



MADE IN BRITAIN
DISTRIBUTED WORLDWIDE

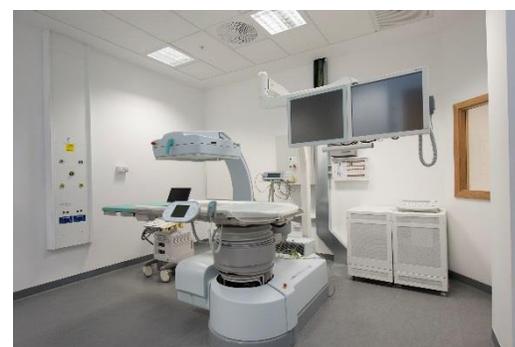
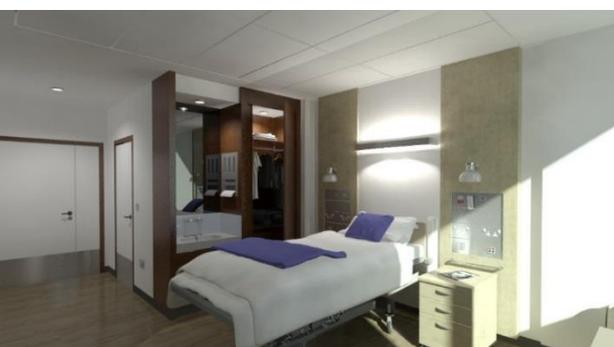
WAVETM **LED** *in-patient healthcare luminaire*



CABL  **FLOW**TM
H E A L T H C A R E

applications

CABLEFLOW™





MADE IN BRITAIN
DISTRIBUTED WORLDWIDE



Innovation is at the heart of an evolutionary healthcare infrastructure. Challenging boundaries whilst being respectful of clinical skills are two valued philosophies which ensure knowledge led developments in bedroom architecture.

At **CABLEFLOW** we recognise the need to be different, to ensure product development offers practical and sustainable progression whilst always ensuring full compliance with Patient Safety Standards and improving the clinical environment for clinicians and patients alike.

We are proud of our British healthcare heritage which offers universal application around the world. Having been conferred both a prestigious **Queens Award for Enterprise: Innovation** and a **Kings Award for Enterprise: Innovation** users of our products and systems take confidence in this unique recognition of Cableflow as a market leader.



Recognised as Britain's foremost medical supply unit manufacturer our range of products whether standard or bespoke offer solutions to satisfy many in-patient design concepts across all clinical environments whether primary or tertiary care areas, and every speciality in-between.

In 2005 our **integra** product became the first and only linear bedhead trunking system to achieve Royal recognition with a **Queens Award for Enterprise: Innovation** from Her Majesty Queen Elizabeth II. This achievement was further endorsed in 2023 with a **Kings Award for Enterprise: Innovation** for our (POAG) equipotential earth bonding socket.

Improving the clinical architecture, patient and clinician experience whilst ensuring flexibility and adaptation in later use are hallmarks of our innovative bedhead solutions. Whether in an acute hospital setting or more domestic environments such as Hospice's and the like our systems can be tailored to your requirements.





The success of our Award winning* Integra healthcare lighting system demonstrates that in-patient room lighting in healthcare facilities requires specific attention to detail.

The **WAVE** has evolved from that experience and understanding of the unique and specific demands that healthcare environments place upon luminaires. Equally at home as an in-patient room luminaire or, as a corridor option, the **WAVE** epitomises distinguished luminaire design.

In-patient accommodation, where the relentless environment calls for luminaires to deliver patient safety alongside clinical function, also requires energy efficient solutions and the **WAVE** meets all of these objectives in a delicately flowing design envelope.

The **WAVE** is unique. No other luminaire on the market can achieve a light output to the same proportions whilst emitting the lowest level of viewed luminance (luminous intensity) to date from a compliant healthcare uplighter. The **WAVE** is an empathetic luminaire solution to any clinical environment as part of an overall room illumination scheme and utilises bespoke LED technology and optics to offer a reduced glare fitting with sympathetic lines.

Mounted at an optimum height of 1.8m The **WAVE** achieves a multitude of illumination criteria in the simplest of forms whilst ensuring CIBSE LG02:2019 performance compliance.

