carbon footprint, further helping businesses to meet government guidelines and targets.



Lower energy ✓



ToughLED™ is exceptionally efficient, providing up to 92 lumens per circuit Watt. Comparatively, T8 fluorescent fittings typically realise only 70 lumens per circuit Watt

Higher output ✓



ToughLED™ outperforms traditional fluorescent light fittings, providing better illumination and eliminating dark areas

● ToughLED™* ○ Traditional fluorescent

*Single 5ft

TOUGHLED™ ANTI-CORROSIVE

Durable construction

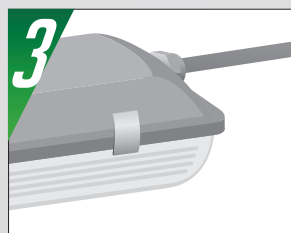
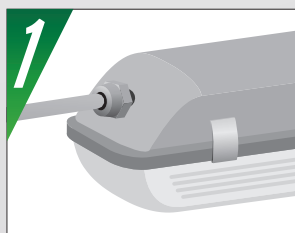
ToughLED's sturdy construction makes it ideal for rugged applications and is suitable for harsh environments

- Full polycarbonate base and diffuser creating a light weight, impact resistant fitting with higher levels of durability than standard GRP bodies
- Fully sealed, continuous gasket to ensure IP65 protection from water and dust
- Solid-state LEDs eliminate the risk of lamps shattering
- Heavy-duty stainless steel clips as standard, ready for use with anti-tamper screws

Quick & easy installation with multiple wiring options

In addition to eliminating maintenance cost, ToughLED™ is quick and easy to install, meaning new-builds go up quicker and retrofits suffer less downtime

- Knockouts at the back and ends of the fitting, plus conduit entry provide multiple wiring options covering all installations
- Detachable gear tray with retainer clip for quick access to the inside of the fitting
- ToughLED™ is available with 1.5m chain suspension kit option (JC71525)



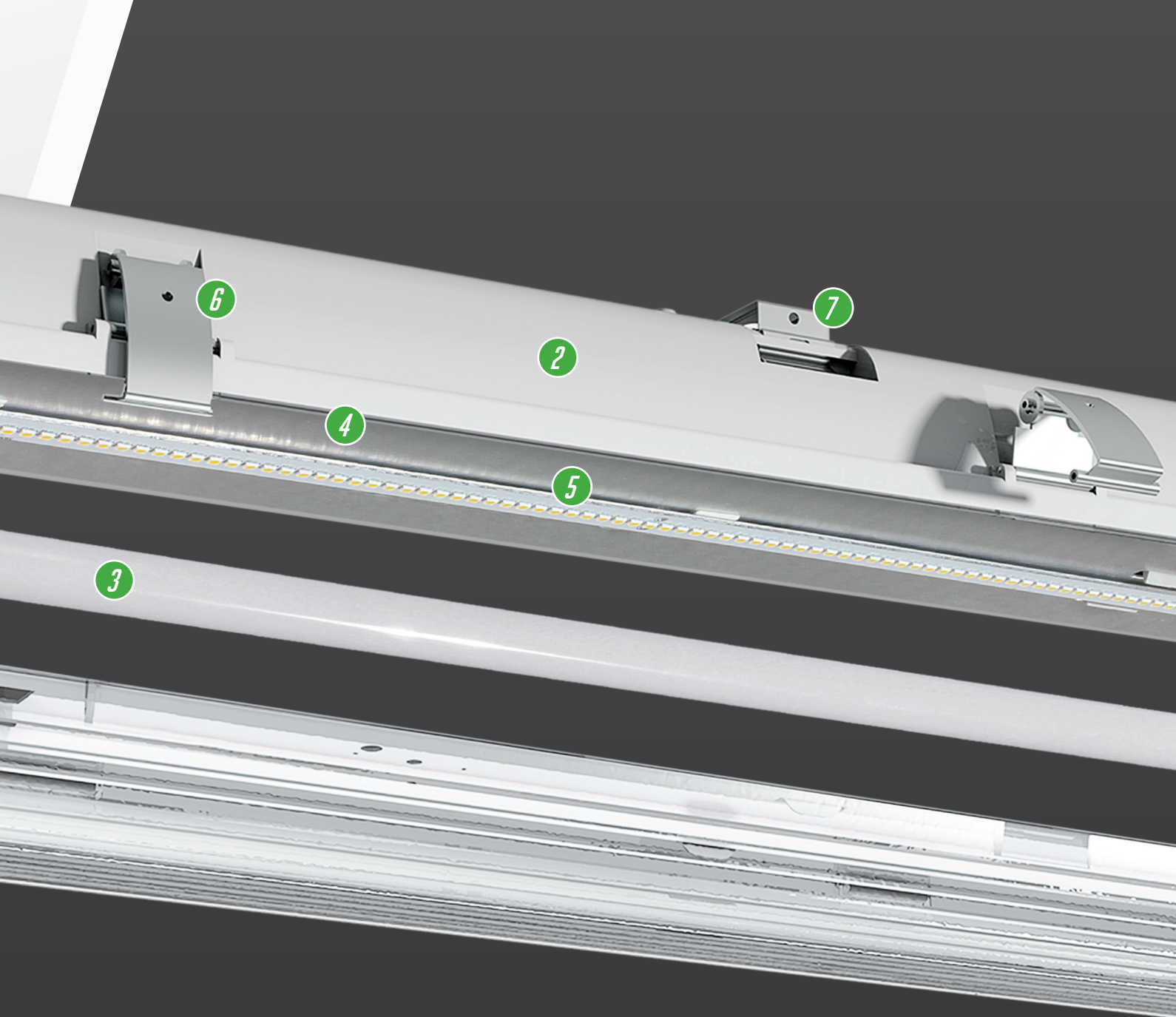
ToughLED™ has three connection points, allowing for various installation options