INCREASED LIFECYCLE

With increasingly stringent cleaning regimes adopted in every healthcare facility, largely to reduce the impact of HAI's, products which are easy to clean are paramount in product selection. A design philosophy that ensures 'form' is as important and 'function' has created soft raised edges. The luminaire is easy to clean with its smooth sealed surfaces and fixing free housing with no crevices or grooves to harbour dust or bacteria, with ease of maintenance high on its agenda of key design features. Careful attention to prismatic diffuser design and materials ensures that **WAVE** offers continued performance output over time which increases life-expectancy and reduces maintenance life-cycle costs of the installation.

** In 2005 CABLEFLOW were recognised as healthcare innovators with the conferment of a Queens Award for Enterprise: Innovation.*



ENHANCED PERFORMANCE

Whilst other healthcare luminaires offer a lighting solution, they are heavily reliant upon a system of additional luminaires to achieve the overall illumination effect by CIBSE LG2.

WAVE is designed to be different and its performance sets it aside from other in-patient luminaires by having a lesser reliance upon the need for significant additional ceiling mounted luminaires and consequently a more cost effective installation.

LED SOLUTION

In collaboration with partners Whitecroft Lighting, we both linked as market-leading renowned brand to offer this LED solution as part of a wider room lighting scheme. This also enables us to offer retrofit LED packs to pre-existing installations.

Adopting a 26watt LED pack in both the uplight and downlight portion of a 900mm fitting, the 2581lumen output for each up and downlight offers a compliant level of illumination for task and general when used as part of a wider lighting scheme design.

PHOTOMETRIC DATA

Full electronic photometric data is available via our sales office

SIMPLE INSTALLATION

The **WAVE** is geared towards simple installation and comprises just two significant parts, a Base and the **WAVE** itself. Developed in this way to allow the first fix Base to be installed at an early stage so that all incoming connections can be tested, the **WAVE** Body is a self-contained second fix assembly which is fully pre-wired to a 20A multi-pin connector.

Healthcare accommodation must be illuminated in accordance with CIBSE LG02:2019 and BS EN 12464-1. Careful consideration of the clinical requirements, room size, ceiling heights and reflectance values of surfaces are key and should be carefully co-ordinated, specifically when a luminaire relying upon its upper flux fraction for effect, such as an uplight, are adopted.

LIGHTING OPTIONS

The performance characteristics of both the uplight and downlight portions of the **WAVE** ensure a safe, relaxing yet workable clinical environment.

Each luminaire portion is independently controlled by remote push-to-make momentary switching. Control between the patient nurse call system and the patient reading light is pre-wired, simply requiring connection of the incoming low voltage relay control cable to the multi-way connector. Relays are provided as a component part of the nurse call system.

Using the latest LED technology and bespoke drivers the assembly offers reduce conventional energy consumption. Correlated colour temperature is 4000°k with a CRI o Ra80.

TL5 options of 28w, 39w 54w and 80w fixed or dimmable output luminaires for the uplight are available as standard, with DSI or DALI interfacing optional. An LED version is also available.





Prismatic diffusers optimise the length of the luminaire to maximise light output which is carefully controlled by our own Award* winning design. The accuracy of the diffuser design, utilising carefully placed prisms, ensures correct and maximised directional luminance is achieved whilst eliminating shadowing which contributes to a viewed luminance of less than 700 cd/m². The same principles apply to the 21w or 28w downlight, always supplied with a dimmable output.

HEALTHCARE SPECIFIC DESIGN

A healthcare specific wall light which has been uniquely designed to meet the stringent requirements of CIBSE LG02:2019 is a rare product.

The **WAVE** can be used in a combination of configurations, as a combined up/downlight, a standalone uplight or simply a downlight.

Whichever configuration is chosen its curvaceous lines soften the ambience of the healing environment, with no flat surfaces upon which items can be rested or placed, further reducing risks within the patient environment.

The ability to illuminate an entire room to levels determined within CIBSE LG02:2019 from a single luminaire sets this fitting aside from its competition.

Patient comfort is also key and with viewed luminance kept within 700cd/m² the worries of discomfort glare for ambulatory or supine patients alike is eliminated.