Microwave sensor

For optimum energy saving ToughLED™ is available with an external on/off microwave sensor. Activated by both movement and daylight, ToughLED™ remains on only when required, switching off when no motion is detected



ADVANCED LED LIGHTING

**1**

Continuous gasket

The use of a continuous, one piece gasket ensures that there are no breaks whatsoever in the IP65 seal

2

Full polycarbonate base and diffuser

Corrosion and impact resistant base and diffuser for durable, maintenance free operation

3

One piece inner diffuser

As part of the dual diffuser system, the thin, inner diffuser removes any harsh glare from the LEDs that could be hazardous in industrial environments

4

Unique connection strap

Unique strap connects the back plate to the body of the fitting, ensuring a quick and simple installation

5

Highly efficient LEDs

Using a linear LED configuration, ToughLED™ provides crisp, clean light with a cool 4000K colour temperature, designed to make areas appear brighter and provide a sense of security

6

Stainless Steel 'anti-tamper' clips

High quality stainless steel clips add greater strength during installation and do not become brittle over time like plastic clips. Prepared and ready for use with anti-tamper screws

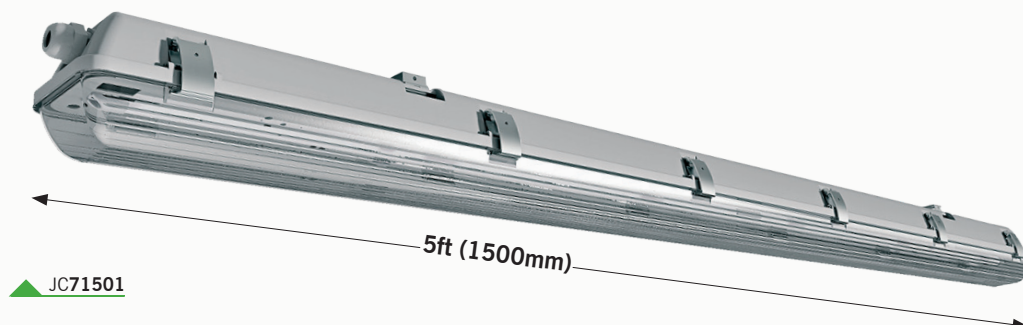
7

Mounting hooks

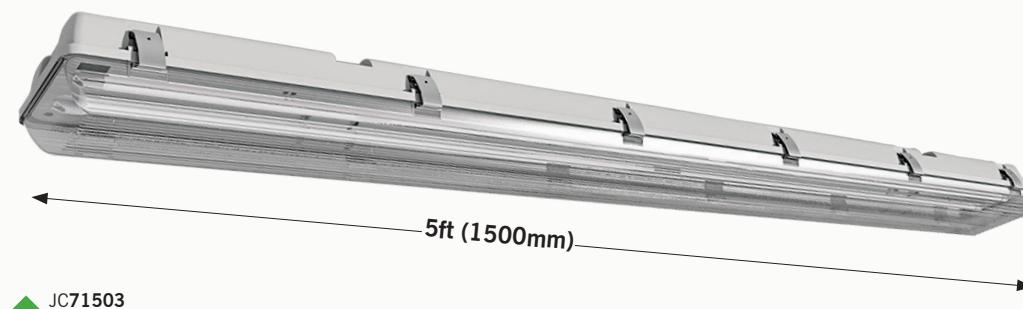
ToughLED™ can be either surface mounted or suspended from fitted mounting hooks for quick and easy installation