Varying lamp sizes allow almost any configuration of in-patient accommodation to be suitably illuminated whether it's a basic treatment room, multi or single bed rooms or higher dependency areas.

HIGH GRADE POWDER COAT FINISH

Finished in a high-grade polyester powder coat we provide an Applicators Guarantee for 30 years to support our 25 year product warranty. The complete unit is coated as standard RAL 9010. On larger schemes where certain quantity limits are exceeded then these colour options may be varied and bespoke finishes offered.



Warning: High Voltage

PERFORMANCE AND PATIENT SAFETY

Reading, observation and minor examination lighting levels as defined in CIBSE LG02:2019 are achieved by the downlight portion of the **WAVE**, with a carefully designed glare limiting cut off. With the downlight available in either 28w or 35w outputs the general nursing care and reading illumination levels are comfortably achieved. Luminaire performance is one of the many key features of the **WAVE** that doesn't go unnoticed.

SPECIFYING PEACE OF MIND

Specifying a CABLEFLOW medical trunking system throughout your hospital will provide an easy to use and aesthetically pleasing solution while maintaining a uniform look across all departments.

As an Award winning manufacturer, innovation is at the core of our philosophy and product solutions, based upon a proven track record over 30 years in the UK healthcare industry.

EMC CERTIFICATION AND COMPLIANCE

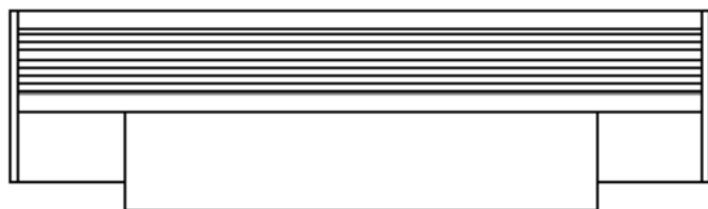
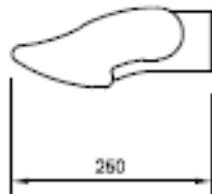
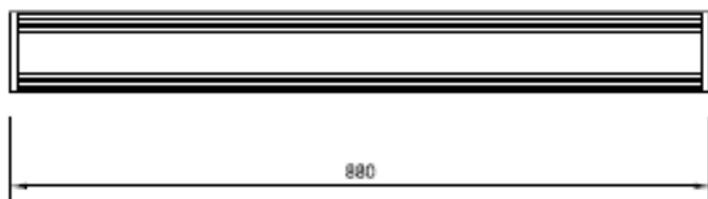
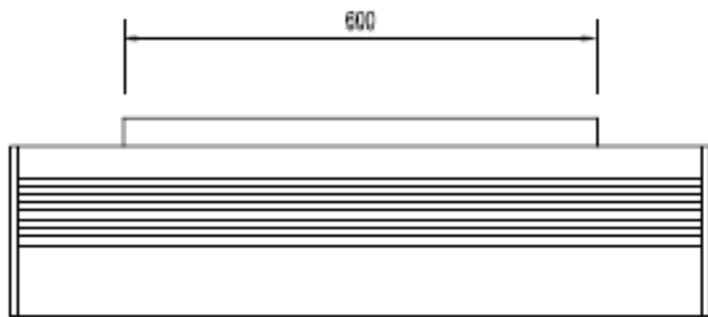
Protecting electronic components in the patent environment from Electro-Magnetic Interference (EMI) and Radio Frequency Interference (RFI) is of paramount importance. **WAVE** has been designed specifically to ensure that it controls both the emission and reception of any such Interference.

The **WAVE** is manufactured to meet the requirements of IEC 60598-2-25 for healthcare facilities. The product is extensively electrically and EMC tested for use within the medical environment and certified to EN 60601-1, and meets the essential requirements of the EU Medical Devices Regulations 2017/745.