TOUGHLED™ ANTI-CORROSIVE

SINGLE 5 FT



TWIN 5 FT



Lumens	Wattage	Lumens pc/W	Colour Temperature	IP Rating
4500 / 9000	49W / 98W	>91	4000K	IP65

Outstanding cost saving ✓

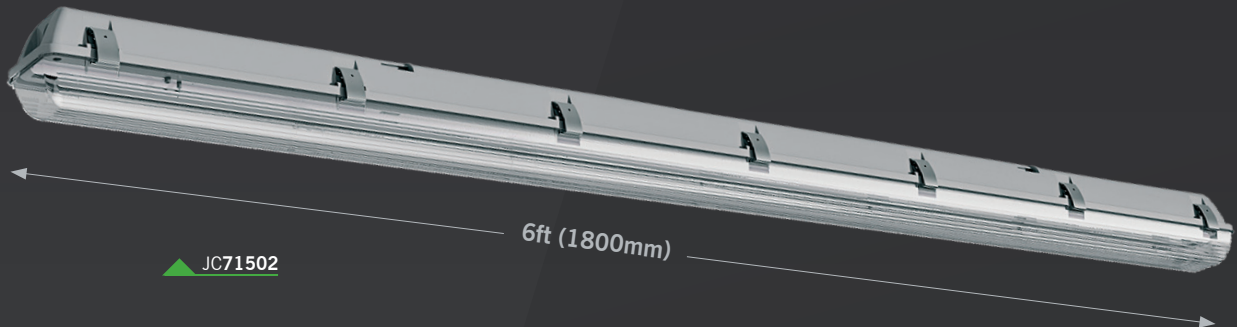
	Fluorescent Single 5ft (58W)	ToughLED™ Single 5ft (49W)	Fluorescent Twin 5ft (116W)	ToughLED™ Twin 5ft (98W)
No. of fittings	50	50	50	50
Total energy usage per fixture	68	49	136	98
Energy cost per hour	£0.41	£0.29	£0.82	£0.59
Annual maintenance cost	£197.08	N/A	£394.16	N/A
Annual energy usage	£3,574.08	£2,575.44	£7,148.16	£5,150.88
Total annual operating cost	£3,771.16	£2,575.44	£7,542.32	£5,150.88
Total annual saving	£1,195.72 (£23 per fitting)		£2,391.44 (£48 per fitting)	

Assumed commercial usage of 24 hours per day, 365 days per year at a cost of 12p per kW/h

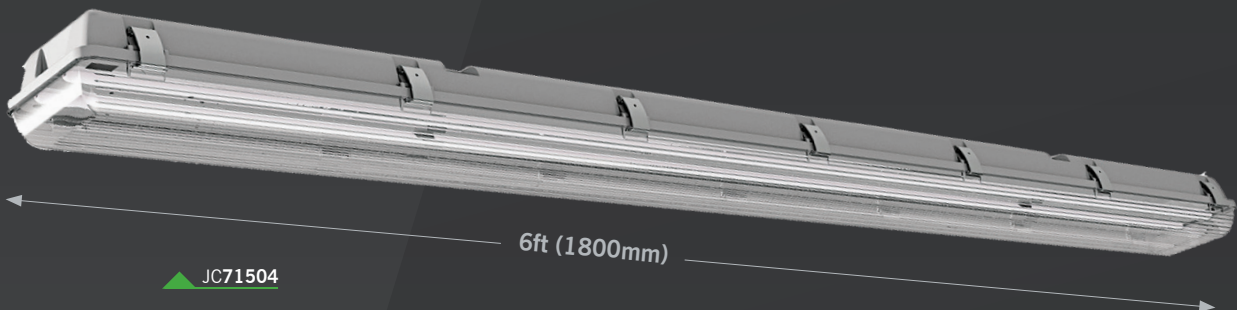
ADVANCED LED LIGHTING

- Outperforms Linear Fluorescent light output
- 30% energy saving against Linear Fluorescent
- Instant start up, flicker free
- Quick & easy installation
- Full polycarbonate base & diffuser
- Stainless Steel 'anti-tamper' clips

SINGLE 6 FT



TWIN 6 FT



Lumens	Wattage	Lumens pc/W	Colour Temperature	IP Rating
5400 / 10800	59W / 118W	>91	4000K	IP65

Outstanding cost saving ✓

	Fluorescent Single 6ft (58W)	ToughLED™ Single 6ft (59W)	Fluorescent Twin 6ft (116W)	ToughLED™ Twin 6ft (98W)
No. of fittings	50	50	50	50
Total energy usage per fixture	82	59	164	118
Energy cost per hour	£0.49	£0.35	£0.98	£0.71
Annual maintenance cost	£197.08	N/A	£394.16	N/A
Annual energy usage	£4,309.92	£3,101.04	£8,619.84	£6,202.08
Total annual operating cost	£4,507.00	£3,101.04	£9,014.00	£6,202.08
Total annual saving	£1,405.96 (£28 per fitting)		£2,811.92 (£57 per fitting)	

Assumed commercial usage of 24 hours per day, 365 days per year at a cost of 12p per kW/h

TOUGHLED™ ANTI-CORROSIVE



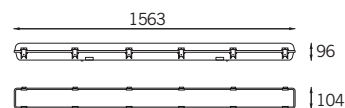
SINGLE 5FT

The direct 5ft linear fluorescent replacement

- Outperforms 5ft linear fluorescent light output
- Up to 30% energy saving

Code	Description	Watt	Lumens
JC71501	ToughLED mains IP65 5ft single	49	4500
JC71505	ToughLED mains IP65 5ft single <i>emergency</i>	49	4500
JC71509	ToughLED mains IP65 5ft single microwave on/off	49	4500

JC71501



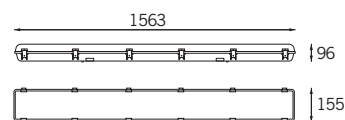
TWIN 5FT

The direct 2x5ft linear fluorescent replacement

- Outperforms 2x5ft linear fluorescent light output
- Up to 30% energy saving

Code	Description	Watt	Lumens
JC71503	ToughLED mains IP65 5ft twin	98	9000
JC71507	ToughLED mains IP65 5ft twin <i>emergency</i>	98	9000
JC715011	ToughLED mains IP65 5ft twin microwave on/off	98	9000

JC71503



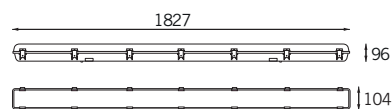
SINGLE 6FT

The direct 6ft linear fluorescent replacement

- Outperforms 6ft linear fluorescent light output
- Up to 30% energy saving

Code	Description	Watt	Lumens
JC71502	ToughLED mains IP65 6ft single	59	5400
JC71506	ToughLED mains IP65 6ft single <i>emergency</i>	59	5400
JC71510	ToughLED mains IP65 6ft single microwave on/off	59	5400

JC71502



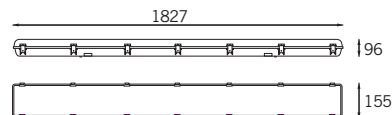
TWIN 6FT

The direct 2x6ft linear fluorescent replacement

- Outperforms 2x6ft linear fluorescent light output
- Up to 30% energy saving

Code	Description	Watt	Lumens
JC71504	ToughLED mains IP65 6ft twin	118	10800
JC71508	ToughLED mains IP65 6ft twin <i>emergency</i>	118	10800
JC71512	ToughLED mains IP65 6ft twin microwave on/off	118	10800

JC71504



Code	Description
JC71525	ToughLED 1.5m Chain Suspension Kit

Lamp	Construction
White 4000K CRI: Ra (80)	Body & Diffuser – Polycarbonate

JCC Lighting Products Ltd

Innovation Centre, Beeding Close, Southern Cross Trading Est, Bognor Regis, West Sussex PO22 9TS

Tel: **01243 838999** Email: sales@jcc.co.uk Fax: **01243 838998**

© JCC Lighting Products Limited 2013 LIT0090

jcc.co.uk