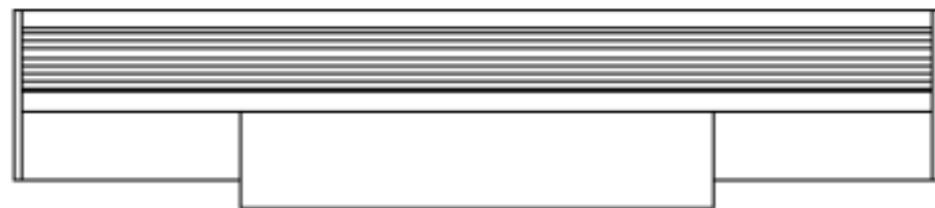
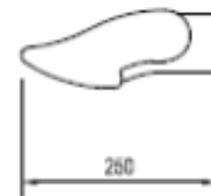
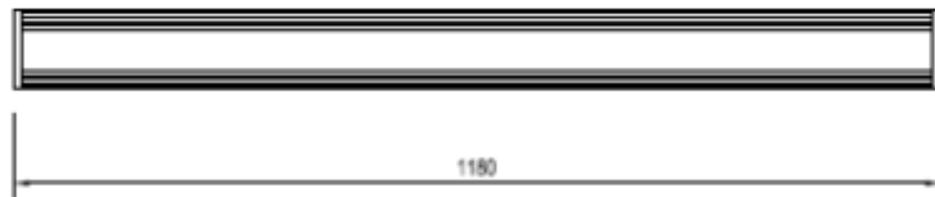
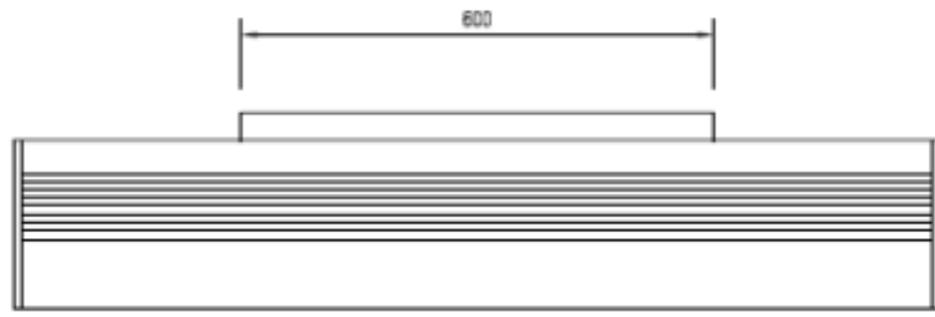
By specifying **WAVE** you can be satisfied that the EMC elements of BS EN ISO 11197:2019 have been complied with. All of our system solutions have been independently tested by BSI with all of the commercially available nurse call systems in operation.



39wUplight & 21wDown



54wUplight & 28wDown



Document Reference	Document Description	Document Reference	Document Description
BS 476-10: 2009	Fire tests on building materials and structures. Guide to the principles, selection, role and application of fire testing and their outputs	BS EN ISO 9170-2:2008	Terminal units for medical gas pipeline systems. Terminal units for anaesthetic gas scavenging systems
BS 1363-1:2016 + A1:2018	13 A plugs, socket-outlets, adaptors and connection units. Specification for rewirable and non-rewirable 13 A fused plugs	BS EN ISO 7599:2010	Anodizing of aluminium and its alloys. General specifications for anodic oxidation coatings on aluminium
BS 1363-2:2016 + A1: 2018	13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A switched and unswitched socket-outlets	BS EN ISO 11197:2019	Medical supply units
BS 1363-4:2016 + A1 2018	13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A fused connection units switched and unswitched	ISO 19054:2006 + A1:2016	Rail Systems for supporting medical equipment
BS 5266-1:2011	Emergency lighting. Code of practice for the emergency escape lighting of premises	HBN 00-03	Designing generic clinical and clinical support spaces
BS 5733:2010+A1:2014	General requirements for electrical accessories. Specification	HBN 00-04	Circulation and communication Spaces
BS 6701: 2016	Telecommunications equipment and telecommunications cabling. Specification for installation, operation and maintenance	HBN 00-09	Infection control in the built environment
BS 6972: 1988	Specification for general requirements for luminaire supporting couplers for domestic, light industrial and commercial use	HBN 04-01	Adult in-patient facilities: planning and design
BS 7671:2018 + A2 2022	Requirements for Electrical Installations 18th Edition IET Wiring Regulations (incorporating Section 710 (Special Locations Medical Locations)	HBN 04-02	Critical care units
BS 8300-1:2018	Design of buildings and their approaches to meet the needs of disabled people. Code of practice	HBN 4, Supplement 1	Isolation facilities for infectious patients in acute settings
BS EN 12206-1:2021	Paints and varnishes. Coating of aluminium and aluminium alloys for architectural purposes. Coatings prepared from coating powder	HBN 6	Facilities for Diagnostic imaging and interventional radiology:
BS EN 12464-1: 2021	Light and lighting. Lighting of work places. Indoor work places	HBN 07-01	Satellite Dialysis Unit
BS EN 13032-2: 2017	Light and lighting. Measurement and presentation of photometric data of lamps and luminaires. Presentation of data for indoor and outdoor work places	HBN 07-02	Main Renal Unit
BS EN 50083-2:2012	Cable networks for television signals, sound signals and interactive services. Electromagnetic compatibility for equipment	HBN 09-02	Maternity Care Facilities
BS EN 50085-1:2005+A1:2013	Cable trunking systems and cable ducting systems for electrical installations. General requirements	HBN 09-03	Neonatal Units
BS EN 50085-2-1:2006	Cable trunking systems and cable ducting systems for electrical installations. Cable trunking systems and cable ducting systems intended for mounting on walls and ceilings	HBN 57: 2003	Facilities for critical care
BS EN 60439-5: 2006	Low-voltage switchgear and control gear assemblies. Particular requirements for assemblies for power distribution in public networks	HTM 00	Building Engineering in the Health Sector
BS EN 60529:1992+A2:2013	Degrees of protection provided by enclosures (IP code)	HTM 02-01	Medical gas pipeline systems
BS EN 60598-1:2021	Luminaires. General requirements and tests	HTM 06-01	Electrical services: supply and distribution
BS EN 60598-2-22:2014 +A1: 2020	Luminaires. Particular requirements. Luminaires for emergency lighting	HTM 06-02	Electrical safety guidance for low voltage systems
BS EN 60601-1-6:2010+A1:2013 +A2:2020	Medical electrical equipment. General requirements for basic safety and essential performance. Collateral standard. Usability	HTM 08-03	Management of bedhead services in the health sector
BS EN 60601-1-2: 2015 + A1:2021	Medical electrical equipment. General requirements for basic safety and essential performance. Collateral standard. Electromagnetic compatibility. Requirements and tests	HTM 17	Health Building Engineering Installations
BS EN 60669-1:2018	Switches for household and similar fixed-electrical installations. General requirements	HTM 2014	Abatement of electrical interference
BS EN 61000-6-3:2021	Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments (formally BS EN 50081-1)	HTM 2020	Electrical safety code for low voltage systems
BS EN 61000-6-4:2019	Electromagnetic compatibility (EMC). Generic standards. Emission standard for industrial environments	CIBSE LG 02: 2019	Lighting guide - Hospitals and health care buildings
BS EN 61000-6-1:2019	Electromagnetic compatibility (EMC). Generic standards. Immunity for residential, commercial and light-industrial environments (formally BS EN 50082-1)	CIBSE LG 3: 2001	Lighting guide - The visual environment for Display Screen Use
BS EN ISO 7396-1:2016 +A1:2019	Medical gas pipeline systems. Pipeline systems for compressed medical gases and vacuum	CIE	European Lighting Guide
BS EN ISO 7396-2: 2007	Medical gas pipeline systems. Anaesthetic gas scavenging disposal systems	NHS SPEC C49: 1997	Nurse Call Systems. Revision 3
BS EN ISO 9170-1:2017	Terminal units for medical gas pipeline systems. Terminal units for use with compressed medical gases and vacuum	EU MDR 2107/745	EU Medical Device Regulation
		UK MDR 2002	UK Medical Device Regulations (SI 2002 (no. 618, as amended)







MADE IN BRITAIN
DISTRIBUTED WORLDWIDE

CABLEFLOW™

Cableflow
International
Limited



For full product data sheets go to our website or contact us directly

www.cableflow.com



Cableflow International Limited | Windsor House | Abbey Barn Road | High Wycombe | Buckinghamshire | HP11 1NN | United Kingdom

(tel) 00 44 (0)1494 52 88 11 | (email) sales@cableflow.com

Registered in England 2356618